JUAN CARLOS BALDA
University Professor

EDUCATION

Ph.D. University of Natal (Durban South Africa), Electrical Engineering, 1986
B.S.E.E.. Universidad Nacional del Sur (Bahía Blanca, Argentina), Electrical Engineering, 1979

UA YEARS OF SERVICE (19 years)

Sept 2012 to date: Associate Department Head and University Professor
August 2009 to Aug 2012: Interim Head of the Department of Electrical Engineering
August 2006 to Aug 2009: Associate Department Head
August 1999 to Aug 2012: Professor at the Department of Electrical Engineering
Aug 1993 – July 1999: Associate Professor at the Department of Electrical Engineering
July 1989 - July 1993: Assistant Professor at the Department of Electrical Engineering

OTHER RELATED EXPERIENCE

Aug 1987 - June 1989: Visiting Assistant Professor at the Department of Electrical and Computer Engineering, Clemson University, 102 Riggs Hall, Clemson, SC 29634, USA.
Aug 1986 - May 1987: Project leader in a research project for the south african utility ESCOM, Department of Electrical Engineering, Natal University.
April 1986 - July 1986: Post-doctoral Fellow at Natal University. Activities included research work, lecturing and co-advisor to 6 M.Sc. and 1 Ph.D. students.
Feb 1983 - Dec 1986: Teaching assistant in the Electrical Machinery Laboratory, Department of Electrical Engineering, Natal University.
Feb 1982 - April 1986: Ph.D. research student at the Department of Electrical Engineering, Natal University.

CONSULTING

None

PATENTS

None

PROFESSIONAL REGISTRATION

Professional Engineer, Arkansas

PRINCIPAL PUBLICATIONS OF THE LAST TWO YEARS

[1] A. Escobar Mejía, C. Busada, J. C. Balda, "An Indirect Matrix Converter for CCHP Microturbines in Data Center Power Systems", *2012 IEEE International Telecommunications Energy Conference (INTELEC 2012)*, September 30 to October 4, 2012, Scottsdale, Arizona.

[2] O. Saadeh, E. Johnson, M. Saadeh, A. Escobar Mejía, H. C. Schinmer, B. Rowden, A. Mantooth, J. C. Balda, S. S. Ang, "A 4kV Silicon Carbide Solid State Fault Current Limiter", *IEEE Energy Conversion Conference and Exposition (ECCE 2012)*, September 15-20, Raleigh, North Carolina.

[3] J. Chou, S. S. Ang, H. A. Mantooth, J. C. Balda, "A Nano-Composite Polyamide Imide Passivation for 10kV Power Electronics Module", *IEEE Energy Conversion Conference and Exposition (ECCE 2012)*, September 15-20, Raleigh, North Carolina.

[4] H. Zhang, S. S. Ang, H. A. Mantooth, J. C. Balda, "A 6.5kV Wire-Bondeless Double-sided Cooling Power Electronic Module", *IEEE Energy Conversion Conference and Exposition (ECCE 2012)*, September 15-20, Raleigh, North Carolina.

[5] A. Johnson, A. Escobar Mejía, J. C. Balda, A. Barnes, "Wind Power Layout for Mitigating Output Power Intermittency", *IEEE 3rd International Symposium on Power Electronics for Distributed Generation*, June 25-28, Aalborg, Denmark.

[6] S. Geurin, A. Barnes, J.C. Balda, "Smart Grid Applications of Selected Energy Storage Technologies", *IEEE-PES ISGT Conference*, Washington DC, 16-18 January 2012.

[7] A. Escobar Mejía, A. Barnes, J.C. Balda, J. Bourne, M. Schupbach, "Enhancing Power Quality on Distribution Systems with Fault-Current Limiters", *IEEE-PES ISGT Conference*, Washington DC, 16-18 January 2012.
[8] A. Barnes, A. Escobar Mejía, J.C. Balda, "Placement of Energy Storage Coordinated with Smart PV Inverters", *IEEE-PES ISGT Conference*, Washington DC, 16-18 January 2012.
[9] A. Barnes, S. Geurin, J.C. Balda, "Optimal Battery Chemistry, Capacity, Charge/Discharge Schedule, and Lifetime for Energy Storage under Time-of-Use Pricing", *IEEE-PES ISGT Europe 2011*, Manchester (UK), 5-7 December 2011.
[10] K. Schirmer, B. Rowden, H.A. Mantooth, S.S. Ang, and J.C. Balda, "Packaging and Modeling of SiC Power Modules," *220th ECS Meeting and Electrochemical Energy Summit*, October 9-14, Boston (MA).
[11] S. S. Ang, T. Evan, J. Zhou, K. Schirmer, H. Zhang, B. L. Rowden, J.C. Balda, and H. A. Mantooth, "Packaging issues for high-voltage power electronics modules," The Electrochemical Society Transactions – CSTIC 2011, "Packaging and Assembly", vol. 30, March 2011.
[12] A. Escobar, M. Saadeh, J.C. Balda, J. Bourne, Y. Feng, H. A. Mantooth, "A methodology to coordinate solid-state fault current limiters with conventional protective devices," *IEEE/PES Power Systems Conference and Exposition (PSCE), 2011*, Phoenix (AZ), 20-23 March 2011.

SCIENTIFIC AND PROFESSIONAL SOCIETIES
Institute of Electrical and Electronic Engineers: Power Electronics and Power & Energy Societies

HONORS AND AWARDS
Voted the Electrical Engineering Outstanding Faculty by the Eta Kappa Nu Honor Society - University of Arkansas branch, academic year 2004-2005.
College of Engineering – Electrical Engineering Department, Outstanding Researcher Award, Department of Electrical Engineering, academic year 2004-2005.
University of Arkansas – Electrical Engineering Academy, Outstanding Faculty Award, Department of Electrical Engineering, academic year 2003-2004.

INSTITUTIONAL AND PROFESSIONAL SERVICE IN THE LAST FIVE YEARS
Taught Basic Electricity and Magnetism at the Electric Meter School (5 times)
Faculty Advisor of the UA chapter of the Power Electronics Society of the Institute of Electrical and Electronic Engineers
Reviewed papers for: IEEE Power Electronics Specialists Conference, IEEE Applied Power Electronics Conference, and IEEE Transactions on Power Electronics
Department of Electrical Engineering Undergraduate Curriculum Committee and Laboratory Committees
College of Engineering Committees
Teaching courses through the Engineering Distance Education Center
Technical Program Chair for the 4th Symposium on Power Electronics for Distributed Generation (PEDG 2013), IEEE, July 8-11, 2013, Rogers, Arkansas.

PERCENTAGE OF TIME AVAILABLE FOR RESEARCH OR SCHOLARLY ACTIVITIES
Fifty percent

PERCENTAGE OF TIME COMMITTED TO THE PROGRAM
Forty percent

RESEARCH INTERESTS
Electric Power Distribution Systems, Power Electronics, Motor Drives, Renewable Energy Sources

Caroline M. Beam
Adjunct Faculty
University of Arkansas

EDUCATION

Doctor of Philosophy, Industrial Engineering and Operations Research, University of California at Berkeley, Berkeley, California. 1999.

Master of Science, Industrial Engineering and Operations Research, University of California at Berkeley, Berkeley, California. 1995.

Bachelor of Science in Civil Engineering and Operations Research, Princeton University, Princeton, New Jersey. 1991.

TEACHING EXPERIENCE

October 2012 – present. The University of Arkansas, Masters of Science in Operations Management, online.

Courses Taught—Lean Production and Inventory Control.

October 2010 – present. The University of Maryland, University College, Masters of Business Administration and Dual Masters of Business Administration, online.

Courses Taught --- Operations Management, Economic Decision Making, Project Management, and Quality Management.

August 2004 – August 2009 – St. Mary's College of California, Master's in Business Administration Program, Moraga, CA.

Courses Taught -- Quantitative Methods, Statistics, and Operations Management.

INDUSTRIAL EXPERIENCE

<u>September 1999– present</u> Principal, Carrie Beam Consulting

Predictive Analytics and Data Mining Projects: Wide variety of Descriptive and Predictive Analytics models built for variety of clients including Riverdeep Educational Products, Philip Johnson and Associates, Firewood Marketing, Systema Performance Systems, St. Francis Memorial Hospital (Catholic Healthcare West), Cambria Solutions, and Kaplan, Von Ohlen, and Massamillo LLC.

Industrial Engineering Projects: Time and Motion Study and Benefits Evaluation of new computer system for Caltrans (California Department of Transportation), Sacramento, CA, as a subcontractor through Deloitte Consulting. San Jose Police Department, Substation Facilities Location Feasibility Study, as a subcontractor through Leading Resources, Inc. Performance Measures for California Department of Motor Vehicles, Business Process Re-engineering project (as a subcontractor with American Management Systems.)

RELEVANT PUBLICATIONS

PROFESSIONAL SOCIETY MEMBERSHIPS and CERTIFICATIONS

INFORMS Franz Edelman Award Committee. Member of the Operations Research Society of America's committee to identify and choose the world's best application of analytics to business.

INFORMS Analytics Certification Exam Question Writer. Member of committee to identify relevant areas of analytics knowledge. Wrote, edited, and selected questions to be used in the Certified Analytics Professional Exam, a new certification of analytics expertise for working professionals to be given for the first time in 2013.

HONORS AND AWARDS

Brandon Brown, M.S.E, P.E.
Adjunct Faculty
University of Arkansas

EDUCATION
M.S., Engineering, University of Arkansas, Fayetteville, AR, 2003
B.S., Mechanical Engineering, University of Arkansas, Fayetteville, AR 1995

NON-ACADEMIC EXPERIENCE
Central States Manufacturing - Building and components manufacturer of light gauge sheet metal and light gauge structural steel.
Production Manager, Trim Departments - Lowell, AR - June 2004 to Present
Engineering Manager - Pocahontas, AR - October, 1999 to June, 2004
Project Engineer - Pocahontas, AR - March 1999 to October 1999
Project Engineer, New Product Development - Jonesboro, AR - 01196 to 03/99
Co-op Engineer - Independence Plant, Newark, AR - 08/94 to 12/94

HONORS and AWARDS
Publications
"Transformation from Batch to Lean Manufacturing: The Performance Issues," *Engineering Management Journal.* 17(3),2005 (B. Brown and T. Collins).
US Patent 5,779,105 - July 14, 1998
US Patent 5,924,602 - July 20, 1999
TBII Engineering Honor Society
IlT~ Mechanical Engr. Society
Golden Key National Honor Society
Dean's List 1992-1995
IlT~ Outstanding Initiate Scholarship
ASU Academic Scholarship
H. L. Lubker Scholarship
G. D. Smith Memorial Scholarship

C. Richard Cassady, PhD

Education
PhD, Industrial and Systems Engineering, Virginia Tech, 1996
MS, Industrial and Systems Engineering, Virginia Tech, 1993
BS summa cum laude, Industrial and Systems Engineering, Virginia Tech, 1992

Academic Experience
Professor, Dept. of Industrial Engineering, U. of Arkansas, 2008-present
Associate Professor, Dept. of Industrial Engineering, U. of Arkansas, 2004-2008
Assistant Professor, Dept. of Industrial Engineering, U. of Arkansas, 2000-2004
Assistant Professor, Dept. of Industrial Engineering, Mississippi State U., 1996-2000
Instructor, Dept. of Industrial and Systems Engineering, Virginia Tech, 1994-1996

Non-Academic Experience
Management Systems Co-op Student, Carilion Health System, Roanoke, VA, 1989-1991

Certification or Professional Registrations
none

Current Membership in Professional Organizations
American Society for Engineering Education
Institute of Industrial Engineers
Society of Reliability Engineers

Honors and Awards
Fellow, Institute of Industrial Engineers, elected in 2012
Fellow, Society of Reliability Engineers, elected in 2010
Charles and Nadine Baum Faculty Teaching Award, U. of Arkansas, 2006
Fellow, U. of Arkansas Teaching Academy, elected in 2006
Imhoff Outstanding Teacher Award, College of Engineering, 2005

Service Activities
Director, U. of Arkansas Freshman Engineering Program, 2006-present
Past General Chair, Reliability and Maintainability Symposium
FIRST LEGO League Team Coach, 2011-present

Recent Publications and Presentations
1. Y. Xiang, C.R. Cassady, E.A. Pohl (2012). "Optimal Maintenance Policies for a System Subject to a Markovian Operating Environment," *Computers and Industrial Engineering*, 62(1), 190-197.
2. "Preparing for Teaching: Successful Strategies," Annual IIE New Faculty Colloquium, Orlando, FL, 2012.
3. B. McClure, C.R. Cassady, C. Rainwater, J.R. Chimka (2012). "Optimizing the Sunday Singles Lineup for a Ryder Cup Captain," *Interfaces*, 42(2), 180-190.

4. “Evaluating the Fairness of Approaches Used to Determine League Champions,” Industrial Engineering Research Conference, 2011.
5. “Incorporating Degrees of Separation into College Football Rankings,” Industrial Engineering Research Conference, 2011 (presented by B. Wiles).
6. L.M. Maillart, C.R. Cassady, C. Rainwater, K. Schneider (2009). “Selective Maintenance Decision-Making over Extended Planning Horizons,” *IEEE Transactions on Reliability*, 58(3), 462-469.
7. C.R. Cassady, J.A. Nachlas (2009). *Probability Models in Operations Research*. CRC Press, Boca Raton.
8. L.M. Maillart, C.R. Cassady, J. (2008). “A Binomial Approximation of Lot Yield under Markov Modulated Bernoulli Item Yield,” *IIE Transactions*, 40(4), 459-467.
9. T.G. Yeung, C.R. Cassady, K. Schneider (2008). “Simultaneous Optimization of $\bar{X}$ Control Charts and Age-Based Preventive Maintenance Policies under an Economic Objective,” *IIE Transactions*, 40(2), 147-159.

Matthew V. Cilli, Ph.D.

Improving Perspective • Quantifying Reasoning • Enhancing Understanding

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(570) 620-1735
gmattcilli@gmail.com

HOLISTIC THINKING AND ANALYTICS FOR BETTER DECISION MAKING

...utilizing a rich palette of hard and soft skills to guide and inspire clients through complex decisions

Visionary Leader and Supervisory Systems Engineer with a Ph.D. and two Master's Degrees coupled with over 25 years of experience leading effective research and development programs for the United States Army.

SUMMARY OF QUALIFICATIONS

- **Highly educated in the hard sciences** with engineering degrees from Stevens Institute of Technology, University of Pennsylvania, New York University Polytechnic, and Villanova University.
- **Experienced leader** of large, diverse teams where a full set of finely tuned soft skills and advanced emotional intelligence are regularly employed.
- **Accomplished public speaker** with a proven track record of several hundred presentations ranging from large audiences at annual conferences to small audiences of defense leaders at the Pentagon.
- **Author** of a growing list of peer reviewed and published papers.

HIGHLIGHTED PROFESSIONAL EXPERIENCE

UNITED STATES DEPARTMENT OF DEFENSE, U.S. ARMY, ARMAMENT RESEARCH, DEVELOPMENT, & ENGINEERING CENTER (ARDEC), Picatinny Arsenal, NJ 07806

Supervisory Systems Engineer (2010 to Present)

- Currently serving as the technical executive for systems engineering tradeoff analyses for several major weapon systems undergoing multi-billion dollar investment decisions.
- Responsible for leading a multi-organizational team through a thorough exploration of stakeholder desires and design alternatives to identify and communicate the relationship between top level design decisions and stakeholder value in the areas of cost, schedule, and performance in the presence of uncertainty.
- Activities include eliciting values from stakeholders, developing an objectives hierarchy, determining value functions and priority weightings for each objective, generating alternatives, assessing alternatives, synthesizing assessments, conducting sensitivity analyses, creating trade space visualizations, driving consensus and fostering understanding of final recommendation.
- Earned the ARDEC System Engineering Fellow Scholarship for this state-of-the-art, extended body of work. ARDEC has granted only one such fellowship award over the last five years.

Deputy Product Manager, Electromagnetic Gun (2004-2009)

- Responsible for a $20M annual budget and led a cross-organizational team (government, industry, and academia) to research and mature electromagnetic launch technology.
- Created a strategic vision to pursue radical technology innovation to sustain firepower capability growth.
- Earned the National Defense Industrial Association (NDIA) Picatinny Chapter Firepower Award for outstanding contributions during this period.

Deputy Project Officer (DPO), Guided Munition Technology Investigations (1997 – 2003)

- Responsible for a $5M annual budget and led a govt./industry team researching a guided munitions suite.
- Earned the ARDEC Commander's Award for Civilian Service during this period.

Systems Management Engineer (1994 – 1997)

- Served as technical representative to the Fire Support Center at Fort Sill, Oklahoma.
- Researched customer requirements and translated requirements into proposed solutions.

Electrical Engineer (1989-1994)

- Served as a project engineer on an Air Defense Gun technology project.
- Provided system quality and reliability engineering support and developed testing plans.

EDUCATION

Stevens Institute of Technology, Hoboken, NJ

- Doctor of Philosophy in Systems Engineering, December 2015
- GPA: 3.96

University of Pennsylvania, Wharton Business School, Philadelphia, PA

- Executive Master's of Science in Engineering and Technology Management, May 1998
- GPA: 3.65

NYU, Polytechnic University, Brooklyn, NY

- Master of Science – Electrical Engineering, January 1992
- GPA: 3.25

Villanova University, Villanova, PA

- Bachelor of Science - Electrical Engineering; Minor: Mathematics, May 1989
- GPA: 3.15 (Eta Kappa Nu Honor Society)

PUBLICATIONS

A Systems Engineering Perspective on the Revised Defense Acquisition System. (January 2016)

- Peer reviewed and accepted for publication in the Journal of Systems Engineering.

Improving Defense Acquisition Outcomes Using an Integrated Systems Engineering Decision Management (ISEDM) Approach. (November 2015)

- A successfully defended dissertation submitted to the faculty of Stevens Institute of Technology in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Systems Engineering.

Vision for a Multiple Objectives Decision Support Tool for Assessing Initial Business Cases of Military Technology Investments. (March 2010)

- Peer reviewed and accepted paper, presented and published in the 8th Conference on Systems Engineering Research (CSER) proceedings. Co-Authored with Dr. Gregory Parnell, Professor of Systems Engineering, U.S. Military Academy, West Point, NY.

Electromagnetic Gun and the Battle of Crecy. (June 2008)

- Winner of best paper and presentation award at the 14th Electromagnetic Launch Conference. Published in EML 2008 Proceedings.

Applying Integrated Product and Process Development (IPPD) on the U.S. Army Multi-Role Armament and Ammunition System. (February 2002)

- Peer reviewed and accepted paper, published in International Council On Systems Engineering (INCOSE) proceedings.

PROFESSIONAL AFFILIATIONS

Member of International Council on Systems Engineering (INCOSE)
Member of the Institute for Operations Research and the Management Sciences (INFORMS)

CERTIFICATIONS

Certified Lean Six Sigma Black Belt
Level III (Senior) Certification for Systems Planner, Research, & Development in the Army Acquisition Corp.

Michael F. Costello
Adjunct Faculty
University of Arkansas

EDUCATION

Doctor of Education (Ed.D.), Educational Innovation and Leadership
Wilmington University, New Castle, Delaware 1998

Master of Science, Human Resources Management (MSHRM)
Wilmington University, New Castle, Delaware 1993

Master of Business Administration (MBA)
Wilmington University, New Castle, Delaware 1992

Bachelor of Science Degree, Accounting
Wilmington University, New Castle, Delaware 1991

Bachelor of Science Degree, Business Management
Wilmington University, New Castle, Delaware 1990

Associate in Arts and Sciences Degree, Business Administration (AAS)
Lord Fairfax Community College, Middletown, Virginia 1987

TEACHING EXPERIENCE

December 1991-present: Assistant Professor, Base Faculty Representative, Industrial Technology Military Programs, Southern Illinois University, Carbondale. Carbondale, Illinois. Classes taught include: Facilities Planning, Supervision, Technology Design, Computer Assisted Drafting, Industrial Safety, Industrial Maintenance, Materials Management and Purchasing, Production and Inventory Control, Total Quality Management, Industrial Safety, Calculus, Six Sigma Green & Black Belt, Statistics and Computer Assisted Manufacturing. Also teach several on-line courses in Safety, Supervision & Robotics.

January 2001 – Present: University of Maryland Eastern Shore, School of Organizational Leadership (PhD) Program, Princess Anne, Maryland. Classes taught include: Bivariate and Multivariate Statistics, Quantitative & Qualitative Research Design Methodologies, and an on-line course in Human Resources Management.

January 1991 – Present: Wilmington University New Castle, Delaware. Graduate and Undergraduate classes taught include: Managerial Quantitative Analysis, Economics, Statistics I & II, Inferential Statistics, Calculus, Production & Operations Management, Analysis of Decision Making, Organization Behavior, Total Quality Management, Advanced Accounting, and Organization Development.

INDUSTRIAL EXPERIENCE

PLANT MANAGER Delmarva Sash and Door Co. Barclay Maryland (1988-1992)

PLANT MANAGER Universal Forest Products, Ranson, West Virginia. (1987-1988)

PLANT SUPERINTENDENT American Woodmark Corporation, Berryville, Virginia (1983-1987)

VICE PRESIDENT of Construction Operations, Shenandoah Masonry Co. Inc., Winchester, Virginia & Cumberland, Maryland. (1971-1983)

PROFESSIONAL PRESENTATIONS

SDWTs and Your Organization (APICS Conference)
The ADA and it's Impact on the College Classroom (College & University Counselors Association)

CERTIFICATIONS

Kepner-Tregoe ...Problem Solving and Decision Making Course
Leadership...Deming's CQI and Employee Involvement
Temple University...Warehouse and Distribution Management Course

Curriculum Vitae

Name: Rick J. Couvillion, PhD, PE
Department: Mechanical Engineering
Date of hire: 11/1/81
Years of service: 30
Present academic rank: Associate Professor, 1986
Degrees:

BSME, University of Arkansas, May, 1975: MSME, Georgia Tech, Sep, 1978
PhD, Mechanical Engineering, Georgia Tech, Dec, 1981

Other related experience – teaching, industrial, etc.:

ALCOA, Arkansas Operations, 5/75-9/77, Plant Engineer

Consulting, patents, etc.:

- Evans Law Firm. Carbon monoxide in Apartment Building. 2005 - 06.
- HSA Engineers. Transient Wall Temperatures. 2007.
- Deltic Timber Corp. Sprinkler System Design. 2007.
- Cooper Tire, Piping Systems, 2010
- Green Bay Packaging, Pumps Assessment, 2012
- Travis Lumber, Boiler Assessment, 2012

State(s) in which registered: Arkansas

Principal publications during the last five years:

Books

- ASHRAE, Fundamentals Handbook, Ch. 5 - Mass Transfer, Principal Editor, 2005, 2009.
- ASHRAE, Fundamentals Handbook, Ch. 3 - Heat Transfer, Principal Editor, 2005, 2009.
- ASHRAE, Fundamentals Handbook, Ch. 2 - Fluid Flow, Principal Editor, 2005, 2009.
- Advanced Electronic Packaging, Ch. 7 - Thermal Management, Richard K Ulrich and William D Brown, eds.,IEEE Press, 2006.

Refereed Journals, Invited Presentations

- Couvillion, Rick J, “Curve Fits for Heisler Chart Eigenvalues”, Computers in Education Journal, July-Sep, 2004.
- John R Barcinella, Darin W Nutter, and Rick J Couvillion, Effective Thermal Conductivity for Single-Bore Vertical HXs with Groundwater Flow, ASHRAE Transactions, Vol 111, 2005.
- Couvillion, Rick J and Hodge, BK, "A Unified Approach to Piping Systems Problems Using Excel", Computers in Education Journal, Jan-Mar, 2009.
- Couvillion, Rick J and Roe, Larry, "Crossflow Air-Liquid Heat Exchanger Rating and Design Using Excel", Computers in Education Journal, July-Sep, 2012.

Other Refereed Publications

- R. Couvillion et al., Proceedings of the Joint ASME Region X/SDPS Graduate Student Technical Conference, Editor, March 2004, March 2005, April 2006.
- R.K. Rajgaharia, D.G. Bhat, and R. J. Couvillion, "Development of an Optimized Chemical Vapor Infiltration Process for Composite CBN-Dispersed Hard Coating on WC-Co Tool Inserts", Proceedings of the Third Joint ASME Region X/SDPS Graduate Student Technical Conference, March 2005.
- Rajgarhia, Rahul K.; Bhat, Deepak G.; Couvillion, Rick J. "Development of a Chemical Vapor Infiltration Process for Composite CBN-Dispersed Hard, Wear Resistant Coating on WC-Co Tool Inserts", Proceedings of the 19th International Conference on Surface Modification Technologies, 2006.
- R. Couvillion et al., Proceedings of the ASME District E Early Career Technical Conference, Editor, April 2007, 2008, 2009, 2010, 2011, 2012.
- Jong, I. C., W. T. Springer, and R. J. Couvillion, “Teaching Deflections of Beams: Advantages of Method of Model Formulas versus Method of Integration,” Session 402, *Proceedings of the 2010 ASEE Midwest Section Annual Conference*, Lawrence, KS, September 22-24, 2010.

Scientific and professional societies membership:

American Society of Mechanical Engineers

- Student Section Faculty Advisor, 1982-85, 1987-92, 2004 - present.
- Student Affairs Coordinator, ASME District E, 7/06 - present.
- Assistant VP for Education, ASME Region X, 7/01 - 6/06.

American Society of Heating, Refrigeration, and Air-Conditioning Engineers

- Chairman, Heat Transfer and Fluid Flow Committee (1.3), 7/95 - 6/97. Currently member and Handbook Subcommittee Chair.
- Faculty Co-Advisor, 1995 – present
- ASEE member
- Pi Tau Sigma, member and Faculty Advisor
- Tau Beta Pi College Advisory Board

Honors and awards:

- Student Section Advisor Award and Silver Medal - ASME (2012)
- Arkansas Academy of Mechanical Engineering (2007).
- University of Arkansas Teaching Academy (2005).
- Fellow - ASME (2004).
- Outstanding Mechanical Engineering Service Award, (1999-2000, 2002-03, 2005-06, 2011-12).
- Outstanding Mechanical Engineering Teacher Award, (1983-84, 1984-85, 1987-88, 2000-01, 2001-02, 2003-04, 2004-05).
- Outstanding Mechanical Engineering Researcher Award, (1984-85, 1989-90, 1990-91).
- ASME Region X Robert W. Cox Award for educational activities and student affairs, (1996).
- Outstanding Mechanical Engineering Faculty Member, Arkansas Academy of Mechanical Engineers (1985-86).
- Ralph R. Teetor Award, Society of Automotive Engineers (1985).

Subjects or courses taught during the most recent academic year:

MEEG 5453	Advanced Heat Transfer	3 sem hours
MEEG 4483	Thermal Systems	3 sem hours
MEEG 4133	Creative Project II	3 sem hours
MEEG 4131	Creative Project I	1 sem hours
MEEG 591	Special Project	3 sem hours
MEEG 2403	Thermodynamics	3 sem hours
MEEG 5403	Advanced Thermodynamics	4 sem hours
GNEG XX01	4 CO-OP sections	4 sem hours

Institutional and professional service in the last five years:

ME Graduate Committee Chair
ME Thermal Systems Group Chair
ME Library Representative
College CO-OP Committee
ME Curriculum Committee
ME Scholarship Committee
ASHRAE Technical Committee 1.3 Handbook Subcommittee Chair
ASME District E Student Affairs Coordinator
UA Teaching Academy Executive Committee
College Distance Education Coordinator

Professional development activities during the last five years:

Taught PE Review Course Segment, 5 hr, every fall
Taught FE Review Course Segment, 2 hr, every semester

Percentage of time available for research or scholarly activities:

15% due to teaching and service commitments

Percentage of time committed to the program:

120%, based on a 40 hr week, including work at home

NORMAN D. DENNIS, JR

University Professor
University of Arkansas
Fayetteville, Arkansas 72701

Education:

BSCE	University of Missouri - Rolla, 1971
MSCE	University of Missouri - Rolla, (Environmental) 1973
MSBA	Boston University, 1979
Ph.D.	University of Texas - Austin, (Geotechnical) 1982

Honors

Diplomat, Geotechnical Engineering, Academy of Geo-Professionals, 2010
Member Arkansas Academy of Civil Engineers, 2010
Distinguished Visiting Professor, United States Air Force Academy, 2008-2009
Charles and Nadine Baum Award, University of Arkansas' Outstanding Teacher Award, 2008
James M. Robbins Award, Chi Epsilon National Teaching Award for Civil Engineering, 2008
Fellow, University of Arkansas Teaching Academy, 2006
Excellence in Civil Engineering Education Leadership Award, American Society of Civil Engineers, 2006
Fellow, American Society of Civil Engineers, 2002
Texas Instruments/College of Engineering Outstanding Teacher Award 1996-97, 1998-99, 2000-01, 2006-2007
Distinguished Lecturer, ASEE/NSF, 2001
Tau Beta Pi, Chi Epsilon, Phi Kappa Phi

Experience:

Teaching:
- Associate Dean, College of Engineering, 2012-
- Co-Director, Wally Cordes Teaching and Faculty Support Center, 2010
- University Professor, University of Arkansas, 2011
- Professor, University of Arkansas, 2001-present
- Associate Professor, University of Arkansas, 1996-2000
- Academy Professor, U. S. Military Academy, 1989-1996
- Assistant/Associate Professor, U.S. Military Academy, 1982-1986

Practice:
- Executive Officer, Engineer Battalion, Ft. Stewart, GA, 1987-1989 (COO of 680 person heavy construction organization)
- Resident Engineer/Contracting Officer, U.S. Army Corps of Engineers, Northern Italy, 1977-1980
- Engineer Officer, Ft. Carson, CO, 1973-1976 (Various technical and leadership positions in 980 person construction organization)

Professional Registration:

Colorado #14402 (1976) Arkansas #9405 (1996)

Professional and Technical Society Activities:

American Society of Civil Engineers/Geo-Institute (4–National Committees, Chair committee on Education, Past-Chair, Committee on Faculty Development, Associate Editor-Journal of Professional Issues, Director, ExCEEd Teaching Workshop 2000-2009)
American Society for Engineering Education (Distinguished Lecturer-Visiting Scholar, Campus Representative, Past Chair-Mid-West Section, Board of Direction 2005-present, Program Chair 2008-2009, Division Chair 2009-2010 Civil Engineering Division.
Transportation Research Board (Member AFS50, Chair AFS10, NCHRP member - 4 panels, Chair NCHRP 24-28)
ABET Program Evaluator – Civil Engineering 2000-present
International Society for Soil Mechanics and Foundation Engineering
United States Universities Council on Geotechnical Education and Research
International Association of Foundation Drilling (Affiliate Member)

Society of American Military Engineers (Past President West Point Post)

Current Research Interests:
Advanced methods for laboratory and field determination of transportation soil properties, use of remote sensing techniques and GIS for geotechnical screening, reliability of geotechnical works, innovative technologies for remediation and monitoring of slope movements, determination of moisture migration in pavement structures, quality control of flexible pavements using seismic methods.

Current Research under Contract:

Calibration of LRFD Resistance Factors for Bridge Foundation Design	$120,000
Measurement of Driven Pile Capacity Using Laser Interferometry	$165,000
Total Funded Research/Grants since 1996	$4,166,800

Graduate Students Supervised (Dissertations or Theses, completed since 1998)
Ph.D. – 6 M.S. – 20

Peer Reviewed Publications	**Educational**	**Technical**
Monographs	1	1
Journal Articles	5	16
Conference Proceedings	15	39

Courses Taught at University of Arkansas

Course	**Times Taught**	**Avg. Course Rating**
Basic Mechanics for Civil Engineers (CVEG 2014)	4	4.5/5.0
Basic Soil Mechanics (CVEG 3133)	3	4.4/5.0
Foundation Engineering (CVEG 4143)	24	4.3/5.0
Earth Structures (CVEG 4153)	7	4.7/5.0
Measurement of Soil Properties (CVEG 5123)	4	4.9/5.0
Transportation Soils (CVEG 5143)	6	4.8/5.0
Advanced Soil Mechanics (CVEG 5163)	3	4.8/5.0
Advanced Foundations (CVEG 5173)	7	4.6/5.0
Geosynthetic Applications (CVEG 563)	7	4.7/5.0

Educational/Teaching Related University Service
Director, University Teaching and Faculty Support Center, 2010-2012
Member University Appointment Promotion and Tenure Committee 2002-2008, 2009-2012, Chair 2006, 2011
Member, University Faculty Senate 1999-2008, 2010-
Member, Campus Council, 2003-2008, 2010-
Member, Steering Committee for Preparing Future Faculty, 2006-2008
Member, University Teaching Council, 1998-2004, Chair (2000-2001, 2002-2003)
Member, University Core Curriculum Committee, 1997-2000
Member College of Engineering ABET Committee, 1999-2003
University Appointment, Promotion and Tenure Committee, Member 2002-2008, 2009-present, Chair 2004 and 2011
Member, University Advising Council, 2002-2004
Member, Faculty Senate Taskforce on Grades, 2004-2006
Member, College of Engineering Teaching Innovation Committee, 1998-present
Chair, Department of Civil Engineering Curriculum Committee, 2001-2006
Chair, Department Promotion and Tenure Committee, 2001-2006
Chair, Department Personnel Committee, 2007-2011
Faculty Advisor, Chi Epsilon Honor Society, 1998-2008, 2009-present

David Gagnon
Adjunct Faculty
University of Arkansas

EDUCATION

Master of Science, Operations Management
University of Arkansas, Fayetteville, Arkansas. 1993

Bachelor of Business Administration
University of Memphis, Memphis, Tennessee. 1987

Executive Certificate
The Darden School, University of Virginia, Charlottesville, VA .1999

TEACHING EXPERIENCE

August 1993-August 1994 Crichton College, Belhaven College
Taught Classes on Leadership, Business, Marketing, Management, Strategy

August 2004-present The University of Arkansas, Masters of Science in Operations Management, Millington, TN site. Classes include classroom as well as on-line instruction

Courses Taught—Operations Management in the Service Sector, Supply Chain Management for Operations Managers, Strategic Management, Organization and Control, Operations Management and Global Competition, Human Resource Management, Human Behavior Analysis,

INDUSTRIAL EXPERIENCE

August 1983- Present	Federal Express Corporation
04/2007-Present	Senior Manager, Global Service and Quality
8/2000-04/2007	Manager, Global Strategic Planning,
8/1997-8/2000	Sr. Manager, Leadership Institute
5/1994-8/1997	Senior Manager, Operations
6/1988-5/1994	Manager. Operations
8/1983-6/1988	Various Part-Time Hourly Positions

PROFESSIONAL MEMBERSHIPS/HONORS

Board Member-CSA Executive Board

Memphis Educational Business Advisory Board

Awarded Fed Ex Five Star in 1993 and 2012. The 5 Star Award is FedEx's highest honor for individual achievement.

ISO 9000 Fed Ex Worldwide Corporate Committee

Awarded Multiple Star/Superstar Awards –Fedex—top 1% of Management

Richard G. Ham, Sr., Ed.D.
3502 NW Mountainview Rd
Bentonville, Arkansas
479-657-3466
drhamsr@gmail.com

Profile:

Experience providing strong leadership and oversight of large-scale security operations, military/government certification and education programs, personnel management, multi-modal (aviation, cargo, surface, military and law enforcement) security issues, contingency planning, airport security operations, implementation of regulations, and various aspects of ground security and emergency management. Skilled in developing, coordinating and implementing policies, programs, and directives at the senior executive level and responding effectively to the Congress, government and industry executives, stakeholders, the media, special interest groups, and the general public.

Education

Doctor of Education in Higher Education, University of Arkansas-Little Rock, College of Education, Department of Educational Leadership, 2006.

Dissertation: *The Effect of Post-9/11 Security Requirements on Aviation Higher Education and Aviation Higher Education Student Attitudes Toward the United States*.

Master of Aeronautical Science, Embry-Riddle Aeronautical University, 1999.

Thesis/Capstone: *Safety and Security Regulatory Schemes and Their Effect on Commercial Aviation*.

Eastern New Mexico and Liberty Universities, Student in Master of Arts in Counseling, 1990-1992.

Bachelor of Science in Social Psychology, Park College, 1988.

Associate of Science in Aviation Science, Community College of the Air Force, 1987.

Transportation Operations, Security, Law Enforcement, and Leadership Training:

- American Society for Industrial Security (ASIS), Certified Protection Professional Course, 2012
- Executive Security Course, Tel Aviv University, Tel Aviv, Israel, 2010
- Civil Process, 2007
- Racial Profiling, 2005, 2006, 2007
- Rural Law Enforcement Training: Domestic Violence Intervention and Investigation , National Sheriff's Association, 2007
- Behavioral Profiling, 2007
- Transportation Security Administration Rail Road Security and Operations Course, 2006
- Part Time II Law Enforcement Course, Arkansas State University- Beebe, 2005
- Domestic Violence, 2005
- Criminal Immigration Course, 2005
- Reid Interview/Interrogation Basic and Advanced Course, 2003
- Basic and Advanced Transportation Security Administration Security Enforcement Academy, 2002 and 2004

- Transportation Security Administration Physical Security Course, 2004
- Department of Homeland Security Threat Assessment Course, 2004
- Airport Security Coordinators Course, American Association of Airport Executives, 2002
- Basic and Advanced Airport Operations Course, American Association of Airport Executives (AAAE), 1997
- USAF/Department of Defense (DoD) Physical Security Course, 1996
- USAF Force Protection Course, 1996
- USAF Counter-Terrorism Course, 1996
- Runway Condition Reading and Snow/Ice Removal Course, AAAE 1996
- USAF Air Command and Staff College, 1996
- Quality Assurance Evaluator Course, 1996
- Safety, Weather, Operations and Security Course, 1995
- Airport Safety, Security and Operations Course, AAAE 1995
- Bird, Wildlife and Airport Access Control, AAAE and Bird Advisory Committee, 1996, 1997
- Aerial Port Commander's Course, 1995
- Instructor Counseling and Student Development, July 1994
- Aircraft Accident, Incident and Mishap Investigation Course, 1993
- USAF Squadron Officers School, 1993
- Education and Training Manager Course, 1993
- Curriculum Development Course, 1993
- Technical Instructor Course, 1992
- Air Base Security and Law Enforcement Commander Course, 1992
- USAF Terminal Instrument Procedures Course, 1990
- USAF Airspace, Combat Airspace, Officer Courses, 1989
- USAF Officer Training School, 1989
- USAF Non-Commissioned Officer Academy and Leadership School, 1987
- USAF Air Traffic Control Operator Course, 1982

Graduate Concentration Hours (not exhaustive)

Psychology/Sociology/Organizational Behavior

Human Factors in Aviation (MAS 604)
Standardized Group Tests (PSY 505)
Professional Assessment/Development (PSY 518)
Techniques-Clinical Counseling, (PSY 544A)
Marriage and Family (COUN 601)
Intro College Student Affairs (HIED 7351-Doctoral Level)
Organizational Behavior in Education (HIED 8342-Doctoral Level)

*Research/Statis*tics

Research Methods & Statistics (MAS 605)
Basic Statistics (EDFN 7304-Doctoral Level)
Qualitative Research Methods (EDFN 7342-Doctoral Level)
Advanced Statistics (EDFN 8305-Doctoral Level)
Advanced Research Methods and Techniques (EDFN 8306-Doctoral Level)
Advanced Research. (EDFN 8341-Doctoral Level)
Internet Research in Higher Education (HIED 8345-Doctoral Level)
Dissertation (HIED 8399-Doctoral Level)

Current Courses Taught

Safety/Security/Operations

Airport Operations Safety (MAS 613)
Aerospace Accident Investigation and Safety (MAS 608)
Airport Operations and Management (BA 645)
Advanced Aviation/Aerospace Planning (MAS 636)
Production and Procedure Management in Aviation, (MAS 641)
Transportation Security (MAS 616)
Aviation Security (MAS 617)

Management/Leadership

The Air Transportation System (MAS 602)
Seminar in Aviation Labor Relations (BA 632)
Advanced Aviation Planning (MAS 636)
Airport Operations and Management (BA 645)
Leadership Theories (HIED 8345-Doctoral Level)
Security Administration and Management (SECR 5020)
Business Asset Protection (SECR 5030)
Leadership and Ethics (OMGT 5823)

Research

Research Methods & Statistics (MAS 605)
Research Methods (MAS 670)
Graduate Capstone (MAS 691)

Certificates/Skills/Expertise:

- Private Pilot Certificate
- Air Traffic Control Tower Operator Certificate
- Specialized Law Enforcement Certificate (Arkansas), 2007
- Statistical, Quantitative and Qualitative Research and Analysis
- Educator/Trainer/Lecturer
- Experience in Time-Motion and Staffing Modeling
- Proficient in use of Statistical Analysis Software
- Proficient in Microsoft Office and Project
- Federal Aviation Administration Appointed Aviation Counselor, 1995
- Aircraft Accident and Incident Investigator

Chronological Summary of Education Teaching and Administration Experience

2014-Present Associate Director, Master of Science in Operations Management, University of Arkansas

2002-2013 General Manager, Assistant/Deputy Federal Security Director, Department of Homeland Security.

2003-Present Instructor, Security Enforcement Training Academy and Federal Law Enforcement Training Center.

2004-2008 Non-Profit Chairman of the Board: Higher Education Scholarship Fund and Foster Parent Recruiting/Training Association. Ensured regulatory compliance, raised funds

to support staff/material cost and scholarship fund requirements; Served as subject matter expert on safety, operations and security curriculum.

1999-Present Adjunct Assistant/Associate Professor Embry-Riddle Aeronautical University and Webster University

1989-2002 Commander, Instructor Supervisor, Curriculum Supervisor. (Equivalent of Dean/ Chief Academic Officer). Commanded Operations, Safety, Security Training, including designated FAA Examiner.

Administrative, Business, Security & Operations Experience

Department of Homeland Security, Transportation Security Administration (TSA)

General Manager/Deputy General Manager, Compliance Programs, Office of Security Operations, and Asst Federal Security Director Dallas Fort Worth International Airport., October 2009-July 2014. Managed the TSA national regulatory compliance program. Developed and provided national and international strategic vision for policies and programs; oversee associated investigative functions for regulatory programs in the Cargo, Explosive Detection Canine, Aviation, Surface, Compliance Reporting, and Training areas. Set initial physical, qualification and suitability requirements for inspectors; coordinated suitability requirements and adjudication requirements.

Accomplishments:

- Chief Regulatory Officer (Senior Executive Service) for a large federal agency.
- Managed the TSA Surface Training Academy to train Inspectors, Federal Security Directors, Federal Air Marshals, and other TSA headquarters and field personnel in railroad and rail mass transit safety, operations, equipment and technology, and other modal-specific security strategies and processes.
- Successfully implemented a broad-sweeping culture change titled Compliance Personnel Evolution that provided a blueprint for professional development of the compliance workforce through enhanced training, quality control standards, and an operational focus to successfully mitigate threat, reduce risk, and identify vulnerabilities.
- Managed a $450 million budget. Saved $70 million annually in first year through innovation of travel and training procedures; negotiated, monitored and administered multi-million dollar contracts
- Ensured compliance with security regulations by air carrier, airport, air cargo, and surface transportation entities.
- Implemented a comprehensive annual work plan for risk-based and operational scope and work of field-based inspection workforce two months ahead of schedule.
- Negotiated a contract to facilitate live exercise training focused on terrorism prevention and response in mass transit and passenger rail systems.
- Built strong relationships with TSA stakeholders via collaborative working groups, speaking engagements, and attendance at conferences.
- Adept at government affairs, working with congressional members and staffers.
- Speaker for airline, airport, surface, and regulatory industry groups and conferences.
- Managed entire TSA regulatory program, including operational K9 units at the agency's fourth busiest airport, including oversight of the merger of American and USAirways, forming the largest air carrier in the world.

Assistant Federal Security Director for Inspections/Deputy Federal Security Director, Little Rock AR National Airport, November 2003-October 2009. Responsible for day-to-day management of TSA personnel conducting screening activities, regulatory inspections, law enforcement and administrative/budget functions for all airports in Arkansas.

Accomplishments:

- Established the organizational structure and management systems required for threat identification, risk management, crisis management, employee accountability, and security of the facilities, including all aircraft.
- Developed travel saving plan utilizing private aircraft, doubling inspector production while cutting cost by $35K annually.
- Acted as primary liaison with Federal, State, and local officials regarding transportation security policies, procedures, and practices; dealt with local Members of Congress and their staff as well as top State officials.
- Managed scheduling activity of Joint Terrorism Task Force members; gathered and disseminated intelligence information.
- Successfully facilitated third-party agreements from specialized service organizations and all TSA resources associated with the operation, including personnel funds, equipment, and information.
- Reviewed, evaluated and recommended improvements of complex transportation security enforcement programs.
- Provided technical assistance to TSA management on five major national investigations involving violations of Federal laws or regulations.
- Coordinated numerous multi-jurisdictional investigations with representatives of other Federal, State and local agencies, including interpretation of legal requirements; adapted TSA policies and procedures and performed significant liaison.
- Led local crisis management activity.

Stakeholder Manager, Little Rock National Airport, October 2002-November 2003. Coordinated requirements and communication procedures with law enforcement, airport management, local, State, and Federal agencies; established stakeholder intelligence networks to improve aviation and multi-modal security; provided technical guidance to staff on all aspects of security operations; researched security requirements, performed threat assessments and implemented corrective action; served as the Federal Security Director's principal advisor on enforcement and compliance at all Arkansas airports; led comprehensive and supplemental inspections, identified weaknesses, and coordinated enforcement actions.

Accomplishments:

- Regularly met with 19 air carrier and airport senior management officials to communicate complex regulatory issues and controversial enforcement actions.
- Managed and developed security programs, inspection schedules, and force protection.
- Initiated, established and maintained monthly contact with Congressional delegation and staff and the Arkansas Governor's office.

United States Air Force, 1982 - 2002

Commander, Airfield Operations/Training Flight(s), Little Rock, AR, Thule, Greenland and Keesler Air Force Bases, July 1995-October 2002. Responsible for all aspects of wing/base air traffic control, including tower and airspace management of special use airspace and airfield management/base operations; provided controls and procedural guidance for approximately 65 military and 13 civilian personnel; represented the FAA as Aviation Safety Counselor.

Accomplishments:

- Trained over 1,500 civilian pilots annually on potential mid-air risk areas, runway incursion safety, and trends in aviation security and safety.
- Implemented and evaluated airfield/airspace security plans and anti-hijack plans.
- Served as Quality Assurance Evaluator for passenger processing and security screening, weather, airfield maintenance/management, and transient aircraft maintenance contract.
- Performed air traffic, airfield security, and airfield safety and security risk assessments.
- Managed a $25 million budget for administration facilities; saved $2.8 million through the consolidation of air traffic control facilities.

- Inspected satellite airports for compliance with safety and security regulations to determine suitability for USAF aircraft use.
- Negotiated international airline contracts with Scandinavia Airlines and airport management/logistics contracts with Greenland companies.
- Ensured 14 CFR 77 and 139 Compliance of assigned airfields.
- Negotiated international airfield, maintenance and aircraft contracts with Greenland Contractors and Foreign Flagged Air Carriers.
- Led USAF School for Air Traffic Control, Airfield Management, Airspace Management and Terminal Instrument Procedures; ensured certification of courses/instructors and accreditation for college credit by the Southern Association of Colleges and Schools

Higher Education and Government Education Experience

University of Arkansas,, College of Engineering, Department of Industrial Engineering

Associate Director, Master of Science in Operations Management, 2014-Present. Leads full-time staff/faculty and adjunct faculty in the administration of the largest Masters' Degree program at the University of Arkansas. Recruits, evaluates and establishes standards for faculty, curriculum, academic policies. Manages all budget expenditures and income, including third-party government programs. Establishes new interdisciplinary certificates and concentration certification area in Homeland Security, Healthcare Management and Lean Operations.

Department of Homeland Security/Transportation Security Administration (TSA)

General Manager/Deputy General Manager, Compliancee Programs, Officee of Security Operations, October 2009-2011. Managed the TSA Surface Training Academy to train Inspectors, Federal Security Directors, Federal Air Marshals, International students and other TSA headquarters and field personnel in railroad and rail mass transit safety, operations, equipment and technology, and other modal-specific security strategies and processes. Developed, delivered and approved curriculum for web-based, online, video, virtual and traditional classroom modalities for security, operations and leadership courses.

Instructor, Security Enforcement Training Academy, Federal Law Enforcement Center 2003-2013. As faculty member, taught basic and advanced courses in technical security and leadership and supervision of workforce. Set scheduling, training cycle and automated logistical tail requirements for all training, education and qualification of agency inspectors; established requirements and negotiated agreements with the Federal Law Enforcement Training Center (FLETC) for federal education and training. Supervised teams working with the registrar to establish life cycle costs and requirements for all FLETC training as well as the Surface Training Academy and Security Enforcement Training Academy. Developed curriculum and learning outcomes based on user/agency requirements; delivered training and adjusted based on student and user/agency feedback. Instructed using web- based, online, video, virtual and traditional classroom modalities.

Accomplishments:

- Successfully implemented a broad-sweeping culture change titled Compliance Personnel Evolution that provided a blueprint for professional development of the compliance workforce through enhanced training, quality control standards, and an operational focus to successfully mitigate threat, reduce risk, and identify vulnerabilities
- Established and enforced domestic and international security requirements based on current intelligence threat and regulatory requirements
- Integrated college-level courses through agreements with the FLETC Center and local institutions to meet certification requirements
- Provided vision for first professional certification program for inspectors
- Managed more than $70 million dollar budget for certification and training

Webster University & Embry-Riddle Aeronautical Universities

Assistant/Adjunct Professor, 1999 – 2013 As faculty member, provide undergraduate and graduate instruction leading to Bachelors and Masters Degrees in Business, Organizational Security Management, and Aeronautical Science; supervise original student graduate research; serve as committee member and chair for graduate research capstone requirement/thesis. Taught courses in statistics, quantitative/qualitative research methods, history, security theory, operational/security aviation legislation and various management courses.

Accomplishments:

- Chair of Record for 321 students
- Established online curriculum Designated subject matter expert for physical security, management and aeronautics courses

United States Air Force

Commander, Instructor, Instructor Supervisor, Curriculum Supervisor, 1989- 2002. Responsible for curriculum development, delivery and certification of courses certified for college credit by the Southern Association of Colleges and Schools. Provided student services, counseling and mentoring. Evaluated instructor performance. Researched end user needs and adjusted courses accordingly. Disciplined students and provided or directed remedial instruction. Supervised administration of Federal Aviation Administration (FAA) tests. Validated security clearance paperwork for initial entrants; ensured compliance with applicable regulations/laws for suitability. Developed curriculum and learning outcomes based on user/agency requirements; delivered training and adjusted based on student and user/agency feedback. Developed, delivered and approved curriculum for web-based, online, video, virtual and traditional classroom modalities for security, operations and leadership courses. Led all facets of airfield security, safety and operations requirements to meet both USAF and FAA requirements.

Accomplishments:

- Successfully led the effort for accreditation resulting in validation of college credit for all courses.
- Negotiated agreement with the FAA for a joint screening device for air traffic controllers to predict success and provide an admission tool
- Revamped all courses through new collaborative process with end users; lauded as revolutionary and greatest improvement in education programs in two decades
- Provided vision and management of new instructor evaluation system and institutional research

metrics evaluating efficacy of instruction and student performance after graduation

- Developed first airfield management integrated course complete with driving lab; incorporated physical and operational security requirements; set standards for FAA Part 66, 107 and 139 requirements for USAF airfields
- Established USAF requirements to meet FAA Part 77, 107 and 139 requirements
- Regulated FAA and International Civil Aviation Authority (ICAO) safety and security requirements as required by treaty/agreement with Denmark and Greenland Home Rule
    - Included supervision of wide/narrow body commercial screening/procedures for personnel and luggage destined for Copenhagen, all cities in Greenland, McGuire AFB, Baltimore International Airport for management courses and four regulated airports in Canada
- Quality Assurance Evaluator for Contract with Greenland Contractors, Scandinavian Airlines and Greenland for all Department of Defense (DoD) contracted commercial service in Greenland
- Primary Embassy subject matter expert to ensure FAA Part 121 and ICAO equivalencies were met for safety, operations and security of airports and air carriers
- Detailed with joint task force after 911 with FAA and FBI; trained over 1,500 pilots on runway incursion, new security and intercept procedures
- Certified Law Enforcement Instructor for Arkansas on Accident Investigation Regulatory Authorities and Security Requirements
- Trained over 1,500 civilian pilots annually on potential mid-air risk areas, runway incursion safety, and aviation security Implemented and evaluated airfield/airspace security plans and anti-hijack plans to comply with Federal/Department of Defense authorities
- Performed air traffic Managed a $25 million budget for administration facilities; saved $2.8 million through the consolidation of air traffic control facilities
- Inspected satellite airports for compliance with safety and security regulations to determine suitability for USAF aircraft use; coordinated with FAA Special Agents and Airport Safety Inspectors to determine if safety and security standards were sufficient for USAF aircraft to remain overnight; data provided for USAF-use to determine adequacy of measures
- Developed and piloted the first USAF Airfield K-9 Program
- Wing Point of Contact for US Secret Service Presidential/Advance Detail including screening, airspace restriction and FAA Coordination
- Wing Point of Contact for 21 airshows, including operations, safety, security and FAA Waivers; served as "Air Boss" for seven airshows
- and safety

Law Enforcement Experience

Lonoke County Arkansas Sheriff's Office/Caroline Township Constable's Office

Constable and Deputy Sheriff, January 2004 – 2008. Sworn armed law enforcement officer with arrest powers; respond to criminal activity and conduct searches, seizures, and arrests; apprehend individuals suspected of criminal activity; interview and interrogate witnesses and suspects. Investigate violations of criminal and civil law.

- Chief Law Enforcement Officer for Caroline Township, Lonoke County, Arkansas
- Established mutual aid agreements with Union Pacific Railroad and adjoining jurisdictions

USAF

Commander, Airfield Operations, Deputy Commander, Squadron Operations (Acting), Security NCO and Augmentee1982-2002, Various Locations. Served in law enforcement, physical security, airport/airfield security NCO and Officer; served in armed law enforcement and security functions; established security requirements in garrison and in deployed locations.

- Served as USAF Law Enforcement/Security Augmentee, 1984-1988
- Served as USAF Squadron/Group Airfield/Air Base Defense Officer, 1989-1993
- Served as Squadron Force Protection Officer, 1990-1995
- Conducted security, and airfield safety and security risk assessments.

Non-Profit and Fund Raising Experience

Arkansas Junior Aviator Committee

- Chairman, Board of Directors, August 2004-May 2008. Chaired board presenting scholarships to deserving students pursuing aviation careers in Arkansas. Raised funds, gave recruitment presentations, and ensured regulatory requirements were met for non-profit status. Chaired the selection Raised recurrent corporate grants and individual contributions to support annual scholarship for aviation higher education students, including an annual stipend for students seeking a bachelors' degree in a pilot discipline and a full scholarship for students seeking an associate degree in aviation maintenance. Assisted in the development of acceptable curriculum for operations, safety and security degrees.

Lonoke County Children of Arkansas Loved for a Lifetime (C.A.L.L.)

Chairman, Board of Directors, January 2006-October 2009. Chartered and chaired the board of faith-based non-profit foster care organization. Raised funds, taught certified course to new foster parents and gave presentations at recruitment events. Wrote charter and ensured regulatory compliance with Department of Children and Family Services and Internal Revenue Service requirements.

- Start-up organization with zero funds; raised recurring grant funding and individual donations sufficient to support all training needs and paid staff in three years.
- Increased certified Foster Parents in Lonoke County from four to fifty in two years, averting placement of children in group homes or unsuitable environments.

AWARDS

- Faculty Member of the Year, Embry-Riddle University, Little Rock Campus, 2009
- Foster Parents of the Year, Arkansas Court Appointed Special Advocates Association, 2009
- TSA Team/Partnership Award, 2010
- Arkansas Foster Parent(s) of the Year, 2009
- TSA Annual Leadership Award Bronze Medal, 2004; Silver Leadership Award, TSA, 2003
- Federal Aviation Administration Southwest Region Aviation Safety Counselor of the Year, 2001
- USAF Meritorious Service Medal (4), Commendation Medal (3), Achievement Medal (2)
- Distinguished Graduate, Air Force Officer Training School, 1989
- Air Force Space Command Airfield Officer of the Year, 1998
- Strategic Air Command Air Traffic Controller of the Year,

Dewey R. Hemphill
Adjunct Faculty
University of Arkansas

EDUCATION

Ph.D. (ABD), Business Administration; Management
Northcentral University, Prescott Valley, AZ

Master of Science, Operations Management
University of Arkansas, Fayetteville, AR, 1996

Graduate Studies, Philosophy (30 hours, no degree conferred)
Memphis State University, Memphis, TN, 1971

Bachelor of Arts, English, Philosophy, Classical Languages
Memphis State University, Memphis, TN, 1968

TEACHING EXPERIENCE

University of Arkansas, Fayetteville, AR August 2011 – Present (Adjunct)
Teach Introduction to Operations Management, Operations Management in the Service Sector, and Strategic Management in both online and on ground courses in the MS, Operations Management degree program

Victory University, Memphis, TN; August 2003 – August 2011 (Full time)
August 2011 – Present (Adjunct)
Teach Business Statistics, Quantitative Methods, Business Strategy, Principles of Management, Organizational Behavior, and Organizational Leadership in both online and on ground courses in the BS, Business Administration, and the BS, Operations Management degree programs

University of Phoenix, Memphis, TN; April 2010 – September 2012 (Adjunct)
Taught Applied Business Research and Statistics, Quantitative Reasoning for Business, Operations Management, and Research and Evaluation I & II in the Business School bachelor and master's degree programs

INDUSTRIAL EXPERIENCE

June 1981 – August 2003	FedEx Corporation	Memphis, TN
Process Improvement Advisor	Customer Services & Operations Support Division	
Program Management Advisor	Information Telecommunications Division	
Manager	Information Telecommunications Division	
Managing Director	European Invoicing, Brussels, Belgium	
Managing Director	Information Telecommunications Division	
Senior Manager	International Sales & Customer Service Division	
Product Development Manager	Satellite Systems Division	
Program Manager	International Telecommunications Division	
Program Manager	Information Systems Division	
Senior Manager	Finance Division	
January 1981 – May 1981	Cylix Corporation	Memphis, TN
Business Advisor	Satellite Communication Sales	
January 1980 – December 1980	Callahan & Associates	Fairhope, AL
Business Consultant	Customer Automation	
June 1971 – December 1979	Data Communications Corporation	Memphis, TN
Vice-President	Customer Service	
Vice-President	Sales	
Vice-President	Computer Operations	
Manager	Computer Operations	
Supervisor	Customer Automation and Training	

RELEVANT PUBLICATION

Peer-reviewed Paper - Sithole, M., Hemphill, D., & Dastoor, B. (2007). *Institutional Changes in Developing Economies: Transformational Changes in South Africa.* Presented at Academy of International Business Southeast Fall 2007 Conference; Nashville, TN, Nov. 7-9, 2007.

PROFESSIONAL SOCIETY MEMBERSHIPS and CERTIFICATIONS

Society for Human Resource Management – Faculty sponsor; Victory University
Sigma Beta Delta Business Honor Society – Faculty sponsor; Victory University
Alpha Sigma Lambda Honor Society –Faculty sponsor; Victory University
Lions Club International

Phillip E. Jackson, D.S.L., FACHE, PAHM

520 Winding Valley Lane, Collierville, TN 38017
(901) 853-2040, phil.e.jackson@gmail.com

Education

Regent University, Virginia Beach, Virginia

- Doctorate of Strategic Leadership, May 2008

Naval Postgraduate School, Monterey, CA

- Masters of Science in Management (Finance), December 1992

National University, San Diego, CA

- Bachelors of Business Administration (Accounting), July 1986

Teaching Experience

n

Baptist College of Health Sciences, Memphis TN

Associate Professor

- Chair, Health Care Management Program
- Teach undergraduate courses in health care management, strategic management, financial management, accounting, and organizational behavior.

University of Arkansas, Fayetteville, AR
Adjunct Faculty

- Masters in Operations Management. Courses: Finance, Health Care Policy, and Organizational and Control.

Past

Victory University, Memphis TN
Assistant Professor

- Teach courses undergraduate courses in leadership, management, finance, accounting, and organizational behavior.
- Lead faculty and mentor for finance and accounting.
- Online content development for 25 courses.

Lead Faculty/Facilitator/Course Author, Ohio University - Online Masters of Health Administration. Courses: Financial Dimensions of Health Care Leadership and Context of Leadership in the U. S. Health Care System; Context of Leadership in the US Health Care System; Leadership and Maximizing Human Capital; Evaluation and Technology in Health Care Administration; Strategic Management in Health Care.

Part-Time Faculty, Colorado State University – Online Masters in Organizational Management. Courses: Foundations of Effective Management, Global Economics, Principles of Management, Dynamics of Power in Organizations, Management in the Global Economy.

Adjunct Faculty, New England College – Online Masters of Healthcare Administration. Developed and taught the following courses in Blackboard: Health Care leadership and management, Health Care Financial Accounting, and Health Care Financial Management.

Adjunct Faculty, Liberty University – Online Masters of Business Administration. Courses: Executive Leadership and Management

Industry Experience

Jul 2007 - Feb 2010

Navy Personnel Command, Millington, TN

Branch Head (Commander)

- Senior medical human resources executive.
- Corporate management and assignment of 25,000 medical personnel encompassing 35 healthcare subspecialties.

May 2004 – Jul 2007

Navy Hospital Great Lakes, Great Lakes, IL

Associate Administrator (Commander)

- Managed $22 million operating budget, and 400 clinical and administrative personnel.
- Line management responsibility for Human resources management, labor relations, customer support services, public relations, food services operations, nutrition management, education and training, facilities management, materials management, security, management information systems, patient administration, and emergency preparedness.
- Committee Membership: Member, Executive Steering Committee; Chair, Human Resources Committee, Chair, Equipment Management Committee, Chair, Energy Conservation Committee, Nonvoting member, Medical Staff Executive Committee, Member, Pharmacy and Therapeutics Committee.

Jul 2001 – May 2004

U. S. Navy Hospital Sigonella, Sicily

Assistant Administrator (Lieutenant Commander)

- Administrative Service Line Leader for seven administrative and support departments, a preferred provider network with host nation (Italian) healthcare providers, and a professional health care team of 135.
- Line management responsibility for Personnel management, facilities management, disaster preparedness planning, managed care operations, patient administration, operations management, public relations, management information systems, security, and nutrition management.
- Committee membership: Member, Executive Steering Committee, Chair, Emergency Preparedness Committee, Chair, Environment of Care Committee, Nonvoting Member, Medical Staff Executive Committee.

Aug 1998 – Jul 2001

Naval Medical Center Portsmouth, Portsmouth VA

Administrator, TRICARE Prime Clinics (Lieutenant Commander)

- Line responsibility for delivery of primary care services to 18,000 enrollees with a professional health care team of 80 clinical, administrative, and support staff.

May 1995 – Aug 1998

TRICARE Management Activity, Office of the Assistant Secretary of Defense (Health Affairs), Washington DC

Senior Program/Budget Analyst (Lieutenant)

- Lead Analyst for multiple budget development submissions for the military health system to include: President's Budget, the six-year, long-term strategic Budget, and the Biennial Budget submissions to the Congressional Budget Office and the Office of Management and Budget.

Dec 1992 – May 1995

Corporate Headquarters, Navy Medicine, Washington DC

Corporate Financial Manager (Lieutenant)

- Allocated and monitored execution of several billion dollars annual operating budget for worldwide Navy healthcare operations.

Publications & Presentations

- Developing a Culturally Competent Healthcare Workforce: The HUMANE Approach, Parts 1 & II, Jackson, P. E. (June 2008). *Hospitals & Health Networks Online*.
- Why Cultural Competence Matters in Healthcare Organizations, Jackson, P. E. (May 2008). *The CEO Refresher.*
- Culturally Competent Healthcare Organizations: SIX HUMANE Steps, Jackson, P. E. (May 2008). *Leadership Advanced Online*.
- Culturally Competent Healthcare Organizations: SIX HUMANE Steps, Granby-Chargois, C & Jackson, P. E. (November/December 2008). *AAMA Executive Online*.
- Poetic Leadership: Being a Mountain, Jackson, P. E. (June 2009). *Leader Values.*
- Financial Dimensions of Healthcare Leadership webinar presented to Mountain State University Masters of Nursing Administration students (March 2011).
- Culturally Competent Health Care presented to the Memphis Chapter of the National Association of Health Services Executives (October 2010).

Professional Society Memberships and Certifications

Certifications:

- Fellow, American College of Healthcare Executives
- Professional, Academy of Healthcare Management
- Executive Medicine Certification
- Certified Healthcare Administrator
- Managed Care Coordinator Certification
- Ambulatory Care Administrator Officer Certification

Memberships:

- American College of Healthcare Executives
- Healthcare Financial Management Association
- National Association of Health Services Executives
- The Association of University Programs in Health Administration
- American Academy of Healthcare Management
- Mid-South American College of Healthcare Executive

Honors and Awards

- School of Global Leadership & Entrepreneurship, Regent University 2008 Outstanding Doctoral Project Award: *"Leading the Century Healthcare Organization: Essential Competencies for Successful Stewardship"*
- Defense Meritorious Service Medal
- Meritorious Service Medal – 2
- Navy Commendation Medal – 3
- Navy Achievement Medal -2
- Chaired 2006 $2.4 million Combined Federal Campaign for Lake County, Illinois. The 2nd most donations in the nation.

Dennis Lithgow, PE
Adjunct Faculty
University of Arkansas

EDUCATION

Master of Science Business Administration 1983
Boston University (European Division)
Boston, Massachusetts

Bachelor of Science Mechanical Engineering 1979
Rose - Hulman Institute of Technology
Terre Haute, Indiana

TEACHING EXPERIENCE

1986 - 2012 **Southern Illinois University -- BS Industrial Technology Program**
College of Engineering
Assistant Professor

- Managed off - campus ITMP sites in West Germany, California, and then in the Midwest.
- Responsible for program administration, staff supervision, student recruitment and advisement, and adjunct faculty selection and facilitation.
- Develop and teach a full load in the areas:
  - Quality Control / TQM
  - Cost Estimating
  - Computer - Aided Manufacturing
  - Motion and Time Study
  - Production & Inventory Control
  - Project Management
- Develop and administer self study courses in First Line Supervision, Computers, Computer-Aided Drafting, and Senior Projects.

2008 – Present **University of Arkansas – MS Operations Management Program**
College of Engineering
Adjunct Professor

- Develop and teach courses in:
  - Maintenance Management (online)
  - Introduction to Operations Management (online)
  - Cost Estimation Models (online)

2003 – 2004 **Central Baptist College – BS Organizational Management Program**
PACE Program
Adjunct Professor

Teach courses in:
- Entrepreneurship and Small Business
- Production & Operations Management

2002 – 2002 **Webster University – MBA Program**
George Herbert Walker School of Business & Technology
Adjunct Faculty

Teach course in:
- Operations & Project Management

1996 – 1997 **Golden Gate University – MBA Program**
Edward S. Ageno School of Business
Adjunct Faculty

Teach course in:
- Quantitative Analysis for Management

INDUSTRIAL EXPERIENCE

2012 – Pres. **Federal Express Corporation**
FedEx Freight
Advisor – Operations Research

2003 – 2004 **Washington Group International, Inc.**
Pine Bluff Arsenal, AR
Industrial Engineer

- Part – time (3 days / 36 hours per week) assignment with Maintenance and Production Control Departments to develop processes / procedures to streamline operations. Completed process mapping, time studies, team building / training, and extensive documentation in support of continuous improvement efforts.

1983 - 1986 **Texas Instruments Corporation**
Defense Systems & Electronics Group
Manufacturing Engineer / Production Control Supervisor

- Three years manufacturing engineering experience.
- One year experience as production control supervisor of $ 30 million / year facility.
- Significant player on team that raised fabrication yields from 88% to 98% during tenure.
- Engineering responsibilities included:
  - Process & methods development / improvement / documentation
  - Statistical process analysis & control (SPC)
  - CNC (G-code) programming
  - Tooling design & project management
  - Capital equipment & project cost estimation / reduction
  - Shop liaison / support.

1979 - 1983 **United States Army Ordnance Corp Captain.**

- Leader of team that reduced missile maintenance backlog by 35% over a 16 month period.
- Army Commendation Medal in 1983 (second highest peacetime award) due to strong leadership record.
- Direct supervision of eight officers.
- Indirect supervision of 250(+) people in five operating groups.

Otto J. Loewer

PRESENT ACADEMIC RANK: Professor, Biological and Agricultural Engineering Department, University of Arkansas

EDUCATION (Degrees):
Ph.D. - Purdue University, 1973, Agricultural Engineering
M.S. - Louisiana State University, 1970, Agricultural Engineering
M.S. - Michigan State University, 1980, Agricultural Economics (degree obtained while on sabbatical leave from the University of Kentucky)
B.S. - Louisiana State University, 1968, Agricultural Engineering

OTHER: Certificate from the University of Oklahoma Economic Development Institute for completion of its course of study (2005).

MILITARY SERVICE: Commissioned as a 2nd Lt., U.S. Army Reserve in 1968 and served as a member of U.S. Army reserves for 10 years.

EMPLOYMENT:
2009-present: Professor, Biological & Agricultural Engineering Department, University of Arkansas
2002-2009: Founding Director of the University of Arkansas Economic Development Institute, reporting directly to the Chancellor of the Fayetteville campus of the University of Arkansas
1996-2002: Dean, College of Engineering, University of Arkansas
1992-1996: Professor and Chairman, Department of Agricultural & Biological Engineering, University of Florida
1985-1992: Professor and Head, Department of Biological and Agricultural Engineering, University of Arkansas
1981-1985: Professor and Director of Graduate Studies, Department of Agricultural Engineering, University of Kentucky
1977-1981: Associate Professor and Associate Extension Professor, Department of Agricultural Engineering, University of Kentucky
1979-1980: Sabbatical leave from University of Kentucky. Graduate Assistant, Department of Agricultural Economics, Michigan State University (9/79-6/80)
1973-1977: Assistant Extension Professor, Department of Agricultural Engineering, University of Kentucky
1971-1973: Graduate Assistant, Department of Agricultural Engineering, Purdue University (6/71-1/73)
1970-1971 Farm and seed plant manager, family operation. Fair Oaks, AR, (5/70-9/70 and 3/71-5/71) and completed U.S. Army Officers branch school, basic course in Air Defense Artillery, Ft. Bliss, TX. (10/70-2/71)
1968-1970: Graduate Assistant, Department of Agricultural Engineering, Louisiana State University

MAJOR PROFESSIONAL HONORS

- Selected as a member of the LSU College of Engineering Hall of Distinction (2008).
- Distinguish Service Recognition given by the 10 county Crossroads Coalition, a regional broad-based development organization in Eastern Arkansas. (2008)
- President of the American Society of Agricultural and Biological Engineers (ASABE) (2005) [Approximately 9000 members, over 20 percent international, representing over 100 countries.]
- Selected as "Communicator of Year" by the northwest Arkansas chapter of the Public Relations Society (2004).
- Designated an outstanding graduate by the Purdue Department of Agricultural and Biological Engineering (2004).
- Received the "Arkansas Engineer of the Year Award" from the Arkansas chapter of National Society of Professional Engineers (1997).
- Fellow of the American Society of Agricultural Engineers (1996).
- A number of awards for publications in research, extension and economic development.

MEMBERSHIPS IN PROFESSIONAL SOCIETIES:

- American Society of Agricultural and Biological Engineers (ASABE): Served as President of ASABE (2005-06) and currently serving as a member of the ASABE Foundation Board of Trustees.
- Registered Professional Engineer (Kentucky, Arkansas).
- American Society for Engineering Education.
- American Society of Animal Science.
- American Society of Agronomy.
- National Society of Professional Engineers (Arkansas Chapter): Served on National Society of Professional Engineers (NSPE) Education Advisory Group (2000 – 2003).
- University Economic Development Association (through 2009).
- International Economic Development Council (through 2009).
- Arkansas Economic Developers: (Board of Directors (2007-2009) (through 2009).
- Chamber of Commerce (State and Fayetteville, AR) (through 2009).

MEMBERSHIP IN CIVIC AND SERVICE ORGANIZATIONS

- Rotary Club (Fayetteville, AR).
- Airport Board, Fayetteville Municipal Airport (past vice-chairman) (2001-present).
- Advisory Board Member of the Arkansas World Trade Center (2006-present).
- Advisory Board Member for LSU Biological and Agricultural Engineering Department (2004-present).
- Advisory Board Member of the John Brown University engineering department (2002-present).
- Advisory Board Member for Oklahoma State University Biosystems and Agricultural Engineering Department (1997-2003).
- Past school board member, Haas Hall Academy (state charter school).

TEACHING (95 %)

BENG 4813: Senior Design (Professionalism Component – 30%) – Fall Semester
BENG 5801: Graduate Seminar – Spring Semester
BENG 5613: Simulation Modeling of Biological Systems (Spring Semester)
BENG 5633: Linkages Among Technology, Economics and Societal Values (6 sections – distance education format: Semester 1, Semester 2, Term 1, Term 2, Term 3 and Term 4)
OMGT 5633: Linkages Among Technology, Economics and Societal Values (4 sections – distance education format: Term 1, Term 2, Term 3 and Term 4)
GNEG 3811 – Internships (Fall, Spring)
GNEG 5801 – Cooperative Education (Fall, Spring)

SERVICE (5%)

ASABE Foundation Board
JBU Engineering Advisory Board
Departmental Committees for Internships/Coops

PUBLICATIONS SUMMARY:

Category	**Total**
Refereed Journal Articles	65
Research Papers (written)	155
Extension	36
Teaching, Education and Economic Development	62
Books, Book Chapters, Monographs	16
Total for all types of publications	**334**

OMAR MANASREH
Professor

EDUCATION

University of Jordan	B.Sc.		1976	Physics
University of Puerto Rico	M.S.		1980	Solid State
University of Arkansas	Ph.D.		1984	Solid State & EE
Wright-Patterson AFB	NRC	Post-Doc	1986-89	Electrical Engineering

UA YEARS OF SERVICE (4 years)
June 2003 – present: Professor of Electrical Engineering, Department of Electrical Engineering

OTHER RELATED EXPERIENCE
November 1999 – June 2003: Professor of Electrical and Computer Engineering, Department of Electrical and Computer Engineering, University of New Mexico, Albuquerque, NM.
February 1995 – October 1999: Electronics Engineer -- Space Vehicles Directorate (AFRL/VSSS), Air Force Research Laboratory, Kirtland AFB, NM.
August 1989 - January 1995: Electronics engineer -- Solid State Electronics Directorate (WL/ELRA), Wright Laboratory, Wright-Patterson Air Force Base, Dayton, Ohio.
August 1986-August 1989: National Research Council (**NRC**) Research Associateship -- Materials Laboratory (AFWAL/MLPO), Wright-Patterson Air Force Base, Dayton, Ohio.
August 1985-July 1986: Visiting Scientist -- Materials Laboratory (AFWAL/MLPO), Wright-Patterson Air Force Base, Dayton, Ohio.
June 1984-July 1985: Research Adjunct -- Department of Physics, University of Sherbrooke, Sherbrooke, Quebec.

CONSULTING: N/A

PATENTS: None

PRINCIPAL PUBLICATIONS OF THE LAST FIVE YEARS: Published over 160 papers in technical journals, over 80 papers in conferences, presented over 60 invited talks, and edited over 40 books and symposia.
Selected relevant publications:

[1] "*Temperature dependence of the band gap of colloidal CdSe/ZnS core/shell nanocrystals embedded into a UV curable resin*," A. Joshi, K. Y. Narsingi, M. O. Manasreh, E. A. Davis, and B. D. Weaver, Appl. Phys. Lett. **89**, 131907(2006).

[2] "*Optical properties of colloidal InGaP/ZnS core/shell nanocrystals*," A. Joshi, M. O. Manasreh, E. A. Davis, and B. D. Weaver, Appl. Phys. Lett. **89**, 111907 (2006).

[3] "*Investigation of rapid thermal annealing on Cu(In,Ga)Se_2 films and solar cells*," X. Wang, S. S. Li, K. W. Kim, S. Yoon, V. Cracium, J. M. Howard, M. O. Manasreh, O. D. Crisalle, and T. J. Anderson, Journal of Solar Energy Materials and Solar cells **90**, 2855-2866 (2006).

[4] "*Investigation of pulsed laser annealing (PLA) and rapid thermal annealing (RTA) of CIGS films and solar cells*," Xuege Wang, Sheng. S. Li, V. Craciun, W. K. Kim, S. Yoon, J. M. Howard, M. O. Manasreh, J.Venturini, O. D. Crisalle, and T. J. Anderson. IEEE 31st Photovoltaic Specialists Conference (PVSC), Orlando, Florida (January 2005).

[5] "*Proton irradiation effect on single-wall carbon nanotubes in a poly(3-octylthiophene) matrix*" P. P. Neupane and M. O. Manasreh, B. D. Weaver, R.P. Rafaelle, and B.J. Landi, Appl. Phys. Lett. **86**, 221908-22190 (2005).

[6] "*Near-infrared wavelength intersubband transitions in GaN/AlN short period superlattices*," E. A. DeCuir, Jr., Emil Fred, B. S. Passmore, A. Muddasani , M. O. Manasreh, Jinqiao Xie, Hadis Morkoç, M. E. Ware, and G. J. Salamo, Appl. Phys. Lett. **89**, (2006).

[7] "*Broadband photoresponse from InAs quantum dots embedded in InGaAs graded well*," J. Liang, M. O. Manasreh, E. Marega, Jr., and G. J. Salamo, IEEE Electron Device Letters Vol. **26**, 631-633, (2005).

[8] "*Intersubband transitions in proton irradiated InGaAs/GaAs multiple quantum dots,*" Y. C. Chua, E. A. decuir, Jr., M. O. Manasreh, and B. D. Weaver, Appl. Phys. Lett. **87**, No. 9, 091905 (3 pages) (2005).

[9] "*Intersubband transitions in proton irradiated InGaAs/GaAs multiple quantum dots,*" Y. C. Chua, E. A. decuir, Jr., M. O. Manasreh, and B. D. Weaver, Appl. Phys. Lett. **87**, 091905 (2005).

[10] ***"Correlation between surface and buried InAs quantum dots,"*** **B. L. Liang, Zh. M. Wang, Yu. I. Mazur, G. J. Salamo, E. A. Decuir, Jr., and M. O. Manasreh, Appl. Phys. Lett. 89, 043125 (2006).**

SCIENTIFIC AND PROFESSIONAL SOCIETIES

The Scientific Research Honor Society **Sigma Xi**, The Institute of Electrical & Electronics Engineering **IEEE** (senior member), The American Physical Society **APS,** The Materials Research Society **MRS**, The Electrochemical Society **ECS**.

HONORS AND AWARDS

- **Science and Technology Achievement Award** presented by the **Air Force Materiel Command**, **Wright-Patterson AFB** in recognition of the significant technical achievement in the field of intersubband transitions in III-V semiconductor quantum wells and superlattices, which lead to a better understanding of how these quantum structures can be used for very long wavelength infrared sensors. May 1993.
- **Scientific Achievement Award** presented by the **Solid State Electronics Directorate**, **Wright Laboratory**, **Wright-Patterson AFB** in recognition of my work on cyclotron resonance measurements of low dimensional systems in III-V semiconductor heterostructures and single quantum wells, August 1992.
- **Performance Award** presented by the **Department of the Air Force** in recognition of a demonstrated standard of performance (1989-1990), (1990-1991), and (1991-1992).
- **National Research Council Fellowship** to study GaAs and related compounds and type II superlattices (1988/89).
- **Aubrey E. Harvey Award** for outstanding graduate research presented by **Sigma Xi**, the Scientific Research Honor Society, in recognition of my work on ultrasonic studies of phase transition in solid electrolytes with fluorite structure, University of Arkansas, 1985.
- **Alshakshir Scholarship** for outstanding undergraduate student, University of Jordan, Amman, Jordan (1974).
- **Outstanding Undergraduate Student Scholarship in Physics**, University of Jordan, Amman, Jordan (Fall 1973, Spring 1974, Fall 1974, and Spring 1975).

INSTITUTIONAL AND PROFESSIONAL SERVICE IN THE LAST FIVE YEARS

1. Organized several national and international symposia for the Materials Research Society and Electrochemical Society. Symposia were focused on semiconductor materials and their electronic and optoelectronic applications.
2. Editor of the book series entitled "***Optoelectronic Properties of Semiconductors and Superlattices***" published by Taylor and Francis (21 Volumes), Editor-in-Chief for the book series entitled "***Semiconductor materials and devices***" published by Artech House (6 Volumes), and Editor of the book series entitled "*Nanoscience and Nanotechnology*" published by McGraw Hill (7 volumes in preparation). Ongoing (new book series). The latte book series is focused on nanomaterials: Example: Polymer nanocomposites: Processing, Characterization, and Applications" by Joseph H. Koo.
3. Wrote a textbook entitled "*Semiconductor Heterojunctions and nanostructures*," which will be published by McGraw-Hill in May 2005. This textbook is currently being used for two courses entitled "Semiconductor Nanostructures I and II." Also, he had partially written and edited a reference book entitle "Semiconductor Quantum Wells and Superlattices for Long Wavelength Infrared Detectors" (Artech House, Boston, MA, 1993). 263 pages. This book is considered one of the best sellers among several books in the field of semiconductors.
4. Developed several innovative experimental techniques to measure the properties of quantum wells and superlattices including FTIR magneto-optical, and waveguide measurements

PERCENTAGE OF TIME AVAILABLE FOR RESEARCH OR SCHOLARLY ACTIVITIES: 50%

PERCENTAGE OF TIME COMMITTED TO THE PROGRAM: 50%

RESEARCH INTERESTS

Extensive experience in the experimental and theoretical optoelectronic properties of III-V semiconductors, superlattices, nanostructures and related devices. In particular, our recent work is focused on optoelectronic devices such as near-, mid-, and long-wavelength infrared detectors as well as III-nitrides for many electronic and optoelectronic applications. Organic/inorganic composites for photovoltaic devices is one of the recent addition to our research efforts.

Scott J. Mason
Adjunct Faculty
University of Arkansas

EDUCATION

Doctor of Philosophy, Industrial Engineering, Arizona State University, 2000
Master of Science in Engineering, Operations Research, The University of Texas at Austin, 1995
Bachelor of Science in Mechanical Engineering with Honors, The University of Texas at Austin, 1993

TEACHING EXPERIENCE

Clemson University
Fluor Endowed Chair in Supply Chain Optimization and Logistics, July 2010 to Present
Chair, South Carolina Center of Economic Excellence in Supply Chain Optimization and Logistics, July 2010 to Present
Professor of Industrial Engineering (with tenure), July 2010 to Present

University of Arkansas
Associate Professor of Industrial Engineering (with tenure), July 2005 to June 2010
Associate Department Head, August 2004 to June 2010
Assistant Professor of Industrial Engineering, August 2000 to June 2005

INDUSTRIAL EXPERIENCE

President, MultipleOptima, Inc., Industrial engineering and semiconductor manufacturing productivity consulting, Clemson, SC, 2000-Present
Senior Industrial Engineering, Abbie Gregg, Inc., Tempe, AZ, 1997-2000
Modeling Engineering, Wright Williams and Kelly, Phoenix, AZ, 1998-1999
Operational Modeling Engineering, Advanced Micro Devices, Austin, TX, 1995-1997
Operational Modeling Consultant, Sematech, Austin, TX, 1993-1995

RELEVANT PUBLICATIONS

Books

Moench, L., Fowler, J.W., Mason, S.J., Production Planning and Control for Semiconductor Wafer Fabrication Facilities: Modeling, Analysis, and Systems, Springer Operations Research-Computer Science Interfaces Series, 2012.

Journal Articles

Kamali, B., Mason, S.J., Pohl, E.A., 2012, An Analysis of Special Needs Student Busing, Journal of Public Transportation, accepted with revisions.
Milburn, A.B., Mason, S.J., Spicer, J., 2012, Characterizing the Home Health Care Supply Chain, Home Health Care Management & Practice, to appear.
Pazour, J.A., Root, S.E., Thomas, L.M., Meller, R.D., Mason, S.J., 2011, Selecting and Allocating Repackaging Technology for Unit-Dose Medications in Hospital Pharmacies, International Journal of Innovation and Technology Management, to appear.
Cakici, E., Mason, S.J., Kurz, M.E., 2011, Multi-Objective Analysis of an Integrated Supply Chain Scheduling Problem, International Journal of Production Research, to appear.

Moench, L., Fowler, J.W., Dauzere-Peres, S., Mason, S.J., Rose, O., 2011, A Survey of Problems, Solution Techniques, and Future Challenges in Scheduling Semiconductor Manufacturing Operations, Journal of Scheduling, 14, 583-599.

Medal, H., Sharp, S.J., Pohl, E., Rainwater, C., Mason, S.J., 2011, Models for Reducing the Risk of Critical Networked Infrastructure, International Journal of Risk Assessment and Management, 15 (2/3), 99-127.

Moench, L., Zimmermann, J., Mason, S.J., Fowler, J.W., 2011, Multiple Orders per Job Formation and Release Strategies in Large Scale Wafer Fabs: A Simulation Study, Journal of Simulation, 5, 25-43.

Jampani, J., Pohl, E.A., Mason, S.J., Moench, L., 2010, Integrated Heuristics for Scheduling Multiple Order Jobs in a Complex Job Shop, International Journal of Metaheuristics, 1 (2), 156-180.

Mason, S.J., Chen, J.-S., 2010, Scheduling Multiple Orders per Job in a Single Machine to Minimize Total Completion Time, European Journal of Operational Research, 207, 70-77.

PROFESSIONAL SOCIETY MEMBERSHIPS and CERTIFICATIONS

Senior Member, Institute of Industrial Engineers (IIE)
Member, Institute for Operations Research and Management Science (INFORMS)

HONORS AND AWARDS

Best Technical Paper, Quality Control and Reliability Engineering Track, Industrial Engineering Research Conference, Houston, Texas, 2004.

Department of Industrial Engineering, University of Arkansas
AAIE Outstanding Faculty Member, 2003-2004, 2007-2008
Outstanding Researcher, 2001-2002, 2002-2003, 2003-2004
Outstanding Service to Students, 2004-2005
Outstanding Teacher, 2005-2006, 2006-2007, 2008-2009, 2009-2010
Student Chapter of IIE's Outstanding Teacher (voted by students), 2009-2010

College of Engineering, University of Arkansas
Outstanding Advisor, 2004-2005

University of Arkansas
Inaugural recipient of the Collis R. Geren Award for Excellence in Graduate Education, 2010
Finalist, Dr. John and Mrs. Lois Imhoff Award for Outstanding Teaching and Student Mentoring, 2009
Faculty Gold Medal, Office of Nationally Competitive Awards, 2009
Outstanding Mentor, Office of Nationally Competitive Awards, 2007, 2008, 2009, 2010
Citation of Appreciation, Faculty Senate, 2003-2004

MARTY D. MATLOCK, Ph.D., P.E., B.C.E.E.
Biological and Agricultural Engineering
Room 233 Engineering Hall
University of Arkansas
Fayetteville, AR 72701
E-Mail: mmatlock@uark.edu

Office: 479/575-2849
Fax: 479/575-2846
Cell: 479/935-6013

Educational Background

Ph.D. Biosystems Engineering, 1996. Oklahoma State University, Stillwater, Oklahoma. United States Department of Agriculture Water Science National Needs Fellow. Dissertation Title: "A Lotic Ecosystem Trophic Status Index using the Periphytic Community as a Bio-Indicator." Advisors: Daniel E. Storm, C. Thomas Haan, Michael D. Smolen and Sterling L. Burks.

M.S. Plant Physiology (Department of Botany), 1989. Oklahoma State University, Stillwater, Oklahoma. Thesis Title: "Identification of the Mechanism of Aluminum Toxicity in Wheat Roots." Advisor: James D. Ownby.

B.S. Soil Chemistry (Department of Agronomy), 1984. Oklahoma State University, Stillwater, Oklahoma.

Professional Experience

Executive Director, Office for Sustainability (July 1, 2012 – Present) University of Arkansas, Fayetteville, Arkansas.

Area Director, Center for Agricultural and Rural Sustainability, UA Division of Agriculture (November 2007-Present) University of Arkansas, Fayetteville, Arkansas.

Professor of Ecological Engineering, Biological and Agricultural Engineering Department (July 2009-Present) University of Arkansas, Fayetteville, Arkansas.

Professional Certifications

Professional Engineer, License Number 88864, Texas Board of Professional Engineers, Austin, TX, 2001 – Present.

Certified Ecological Designer, American Ecological Engineering Society, 2011-2016

Board Certified Environmental Engineer, American Academy of Environmental Engineers, 2011-Present

Certified Senior Ecologist, Ecological Society of America, 2007-2012

Select Publications

Matlock, M., G. Thoma, E. Cummings, J. Cothren, M. Leh, and J. Wilson. 2012. Geospatial analysis of water use, water stress, and eutrophication impacts from US dairy production. International Dairy Journal, *In Press*.

Leh, M., **M. Matlock,** E. Cummings, G. Thoma, and J. Cothren. 2012. Measuring Ecosystem Service Change- A Case Study from a Northwest Arkansas Dairy Farm. International Dairy Journal, *In Press*.

Ludwig, A., **M. D. Matlock,** B. Haggard, I. Chaubey. 2012. Periphyton nutrient limitation and maximum potential productivity in the Beaver Lake Basin, USA. *Journal of the American Water Resources Association. In Press*

Sandefur, H., **M. Matlock**, and T. Costello. 2011. Seasonal productivity of a periphytic algal community for biofuel feedstock generation and nutrient treatment. Ecological Engineering, 37(10): 1476-1480.

Morgan, R. and **M. Matlock**, 2008. A collaborative learning matrix for combining science with stakeholder involvement to prioritize watershed implementation in Arkansas' nonpoint source state management plan. Journal of Environmental Assessment Policy and Management. 10(3):1-25.

Rodriguez, A. and **M. Matlock,** 2008. Measuring Temporal Variability in Algal Nutrient Response in the

Lake Waco/Bosque River Watershed. *Journal of Biological Engineering. 2:1 (11Jan2008).*

Ludwig, A., **M. D. Matlock,** B. Haggard, M. E. Matlock, E. Cummings. 2008. Identification and evaluation of nutrient limitation of periphyton growth in headwater streams in the Pawnee

Chaubey, I., and **M. Matlock.** 2007. Teaching Undergraduate Students to Manage Aquatic Ecosystems at the Watershed Level**.** *International Journal of Engineering Education.* 23(4): 1957-1959.

Books

Popp, J., M. Jahn, N. Kemper, and **M. Matlock,** Eds. 2012. *The Role of Biotechnology in Feeding 9.25 Billion People*. Cambridge University Press, Cambridge, MA. ISBN: 978-0-521-19234-7.

Matlock, M. and R. Morgan, 2011. *Ecological Engineering Design: Restoring and Conserving Ecosystem Services.* John Wiley and Sons, NY, NY. 410 pgs. March 2011. ISBN-10: 0470345144, ISBN-13: 978-0470345146

Luoni, S., J. Huber, **M. Matlock**. 2010**. Low Impact Development: a design manual for urban areas.** UA Press. UA Community Design Center, Fayetteville, AR. ISBN**:** 978-0-9799706-1-0.

Sabatier, P., W. Focht, M. Lubell, Z. Tracthenberg, A. Vedletz, and **M. Matlock**, Eds. 2005. *Swimming Upstream: Collaborative Approaches to Watershed Management*. Publisher: MIT Press, Boston, MA. ISBN: 0-262-19520-8; March 2005.

Patents

Osborn, G. S., **M. D. Matlock**, S. S. Teltschik. 2007. Portable System to Enhance Biological Treatment Processes for Improving Water Quality: A portable water ecosystem oxygenator. U.S. Patent Number 20050279713.

Osborn, G. S., **M. D. Matlock**, S. S. Teltschik. 2011. System and Method for Dissolving Gases in Fluids and for Delivery of Dissolved Gasses. Australian Patent Number 2006249808.

Membership in Professional Societies

Keystone Alliance for Sustainable Agriculture. Executive Committee, 2010 – Present.

AEES– America Ecological Engineering Society – President, 2007-2008; Vice President, 2005-6.

ASABE – American Society of Agricultural and Biological Engineers

ASCE - The American Society of Civil Engineering – Environmental Engineering Committee

AWRA – American Water Resources Association

Select Honors and Awards

2011-2012 ACSA Collaborative Practice Award. *Low Impact Development: a design manual for urban areas* by the American Collegiate Schools of Architecture.

2011 American Society of Landscape Architects Award of Excellence in Communications: *Low Impact Development: a design manual for urban areas.*

2011 American Institute of Architecture Honors Award in Regional and Urban Design: *Low Impact Development: a design manual for urban areas*, developed by UACDC and the UA Ecological Engineering Group under a grant from the U.S. EPA and the ANRC

2011 EDRA Great Places Book Award: Finalist. Environmental Design Research Association (ERDA), for Low Impact Development: a design manual for urban areas

2010 American Institute of Architecture (AIA) Education Honors Award. Porchscapes: An Affordable LEED for Neighborhood Development.

2010 Residential Architect Design Merit Award (AIA). Porchscapes: An Affordable LEED for Neighborhood Development.

2009 American Architecture Awards sponsored by The Chicago Athenaeum: Museum of Architecture and Design. The award for "Porchscapes: A LEED Neighborhood Development".

2009 AIA Honor Award for Regional and Urban Design from the American Institute of Architects (AIA). Porchscapes: An Affordable LEED-Neighborhood Development (LEED-ND).

2009 Progressive Architecture Award from *Architect* magazine. The Progressive Architecture Awards (P/A), along with the American Institute of Architects Honor Awards, are the most venerated.

ROY A. McCANN
Associate Professor

EDUCATION
B.S.E.E., University of Illinois (Urbana, IL), 1990
M.S.E.E., University of Illinois (Urbana, IL), 1991
Ph.D., E.E., University of Dayton (Dayton, OH), 2001

UA YEARS OF SERVICE (4 years)
August 2003 to Present: Associate Professor at the Department of Electrical Engineering

OTHER RELATED EXPERIENCE
May 1998 to August 2003: Advanced Product Engineering, Delphi Corporation
May 1994 to April 1998: New Product Development, ITT–General Motors Corporation
March 1993 to March 1994: Design Engineer, Northrop–Litton Industries
May 1991 to March 1993: General Motors – Delco Products

CONSULTING
Naval Ships Mooring Control and Diagnostics, Giotto Technologies, Inc, Woodlands TX 77380

PATENTS
[1] M. Colosky, S. Collier-Hallman, R. McCann, P. Weilhammer, and J. Tallant, "Method and apparatus for calibrating and initializing an electronically commutated motor," U.S. Patent No. 6,826,499: November 2004.
[2] R. McCann, and A. Badawy, "Method and system for improving vehicle stability incorporating an electric power steering system," U.S. Patent No. 6,499,559: December 2002.
[3] R. McCann, S. Mir, D. Skellenger, and M. Colosky, "Minimization of motor torque ripple due to unbalanced conditions," U.S. Patent No. 6,426,602: July 2002.
[4] S. Mir, D. Skellenger, R. Mc Cann, and M. Colosky, "Torque current comparison for current reasonableness diagnostics in a permanent magnet electric machine," U.S. Patent No. 6,392,418: May 2002.
[5] R. McCann, "Braking control system for vehicle," U.S. Patent No. 6,253,141: June 2001.
[6] R. McCann, "Predictive conductive angle motor control system for brake-by-wire application," U.S. Patent No. 6,075,332: June 2000.
[7] R. McCann, "Low torque ripple switched reluctance motor regulation system," U.S. Patent No. 6,002,233: December 1999.
[8] R. McCann, "Brake-by-wire system with switched reluctance motor controller," U.S. Patent No. 5,977,740: November 1999.
[9] R. McCann, "Switched reluctance motor with indirect position sensing and magnetic brake," U.S. Patent No. 5,949,211: September 1999.
[10] R. McCann, "Commutation circuit for switched reluctance motor," U.S. Patent No. 5,872,441: February 1999.
[11] R. McCann, "Switched reluctance motor controller," U.S. Patent No. 5,838,133: November 1998.
[12] R. McCann, "Rotary actuator," U. S. Patent No. 5,703,555: December 1997.
[13] R. McCann, "Switched reluctance motor with indirect position sensing," U.S. Patent No. 5,691,591: November 1997.
[14] J. Suriano, R. McCann, and L. Eckert, "Windshield wiper system with soft wipe mode for high-speed operation," U.S. Patent No. 5,654,616: August 1997.
[15] R. McCann, J. Suriano, and K. Cook, "Windshield wiper system having reduced wipe speed at reversal points using variable frequency induction motor control," U.S. Patent No. 5,642,026: June 1997.
[16] R. McCann, "Method and apparatus for hybrid direct-indirect control of a switched reluctance motor," U.S. Patent No. 5,637,974: June 1997.
[17] J. Jackson, and R. McCann, "Auto up window with obstacle detection system/voltage mode," U.S. Patent No. 5,616,997: April 1997.
[18] J. Jackson, and R. McCann, "Auto up window with obstacle detection system/current mode," U.S. Patent No. 5,585,702: December 1996.
[19] R. McCann, J. Suriano, and W. Staker, "Windshield wiper system incorporating a variable speed DC motor," U.S. Patent No. 5,506,483: April 1996.

PROFESSIONAL REGISTRATION
Professional Engineer–Ohio License 58896

PRINCIPAL PUBLICATIONS OF THE LAST FIVE YEARS

[1] R. McCann, J. Daily and Glenn Addo, "RFID Technology in Large Truck and Trailer Applications," *SAE 2006 Systems Engineering and New Developments in Electronics,* October 2006.
[2] R. McCann, "Jackknife Avoidance in Large Trucks using Front Active Steering," *SAE 2005 Transactions Journal of Commercial Vehicles,* pp. 280-295, July 2005.
[3] R. McCann and Son Nguyen "Development of an Automated Pavement Profiling Truck," *2006 Society of Automotive Engineers Commercial Vehicle Engineering Congress*, Chicago, October 31–November 2, 2006.
[4] K. Wang, Z. Hou, W. Gong, R. McCann, "A Kalman Filter Based Tracking System for Automated Inventory of Roadway Signs," *Compendium of Transportation Research Board 85th Annual Meeting* , Washington DC, January 2006.
[5] R. McCann and S. Damugatla, "Analysis of an Interior Permanent Magnet Synchronous Motor with MEMS based rotor flux sensing," *Proceedings of IEEE Industry Applications Society Annual Meeting*, Hong Kong, October 2-6, 2005.
[6] A. Kumar-Gunda and R. McCann, "Sliding mode observer for real-time diagnosis of an interior permanent magnet synchronous motor," *Proceedings of the 2005 IEEE Vehicle Power and Propulsion Conference*, Chicago, Sept. 7-9, 2005.
[7] R. McCann, "Improved operation of networked control systems using Lebesgue sampling," *Proceedings of IEEE Industry Applications Society Annual Meeting*, Seattle, October 3-7, 2004.
[8] A. Le, R. McCann, "Event Based Measurement Updating Kalman Filter in Network Control Systems," *IEEE Region 5 Conference*, Fayetteville, AR, April 20-22, 2007.
[9] W. Traore and R. McCann, "Flux Estimation ion Switched Reluctance Motors using a Two-Dimensional Least Squares Method," *IEEE Region 5 Conference*, Fayetteville, AR, April 20-22, 2007.

SCIENTIFIC AND PROFESSIONAL SOCIETIES
Institute of Electrical and Electronic Engineers: Industry Applications Society
Society of Automotive Engineers

HONORS AND AWARDS
2005 Arkansas Academy of Electrical Engineering Outstanding Faculty Award
2006 University of Arkansas IEEE and HKN Outstanding Faculty Member Award
2005-2006 Univ. of Arkansas, College of Engineering (Dept. of Electrical Engineering) Outstanding Teacher Award

INSTITUTIONAL AND PROFESSIONAL SERVICE IN THE LAST FIVE YEARS
Faculty Adviser Solar Boat Team, University of Arkansas (2004-2008)
Faculty Chair of ELEG Undergraduate Recruitment Committee (2007-2008)
Faculty Adviser Eta Kappa Nu Honor Society (2007-2008)
Chair (2007-2008) and Vice-Chair (2006-2007) IEEE-IAS Appliance Committee
Session Organizer-Chair, IEEE-IAS Appliance, Industrial Controls and Electric Machines Committees (2003-2008)
Member, ELEG Graduate Committee

PERCENTAGE OF TIME AVAILABLE FOR RESEARCH OR SCHOLARLY ACTIVITIES
100%

PERCENTAGE OF TIME COMMITTED TO THE PROGRAM
100%

RESEARCH INTERESTS
Sensor networks in transportation and energy systems: Lebesgue sampling and state-estimation, event-triggered Kalman filters and model predictive control, nanowire giant magnetoresistive (GMR) magnetic flux sensors, gain-scheduling for stability enhancement of articulated vehicles.

Moira McGlynn, PhD.
Adjunct Faculty
University of Arkansas

EDUCATION

PhD, Administrative and Engineering Systems
Union College of Union University, Schenectady, NY, 1993

MBA, Private Sector
Union College of Union University, Schenectady, NY, 1990

TEACHING EXPERIENCE

January, 2004 to present Keller Graduate School of DeVry College of NY, Manhattan Center. I teach blended format courses. I also taught in the Keller Online program.

Courses Taught in a Blended Format (onsite with an online component for exams and discussions) Leadership and Organizational Behavior, Managing Quality, MBA Capstone Course – Business Planning Seminar, Management Information Systems, Strategic Management of Technology

7/2008 to present: Centenary College, NJ
Courses Taught Online and Onsite: Leadership, Managerial Applications of IT

9/2009 to present: SNHU Online, NH
Course Taught Online: MBA Capstone Course – Strategic Management

1/2007 to 12/2008: Drexel's the iSchool, Philadelphia, PA
Course Taught Online (8 times): Managing Information Organizations

INDUSTRIAL EXPERIENCE

7/2000-2001 (Company went out of business)	Hydraweb Technologies, NY, NY
	Manager
4/1998 to 7/2000 (Company went out of business)	Emerald, Brighton, MA
	Manager, Technical Support
4/1995 to 4/1998	Dun & Bradstreet Software Marlboro, MA

Customer Technical Support

11/1980-2/1988 IBM Corporation, Poughkeepsie NY

New Software Development Planner
Programmer

RELEVANT PUBLICATIONS

Its Time to Automate Your Application Performance Monitoring Process, Technical Support Magazine, November 1998.

PROFESSIONAL SOCIETY MEMBERSHIPS and CERTIFICATIONS

IEEE Computer Society (lapsed member)

Kerry Melton
CURRICULUM VITAE

EDUCATION

July 2012 **Oklahoma State University** **Stillwater, OK**
Doctor of Philosophy - School of Industrial Engineering and Management

May 1994 **University of Arkansas** **Fayetteville, AR**
Master of Science - Industrial Engineering

July 1992 **University of Arkansas** **Fayetteville, AR**
Bachelor of Science - Industrial Engineering

WORK EXPERIENCE

May 2013 – Present **Walmart/Sam's Club** **Bentonville, AR**
Merchandise Logistics Manager

I evaluate supply chain processes using techniques such as detailed process mapping, cost modeling, inventory management, transportation and distribution center modeling, and data analysis, and work closely with cross-functional business units (Replenishment, Merchants, Suppliers, and Transportation). I identify and implement supply chain solutions and initiatives to reduce inventory, lead-time, and store-landed costs, and create supply chain efficiencies for Sam's Club, Walmart, and Suppliers. I maintain and manage Supplier and Buyer relationships by attending Buyer-Supplier meetings; engage strategic suppliers for broader collaborative initiatives (for example, Sam's Club joint business planning); participate in supplier conferences; and act as the key point of contact for Suppliers and Buyers regarding supply chain questions. I educate the organization on supply chain concepts by implementing on-boarding programs for cross-functional areas; present supply chain initiatives and practices at meetings; and collaborate with management to reinforce current objectives and directional strategies. I develop analytical tools to support and maintain the business by building analytical tools for modeling purposes; research external tools; train associates on how to effectively apply tools; and analyze supply chain initiatives' impact to the business based on results obtained from analytical tools. I demonstrate up-to-date expertise in merchandising logistics and apply this to the development, execution, and improvement of action plans by providing expert advice and guidance to others in the application of information and best practices; support and align efforts to meet customer and business needs; and build commitment for perspectives and rationales. I provide and support the implementation of business solutions by building relationships and partnerships with key stakeholders; identify business needs; determine and carry out necessary processes and best practices; monitor progress and results; recognize and capitalize on improvement opportunities; and adapt to competing demands, organizational changes, and new responsibilities. I model compliance with company policies and procedures and support company mission, values, and standards of ethics and integrity by incorporating these into the development and implementation of business plans; use the Open Door policy; and demonstrate and assist others with how to apply these in executing business processes and practices.

August 2014 – December 2014 **University of Arkansas** **Fayetteville, AR**
Adjunct Professor, Walton College of Business

Teaching Activities

I will be teaching the WCOB 1033- Data Analysis and Interpretation- course for the Department of Management during the fall 2014 semester. The course will focus on the fundamentals of statistics including central tendency, variation, standard deviation, descriptive statistics, discrete and continuous distributions, correlation, and covariance. Additionally, the course will concentrate on hypothesis testing, simple and multiple linear regression, data sampling methods, confidence interval estimation, and analysis of variance. The students are required to extensively use Microsoft Excel to solve statistical based problems and to tabularize and graph data. Students are required to complete a project related to a "real world" problem using the tools learned in the course.

August 2013 – December 2013 **University of Arkansas** **Fayetteville, AR**
Adjunct Professor, Walton College of Business

Teaching Activities

I taught the WCOB 2023- Production and Delivery of Goods and Services- course for the Supply Chain Management Department. The course focused on inventory decision making, demand forecasting, statistical quality control, network design and facility location, cost allocation and activity management, systems analysis, and transportation.

November 2013 – December 2013 **John Brown University** **Rogers, AR**
Adjunct Professor, Degree Completion Program

Teaching Activities

I taught the OM 4113- Applied Statistics for Managers- course for the John Brown University Degree Completion Program. The course focused on the fundamentals of statistics including central tendency, variation, descriptive statistics, discrete and continuous distributions, correlation, and covariance. Additionally, the course concentrated on hypothesis testing, simple and multiple linear regression, data sampling methods, confidence interval estimation, and analysis of variance. The students were required to extensively use Microsoft Excel to solve statistical based problems and to tabularize and graph data. Students were required to complete a project related to a "real world" problem using the tools learned in the course.

August 2012 – May 2013 **Bradley University** **Peoria, IL**
Assistant Professor, Department of Industrial and Manufacturing Engineering and Technology

Teaching Activities

Serving a one-year contract, I taught three courses- Engineering Statistical Methods, Senior Project Design, and Introduction to Manufacturing Processes. I also taught three labs related to the Introduction to Manufacturing Processes course. The Engineering Statistical Methods course was a second level statistics course in the Engineering Department that focused on: statistical distributions, hypothesis testing, simple and multiple linear regression, analysis of variance, design of experiments, etc. The Introduction to Manufacturing Processes course concentrated on teaching manufacturing processes related to injection molding, lathe machines, milling and drilling machines, welding, machine vision, metrology, casting, process capability, quality control, machining optimization, etc. This course also gave students hands-on experience using different machinery and equipment in a lab setting. In the lab, I also taught Mastercam, which gave students the ability to complete a part design,

using the computer, and then translate the part into machining operations using computer numerical control code. Senior Project Design focused on manufacturing, process, and quality control improvements with Caterpillar, Eli Lilly, and Methodist Hospital in Peoria and the completion of a capstone project and final presentation to each company.

Research Activities

I conducted research related to my dissertation- *Truckload Freight Transportation Utilizing Relay Points to Improve the Driving Job*. Using a mixed integer quadratic program, I developed a method to better manage and relay truckload drivers in order to improve driver home time and minimize drive time and driving distances while maintaining healthy levels of driver pay. The mixed integer quadratic program included not only truck driver measures but transportation metrics important to the transportation carrier and customer. Additionally, I worked with a graduate student on a project to develop a better method of domiciling and sourcing truck drivers by considering driver pay, unemployment levels, labor population, and cost of living indices. The driver sourcing research was extension work related to my dissertation and was published in the *International Journal of Applied Industrial Engineering*. The journal paper is titled *Domiciling Truck Drivers More Strategically in a Transportation Network*.

Service Activities

I served on three different committees at Bradley University: Program Outcome Assessment and Program Objective, Student Recruitment and Outreach, and Industrial and Manufacturing Engineering and Technology Programs. The Program Outcome Assessment and Program Objective committee was concerned with ABET related policy adherence and to the development and use of program outcome rubrics for the different curriculum course programs. The Student Recruitment and Outreach committee involved recruiting high school students from the local Peoria, IL area, students from the Illinois Central Community College, and engineering freshmen students who were undecided on their engineering major. We also conducted information fairs on and off campus to promote the Industrial and Manufacturing Engineering and Technology program. The Industrial and Manufacturing Engineering and Technology Programs committee was concerned with ensuring that department programs, courses, labs, etc. maintained curriculums in-line with current industry needs and requirements. We worked closely with our Industrial Advisory Council to ensure course work was in-line with industry needs.

August 2008 – July 2012 **Oklahoma State University** **Stillwater, OK**
Teaching Assistant/Research Assistant, School of Industrial Engineering and Management

Teaching Activities

I taught the undergraduate Engineering Economics and Analysis (Engineering Economy) course for 6 semesters in the School of Industrial Engineering and Management from the Fall 2008 semester through the Spring 2012 semester. Over the 6 semesters, I taught a total of 500 students. The focus of the course curriculum consisted of: the time value of money, alternatives decision analysis using measures of financial worth and financial rates of return, corporate taxes, depreciation analysis, accounting principles, inflation, loans, bonds, break-even analysis, sensitivity analysis, forecasting, budgeting, and cost-benefit analysis.

During the Fall 2011 semester, I worked for Dr. Ricki Ingalls as a teaching assistant for the Financial and Advanced Capital Investment Analysis course in the School of Industrial Engineering and Management. My main responsibilities included proctoring examinations, grading assignments, aid in answering assignment questions, and grading examinations.

I worked for Dr. Ricki Ingalls as a teaching assistant for the Discrete System Simulation course in the School of Industrial Engineering and Management during the Fall 2008 semester. My main responsibilities included proctoring examinations and grading assignments.

Research Activities

From the Spring 2009 semester through the Spring 2012 semester, I worked for Dr. Ricki Ingalls and Dr. Manjunath Kamath on the Freight Movement Model (FMM)/Supply Chain project working collaboratively with the University of Oklahoma (Dr. Simin Pulat and Dr. Guoqiang Shen). The FMM/Supply Chain project was a decision support information system for transportation infrastructure and supply chain system planning in the United States that involved managing large data sets and utilizing the four step urban planning approach: freight generation, freight distribution, transportation mode split, and freight flow assignment. The main goal of the project was to develop a decision support and planning tool for the Oklahoma Department of Transportation that can determine the best way to distribute and assign truckload freight on a highway transportation network and within a supply chain model in a cost effective way. Regression models were created and executed in Minitab software to establish freight generation (i.e. production and consumption locations and truckload quantities). A doubly-constrained gravity model was created in VBA Microsoft Excel to distribute truckload freight between production and consumption locations. The FMM model also determined the best way to assign and route truckload freight using a mixed integer optimization program, while considering traffic congestion along a congested shortest path transportation network. Within the FMM framework, a supply chain model was integrated to optimally determine, using a mixed integer program, the supply chain network for specific clients. The supply chain model determined what sites (i.e. manufacturers, distribution centers, suppliers, etc.) should be opened or closed, how much production should be sourced from different sites, what transportation mode should be used, how much product should be stored as inventory, etc. Additionally, our team used an extensive number of programs to develop the FMM/Supply Chain model including: Minitab, TransCAD, ArcGIS, Visual Basic and VB.net, Microsoft applications (e.g. Access, Excel, Word, and PowerPoint), FICO Xpress optimization, C++, CPLEX, Map Window, and ARENA Simulation. The FMM/Supply Chain project was sponsored by the Oklahoma Department of Transportation through the Oklahoma Transportation Center.

From the Spring 2011 semester through the Spring 2012 semester, I worked for Dr. Ricki Ingalls on a collaboration project with the University of Arkansas (Dr. Manuel Rossetti). The project was a Cloud Computing CELDi project involving supply chain network optimization and simulation in a cloud environment. Cloud computing was used to execute a supply chain optimization model based on user input information, specifications, and parameters. The supply chain model determined optimally how a client's supply chain network should be designed and from where product should be sourced. The supply chain model was a mixed integer program that minimized system costs, and was created in FICO Xpress optimization software. The supply chain optimization results serve as input to a simulation model, which simulates various supply chain activities on a cloud. The end result was an effective optimization/simulation model for large supply chains that can operate in a cloud computing environment.

During the Fall 2009 semester, I worked on a project dealing with clustering commodities into logistical families and gave a presentation- *Models for Clustering Commodities into Logistical Families*- on behalf of Dr. Balabhaskar Balasundaram and Dr. Manjunath Kamath at the ICOVACS 2009 conference in Louisville, KY. The clustering of commodities involved the creation and execution of a mixed integer program.

Teaching Instructor, William S. Spears School of Business

Teaching Activities

I taught the undergraduate Operations Management course in the Management Science and Information Systems Department in the William S. Spears School of Business at Oklahoma State University. I taught the undergraduate Operations Management course for 5 different semesters from the Summer 2009 semester through the Summer 2012 semester. Over the 5 semesters, I taught a total of 200 students. The course covered a diverse number of topics in Operations Management consisting of: demand forecasting, linear programming, reliability, inventory management, quality control and management, MRP and ERP, capacity planning, facilities layout, decision theory, work design and measurement, supply chain management, and the transportation model.

August 2008 – July 2012 **J.B. Hunt Transport, Inc.** **Lowell, AR**
Consulting Logistics Engineer- Dedicated Contract Services (Engineering)

J.B. Hunt Transport, Inc. is a transportation and logistics company that provides intermodal, truck, dedicated, and integrated capacity solutions and services. I did consulting work for J.B. Hunt Transport, Inc. on an as needed basis for the Dedicated Contract Services division within the Engineering Department. My responsibilities included transportation fleet design, transportation network design, resource requirements procurement (drivers, tractors, trailers), and site selection/facilities location.

June 1997 - August 2008 **J.B. Hunt Transport, Inc.** **Lowell, AR**
Senior Analyst- Information Systems/Business Intelligence

As a senior analyst for the Information Systems/Business Intelligence Department, I worked in several different capacities. I was a Visual Basic and SQL programmer responsible for developing and integrating internal customer pricing tools and reporting systems for the Intermodal and Dedicated Contract Services divisions, while using Microsoft Access and SQL server databases, real time DB2 systems, and various reporting tools. I was responsible for managing large amounts of operations and financial data. I was also responsible for maintaining all pricing tools used in operations. I created SQL, COBOL, and WebFocus programs to query large data sets, to execute automated batch programs, and to report information to various departments throughout J.B. Hunt Transport. Database systems and processes to store and retrieve critical data were continually designed and re-designed to more efficiently access and process large data sets.

Senior Financial Analyst- Dedicated Contract Services

I was responsible for portfolio management, financial data analysis, and financial reporting for the Dedicated Contract Services division for the Midwest, Southwest, and Southeast regions. A majority of the job involved pricing new customer business, pricing contract renewals, developing contracts for new business, and developing contract extensions for existing customers. Additional responsibilities included monthly profit/loss reconciliation and management on existing J.B. Hunt Transport business and reporting financial anomalies to senior management. An extensive profit/loss analysis was done monthly to evaluate financially poor accounts that did not maintain an acceptable financial operational ratio/profit.

As a Senior Financial Analyst, I was able to win the Dedicated Contract Services support person of the year award in 2004. Also, one of my regions (Southwest region) had the most improved profitability in 2004.

Walmart National Client Manager- Dedicated Contract Services

I was responsible for managing the consolidation transportation and store delivery business for J.B. Hunt Transport's Walmart account. As the National Client Manager, I managed 3 Account Representatives and 1 Billing Administrator, and my team was responsible for managing 415 truck drivers who transported truckload freight for Walmart's consolidation and store delivery business. Additional responsibilities included developing, measuring, and reporting key performance indicators to Walmart on a daily and weekly basis. Our team met at Walmart corporate offices in Bentonville, Arkansas on a weekly basis to discuss seasonal freight, transportation related issues, and short and long term strategic plans. I also managed all billing, collections, and reporting services for the Walmart account. My team was responsible for ensuring that customer value was continually added in order to grow Walmart's business incrementally, while maintaining adequate profit margins for J.B. Hunt Transport and low everyday cost for Walmart.

As the National Client Manager, our team was able to grow the Walmart business by 100 drivers and tractors, which amounted to $16 million annually in incremental Walmart business. We were able to obtain exceptional profit margins by running an efficient and productive operation and by using a backhaul freight network to minimize non-revenue generating empty tractor miles. The account earned about $65 million in annual revenue.

Engineering Manager-J.B. Hunt Logistics (Transplace)

At J.B. Hunt Transport Logistics (Transplace), I managed 6 industrial engineers who were responsible for designing and pricing transportation and enterprise solutions for new business and contract renewals. The team was also responsible for working with sales to present transportation solutions to clients and to show transportation savings. In-house optimization and transportation routing software were used to develop transportation solutions and to do site selection analysis for clients. Microsoft Access was used to manage customer data for the optimization software. Additionally, we provided consulting work to customers in the form of site selection, optimal truck routing, fleet sizing, etc. Our team was able to secure about $100,000 in new consulting business, and was awarded a new multi-million dollar long term client.

Senior Logistics Engineer- Dedicated Contract Services

As a Senior Logistics Engineer for the Engineering Department, I was responsible for designing, pricing, implementing, and aid in selling engineered transportation solutions to various clients. We were responsible for integrating and implementing new business on-site at customer locations. Linear programming, simulation, and in-house developed optimization tools were utilized to design more optimal transportation network solutions that included more optimal truck routing and more efficient resource and fleet sizing in terms of driver, tractor, and trailer quantities. Existing business was also re-designed and re-priced on an as needed basis. Also, our team was responsible for developing new tools for other departments within J.B. Hunt Transport in order to automate and streamline processes better. Our team also developed customized reports for senior level management, operations managers, safety managers, and sales managers within J.B. Hunt Transport. The Engineering Department was a highly visible department to senior level executive management because we were able to secure a significant amount of new and incremental customer business for J.B. Hunt Transport. As a team member, I was able to secure about $75 million in new business from the projects that I completed, which included: Walmart, Procter & Gamble, Windsor Door, The Ford Motor Company, General Motors, and Chrysler Corporation.

January 1994 - June 1997 **Foam Molding Corporation** **Rogers, AR**
Engineering and Quality Control Manager

At Foam Molding Corporation, we produced injection molded plastic parts for the medical and technology industries. I managed the Engineering and Quality Assurance sectors of the Finishing/Painting Department and managed 23 associates. I was responsible for making sure proactive quality measures and monitoring systems were in place on the manufacturing shop floor to ensure that products were painted and finished according to customer specifications. I coordinated with shop floor supervision to make sure quality metrics were adhered to and that engineering changes were appropriately communicated on all products. I was responsible for developing methods and standards and processes for manufacturing new products, testing new products, and implementing new products into a manufacturing environment. I also helped Foam Molding become ISO 9000 certified. In addition to the quality and engineering responsibilities, I managed maintenance and plant safety, while dealing with OSHA and hazardous materials compliance.

At Foam Molding Corporation, I won an employee of the month award and our team was able to implement multi-million dollars worth of new incremental business. Our team also won a Baxter Healthcare quality award during my tenure at Foam Molding, and our team was responsible for $3 million in plant renovation and layout projects.

June 1992 - December 1993 **University of Arkansas** **Fayetteville, AR**
Teaching Assistant/Research Assistant, Department of Industrial Engineering

Teaching Activities

During the Fall 1992 semester, I taught the laboratory for the Manufacturing Systems Design course in the Industrial Engineering Department. I taught 50 students. I was responsible for teaching students how to setup and use the coordinate measuring machine (CMM) and how to setup, program, and use the laboratory CNC milling machine. Additionally, I was responsible for tooling, machine maintenance, and aluminum stock inventory. I also coordinated activities with other manufacturing laboratories at Engineering South, so students could see how lathes, drills, and other machinery work together to produce different parts and components.

Research Activities

In 1993, I conducted research under the supervision of Dr. John English on the Advanced Manufacturing Technology Laboratory (AMTL) project, which was a multi-disciplined and collaborative project involving industrial, mechanical, computer science, and electrical engineers. The advanced laboratory was developed in the Mechanical Engineering Department at the University of Arkansas. As an industrial engineer, I developed processes, procedures, and experimental design studies associated with measuring tool wear and promoting tool life, while using a milling machine. The team was concerned with variables such as tool chatter, tool vibration, tool composite design, milling machine settings, etc. The goal was to develop a system for improving tool wear and tool life, while producing quality parts on a milling machine. We also developed quality mean and range control charts and conducted design of experiments. The project was sponsored through the state of Arkansas.

During the summer of 1992, I conducted research with Dr. Rick Malstrom and Dr. Timothy Meinert on a facilities layout design project for the Hiram Walker Company in Fort Smith, AR. The project consisted of more optimally laying out machinery, storage racks, equipment, etc. in such a way to minimize transportation flow costs within the facility and to more optimally use plant space. The flow of product was improved resulting in substantial annual savings, and storage space capacity was significantly improved.

Engineering Student Internship

I did an engineering student internship with The Trane Company from December 1989 through July 1990. I was a supervisor for the commercial heaters division responsible for managing 10 associates. Daily responsibilities included: managing employee issues, meeting scheduled production quotas, assuring quality produced products, managing vendor and finished goods inventory, coordinating transportation to pick-up and deliver finished products, ensuring safety, developing methods and bill-of-materials for new products, new product implementation, etc. The plant operated under a Just-in-Time (JIT) inventory system, so we operated the plant as efficiently as possible; therefore, managing inventory and quality were top priorities. In addition to the daily requirements, there were cases where work cells had to be created or reconfigured to incorporate new product lines, new product designs, and newly purchased equipment. Our team completed numerous capital intensive projects in order to develop a more self-sufficient and cost effective production plant.

AWARDS AND COMMENDATIONS

Sammy Service Award (Walmart/Sam's Club)- 2014
IIE Silver Award (Oklahoma State University)- 2012
MHEFI scholarship award (Oklahoma State University)- 2009, 2010, 2011
Research team received a CELDi best poster award (Oklahoma State University)- 2010
Yamanouchi Foundation fellowship award (Oklahoma State University)- 2008-2011
J.B. Hunt Transport, Inc. (Dedicated Contract Services) support person of the year award- 2004
J.B. Hunt Transport, Inc. service award- 2002
J.B. Hunt Transport, Inc. managerial promotions- 2000, 2001
Baxter Healthcare quality award for the Foam Molding Corporation- 1997
Foam Molding Corporation outstanding employee award- August 1996
The Trane Company quality control award- 1990
Dean's list numerous times at the University of Arkansas

PH.D. DISSERTATION

Melton, K. "Truckload Freight Transportation Utilizing Relay Points to Improve the Driving Job." Dissertation. Oklahoma State University, 2012.

MASTER'S THESIS

Melton, K. "Diagnosis of Discrete Manufacturing Processes." Thesis. University of Arkansas, 1994.

JOURNAL PUBLICATIONS

Melton, K., Parepally, S. "Domiciling Truck Drivers More Strategically in a Transportation Network." *International Journal of Applied Industrial Engineering* 2 1 (2014): 41-56.

Melton, K., Ingalls, R. "Utilizing Relay Points to Improve the Truckload Driving Job." *International Journal of Supply Chain Management* 1 3 (2012): 1-10.

Melton, K., English, J., Taylor, G.D. "A Statistical Process Control Approach to Process Diagnosis in Discrete Manufacturing Environments." *International Journal of Quality Science* 2 2 (1997): 234-59.

CONFERENCE PROCEEDINGS

Zhang, H., Chen, J., Melton, K. (2013). *The Development of a RFID-based Interactive Academic Advising System (RFID-based IAAS)*. Paper presented at the Proceedings of the 2013 American Society for Engineering Education IN/IL Conference.

Melton, K., Ingalls, R. (2012). *Truckload Freight Transportation Utilizing Relay Points to Improve Driving Jobs.* Paper presented at the Proceedings of the 2012 Industrial and Systems Engineering Research Conference.

PAPERS RECENTLY SUBMITTED TO JOURNALS

Zhang, H., Chen, J., Melton, K. "RFID in Academic Advising System." *Journal of Engineering & Technology* 1 1 (2013): 1-26.

Chen, J., Melton, K., Uddavolu, R. "Lean Sigma Manufacturing System Design Based on Simulation Analysis – An Industrial Case Study." *Journal of Manufacturing Technology Management* 1 1 (2012): 1-31.

CONFERENCE PRESENTATIONS

Spring 2013 American Society for Engineering Education IN/IL Conference
I presented a paper entitled *The Development of a RFID-based Interactive Academic Advising System (RFID-based IAAS)*.

Spring 2012 Industrial and Systems Engineering Research Conference (ISERC) Conference
I presented a paper entitled *Truckload Freight Transportation Utilizing Relay Points to Improve Driving Jobs*.

Fall 2011 Center for Excellence in Logistics and Distribution (CELDi) Conference
Presented a poster entitled *Supply Chain Model Using Cloud Computing*

Spring 2010 Center for Excellence in Logistics and Distribution (CELDi) Conference
Presented a poster entitled *TISCSoft: A Decision Support System for Transportation Infrastructure and Supply Chain System Planning*

Fall 2009 Center for Excellence in Logistics and Distribution (CELDi) Conference
Presented a poster entitled *A Decision Support System (DSS) for Transportation Infrastructure and Supply Chain System Planning*

Fall 2009 International Conference on Value Chain Sustainability (ICOVACS) Conference
Presentation made on a paper entitled *Models for Clustering Commodities into Logistical Families*

Spring 2009 Council of Supply Chain Management Professionals - Oklahoma City, OK
Presentation made on a project entitled *A Decision Support System (DSS) for Transportation Infrastructure and Supply Chain System Planning*

SERVICE

Samaritan Community Center Volunteer Program- Rogers, AR
Walmart Associate in Need Program- Walmart/Sam's Club
Youth Strategies Volunteer Program- Walmart/Sam's Club
Program Outcome Assessment and Program Objective committee- Bradley University
Student Recruitment and Outreach committee - Bradley University
Industrial and Manufacturing Engineering and Technology Programs committee - Bradley University
Student Technology Fee Oversight committee- 2011-2012- Oklahoma State University
Institute of Industrial Engineers (IIE)
Public Relations Director- 2011-2012- Oklahoma State University

Graduate Student Representative- 2009-2010- Oklahoma State University
Children's church leader
FAITH church leader
Basketball Coach (4th grade girls)- 2011-2012- Stillwater, OK

PROFESSIONAL MEMBERSHIPS/AFFILIATIONS

Production and Operation Management Society
Institute of Industrial Engineers
Alpha Pi Mu
INFORMS
American Society for Quality
Institute for Supply Management (ISM)

Dennis Ray Mickelsen
Adjunct Faculty
University of Arkansas

EDUCATION
M.S., Management, Troy State University, Pensacola, FL, 1998
B.A.S., Resource Management, Troy State University, Pensacola, FL, 1996

NON-ACADEMIC EXPERIENCE
Business Development Manager
512001 - 312005
Responsible for Strategic Planning, Forecasting, Pricing Activity, Sales and Marketing, and New Business Program Management in a Fast Paced Multi-national, Multi-market Environment. As a member of the divisional electronics strategy board. Responsible For start up planning on several new market activities. Led capture activities For first medical and appliance related manufacturing opportunities that were used to offset declining automotive business base. Trained employees in statistical methods. Worked with team to achieve certification to 15014001 and TS16949. (Maintained responsibilities For Purchasing and Information Technology until those departments were centralized at the corporate level in 2004.) Corporate Strategy to move business offshore Forced Facility closure.

Delphi Packard Hughes Interconnect
Electronic Products
Foley, Alabama
Business Segment Manager
411998 - 512001
Responsible For profit /Ioss and Operations of a $40 Million in Sales Manufacturing Facility for automotive electronics. Met or exceeded key operational & performance measures. Implemented lean manufacturing techniques. Provided direct stewardship of 160 employees and matrix responsibility For 60 support personnel including managers and engineers. Provided leadership in strategic planning, Forecasting, budgeting and performance measurement, new business development and production management. Participated as a member of the divisional electronics strategy board. Obtained QS9000 quality certification.

Delphi Packard Hughes Interconnect
Alabama Operations
Foley, Alabama
Engineering/Quality Manager
411996 - 411998
Responsible for Process, Industrial, Facilities, Test and Quality Engineering for the electronics manufacturing Facility and for Process, Industrial, and Facilities engineering for the aerospace wiring manufacturing Facilities. Directly supervised 25 professional/technical employees. Provided divisional technology marketing support and research. Participated as a member of the divisional electronics strategy board. Obtained 150-9000 quality certification.

Delphi Packard Hughes Interconnect

Electronic Products
Foley. Alabama
Engineering Manager
4/1994 - 4/1996
Responsible for Process. Industrial. Facilities. Test and Quality Engineering for the electronics manufacturing facility, Directly supervised 12 professional, technical employees, Provided divisional technology marketing support and research, Participated as a member of the divisional electronics strategy board,

Hughes Aircraft - Alabama
Defense Wiring Systems
Foley. Alabama
Engineering Manager
4/1992 - 4/1994
Responsible for Process. Industrial. Test. and Facilities Engineering for our defense subassembly manufacturing facility, Planned transition of facility to electronic products and existing work to Fort Defiance Arizona facility, Provided statistical and quality circle training to employees,

Hughes Aircraft - Alabama
Defense Wiring Systems
Foley. Alabama
Senior Project Engineer
6/1.982 - *4/1992*
Responsible for technical support area which supported Test Equipment and Information Technology equipment. Continuously increasing responsibility from original hire as a Test Technician for harness test equipment in 1982,

Royal Systems
Mobile. Alabama
Field Service Engineer
2/1979 - 6/1982
Provided field repair services for copy machines. calculators. typewriters and dictating equipment

United States Navy *2/1973* - 2/1979
Various Locations CONUS & Overseas
Cryptologic Technician (Maintenance)
Top Secret Clearance - Special Intelligence access. Honorable Discharge, Completed Electronic Technician Class A School. Cryptologic Technician (M) Class A School. Digital Computers and Solid State Engineering School (National Security Agency). Bitman Computer Systems Maintenance (National Security Agency),

JOB RELATED CERTIFICATIONS
Six-Sigma Black-belt (Delphi Corporate)
Shainen Journeyman (Applied Statistics Methodology), (Shainen Institute)
Statistical Methods Instructor (Deming Institute)

HAMEED A. NASEEM
Professor

EDUCATION
Ph.D. Materials Engineering Science, Virginia Polytechnic Institute and State University, 1984
M.S. Physics, Virginia Polytechnic Institute & State University, 1980

UA YEARS OF SERVICE (23 years)
Aug., 1995- Present , Professor, Dept. of Electrical Engineering, University of Arkansas, Fayetteville, AR.
Aug. 1990- Aug., 1995, Assoc. Prof., Dept. of Electrical Engineering, University of Arkansas, Fayetteville, AR.
Aug. 1985- Aug., 1990, Asst. Prof., Dept. of Electrical Engineering, University of Arkansas, Fayetteville, 1985-90

OTHER RELATED EXPERIENCE
Aug. 1995- Present, Adjunct Professor, Department of Physics
Jan. 1984- July 1985, Post-doctoral Research Associate, Southern Methodist University, Dallas, TX.

PATENTS (8 awarded)
1. "Low Temperatures Production of Large Grain Polycrystalline Silicon," Inventors: H. A. Naseem and Marwan Albarghouti, Awarded April 10, 2007, **U. S. Patent No. 7,202,143**.
2. "Method of Doping Silicon, Metal Doped Silicon, method of Making Solar Cells, and Solar Cells," Inventors: H. A. Naseem, M. S. Haque, and W. D. Brown, Awarded Jan. 18, 2005, **U. S. Patent No. 6,844,248**.
3. "Process and apparatus For Applying Charged Particles to a Substrate, Process for Forming a Layer on a Substrate, Products Made Therefrom," Inventors: W. D. Brown, E. A. Beera, A. P. Malshe, and H. A. Naseem, Awarded April 8, 2003, **U. S. Patent No. 6,544,599**.

PRINCIPAL PUBLICATIONS OF THE LAST FIVE YEARS
1. "Investigating the role of hydrogen in silicon deposition using an energy-resolved mass spectrometer and a Langmuir probe in an Ar/H2 radio frequency magnetron discharge", S. L. Mensah, Hameed H. Naseem, Husam Abu-Safe, and M. H. Gordon, Phys. of Plasmas 19, pp. 073521-073527, 2012
2. "Terahertz plasmon amplification using two-dimensional electron-gas layers," Mohammad A. Khorrami, Samir El-Ghazaly, Shui-Qing Yu, and Hameed Naseem, Journal of Appl. Phys., **Vol.** 111, pp. 094501 - 094501-6, 2012
3. "Fabrication of horizontally grown silicon nanowires using a thin aluminum film as a catalyst," Hafeezuddin K. Mohammed, Husam Abu-Safe, Benjamin Newton, Samir El-Ghazaly, Hameed A. Naseem, Thin Solid Films, Vol. 519, pp. 1681-86, 2010.
4. "Langmuir probe and optical emission studies in a radio frequency (rf) magnetron plasma used for the deposition of hydrogenated amorphous silicon," S. P. Koirala, S. Mensah, H. H. Abu-safe, H. A. Naseem, and M. H. Gordon, Surface and Coatings Technology, Vol. 203, pp. 602-05, 2008.
5. "Understanding the Effects of Stress on the Crystallization of Amorphous Silicon," Li Cai, Min Zou, Husam H. Abu-Safe, Hameed Naseem, and William Brown, Journal of Electronic Materials, Vol. 36 No. 3, p. 191-196, 2007.
6. "Effect of stress on the aluminum-induced crystallization of hydrogenated amorphous silicon films," Maruf Hossain, Husam Abu-Safe, Hameed Naseem, and William Brown, Journal of Materials Research, Vol. 21, No. 10, p. 2582, 2006.
7. "TEM Investigation of the Role of a Nano-oxide Layer in Aluminum-Induced Crystallization of a-Si:H," Marwan Albarghouti, Hameed Naseem, and Mowafak Al-Jassim, Electrochemical and Solid State Letters, Vol. 9, No. 7, p. G225, 2006.
8. "Interfacial Diffusion Effect on Metal Induced Crystallization of an amorphous Silicon—A Microstructural Pathway," A. K. Srivastava, K. N. Sood, R. Kishore, and H. A. Naseem, Electrochemical and Solid State Letters, Vol. 9, No. 7, p. G219, 2006.
9. "Large Grain Poly-Crystalline Silicon Thin Films Prepared by Aluminum-Induced Crystallization of Sputter-Deposited Hydrogenated Amorphous Silicon," Maruf Hosssain, Harry M. Meyer, III, Husam H. Abu-Safe, Hameed Naseem, and W. D. Brown, Journal of Material Research, Vol. 21, No. 3, p. 761, 2006.
10. "The effect of hydrogen in the mechanism of aluminum-induced crystallization of sputtered amorphous silicon using scanning auger microanalysis", Maruf Hossain, Harry M. Meyer, III, Husam H. Abu-Safe, Hameed A.

Naseem and William D. Brown, Thin Solid Films, Vol. 510, No. 1-2, p. 184, 2006.

11. "The Effects of Hydrogen on Aluminum-Induced Crystallization of Sputtered Hydrogenated Amorphous Silicon," Maruf Hossain, Husam H. Abu-Safe, Hameed Naseem, and William D. Brown, Journal of Electronic Materials, Vol. 35 No. 1, p. 113, 2006.
12. "Characterization of hydrogenated amorphous silicon thin films prepared by magnetron sputtering," Maruf Hossain, Husam H. Abu-Safe, Hameed Naseem and William D. Brown**,** Journal of Non-Crystalline Solids, Vol. 352, No. 1, p. 18, 2006.
13. "Large Grain Poly-Crystalline Silicon Thin Films Prepared by Aluminum-Induced Crystallization of Sputter-Deposited Hydrogenated Amorphous Silicon," Maruf Hosssain, Harry M. Meyer, III, Husam H. Abu-Safe, Hameed Naseem and W. D. Brown, Journal of Material Research, Vol. 21, No. 3, p. 761, 2006.
14. "Transmission Electron Microscopy and X-Ray Diffraction Analysis of Aluminum-Induced Crystallization of Amorphous Silicon in α-Si:H/Al and Al/ α-Si:H Structures," Ram Kishore, C. Hotz, H. A. Naseem, and W. D. Brown, Microscopy and Microanalysis, Vol. 11, No. 2, p. 133, 2005.

SCIENTIFIC AND PROFESSIONAL SOCIETIES

Senior Member, Institute of Electronics and Electrical Engineers (IEEE)
IEEE, Photonics Society

HONORS AND AWARDS

Arkansas Academy of Electrical Engineering Outstanding Faculty Award, 1988, 1993, 1996, 2000
Texas Instruments Outstanding Researcher Award, 1996, 1998
Phillips Petroleum Company Outstanding Faculty Award, 1994
Arkansas Teaching Academy, College of Engineering Teaching Award, 1994
Haliburton Outstanding Teacher Award, 1992
Outstanding Researcher Award, 1989
Elected Member, New York Academy of Science, 1987
Phi Beta Delta, International Scholars, 1995
Eta kappa Nu, 1987
Sigma Pi Sigma, 1979

INSTITUTIONAL AND PROFESSIONAL SERVICE IN THE LAST FIVE YEARS

Undergraduate Curriculum Committee
Tenure and Promotion Committee
Electronics/Circuits Committee
HiDEC Steering Committee
Graduate Committee (Electrical Engineering)
Graduate Committee for MicroEP (M.S. and Ph. D.) Program
College of Engineering Promotion and Tenure Committee (EE Rep.)
College of Engineering Library Committee (EE Rep.)
Faculty Advisor, Al-Islam Students Association
Journal Paper Reviewer: Thin Solid Films; J. Electronic Materials; J. Vac. Sci. & Tech., J. of Materials; J. of Electrochemical Society; J. of Optical Materials

PERCENTAGE OF TIME AVAILABLE FOR RESEARCH OR SCHOLARLY ACTIVITIES

40 percent

PERCENTAGE OF TIME COMMITTED TO THE PROGRAM

100 percent

RESEARCH INTERESTS

Semiconductor Material Synthesis and Characterization; Microelectronic Fabrication Technology; Fabrication and Characterization of Thin Films and Electronic Devices; Amorphous, Nanocrystalline, Microcrystalline, Polycrystalline, and Single Crystal Silicon, and Alloys (with oxygen, nitrogen, carbon, and germanium); Low Temperature Epitaxy of Si, SiGe, SiGeSn, Optoelectronic Devices, Long Wave integrated Optoelectronics; Photovoltaic Solar Cells; Silicon Nanowire and Carbon Nanotube based Solar Cells and Microwave and Millimeter Wave Devices; Low Temperature Metal Induced Crystallization.

Leonard Nethercutt
Adjunct Faculty
University of Arkansas

EDUCATION

Ph.D. Studies in Business Administration.
University of Memphis. 1992 – 1995.
Concentration-Finance.
Minor-Economics.
45 hours completed coursework. ABD—all but Dissertation.

Master of Business Administration.
University of Arkansas at Little Rock. 1991.

B.S. Accounting
University of Arkansas at Little Rock. 1987.

TEACHING EXPERIENCE

Summer 1996 to current. University of Arkansas-adjunct faculty at LRAFB site in the Master of Science Operations Management program. Classes include Finance for Operations Managers, Project Management for Operations Managers, Economic Decision Making, and Introduction to Operations Management. Serve on the oral comprehensive exam committee.

Fall 1996. University of Arkansas-Little Rock. Adjunct instructor. Money and Banking.

Spring 1996 to Summer 1997. University of Central Arkansas. Adjunct instructor. Macro and Micro Economics.

Spring 1995. Arkansas State University (LRAFB). Statistics.

1992-1994, University of Memphis. Teaching assistant. Corporate Finance.

INDUSTRIAL EXPERIENCE

1992-2010. Milestone Financial Services. Mayflower, AR (owner)
Provide financial management services to business clients.

1981-1991, Station Management Services, Inc. Little Rock, AR. (CEO, owner)
Partnered with Texaco Marketing and Refining in area market conversions.

- Company operated convenience stores for major oil companies. The company operated up to 18 locations in three states.
- Company distributed/warehouse petroleum and auto products.

Responsibilities included devising company strategy, directing and controlling operations, formulating policy, developing budget process, and performing financial management.

1980-1990, E K WILLIAMS CO. Little Rock, AR. (partner, owner)
Company performed outside accounting services and tax preparation for small business clients and individuals. Responsibilities included planning, directing, controlling, and overseeing internal operations as well as maintaining quality and cost controls. Also served as business consultant for clients including accounting, taxes, planning, budgeting, and representation before the IRS.

1985-1986, Automated Inventory Systems, Inc. (partner) Company developed inventory system utilizing hand held scanners and product database. The system provided detailed physical inventories as well as product movement reports when integrated with purchasing records, product and pricing exception reports.

RELEVANT PUBLICATIONS
Touched by tragedy: capital market lessons from the crash of ValuJet Flight 592, *Economics Letters*, 1997, Nethercutt and Pruitt.

The Texaco Racial Discrimination Case and Shareholder Wealth, *Journal of Labor Research*, Fall 2002, Pruitt and Nethercutt.

PROFESSIONAL SOCIETY MEMBERSHIPS and CERTIFICATIONS
NASD Series 6, 7, 63, 65(2003/4)
Enrolled Agent—1980--present.

HONORS AND AWARDS
Received the Wernet Fellowship for outstanding academic achievement for a Finance Doctoral student—University of Memphis (1994)

OTHER ACTIVITIES
Served as member of the Steering Committee during 1997 for a possible rural water system serving an area in Southwest Faulkner County. Refocused efforts continue through 2012.

Served as Committee Member for Connect Faulkner County to facilitate broadband availability in Faulkner County. Connect Arkansas has recently received government funding to move forward with the project.

Curriculum Vitae

Name: Darin W. Nutter

Department: Mechanical Engineering

Date of hire: August, 1994

Years of service: 18

Present academic rank: Professor, 2012

Degrees:
BSME, Oklahoma State University, 1986
MSME, Oklahoma State University, 1988
Ph.D., Texas A&M University, 1994

Other related experience – teaching, industrial, etc.:
Fleming Foods, Inc., 1988-1989, Corporate Facilities Engineer
Energy Systems Laboratory at Texas A&M University, 1990-1994, Research Engineer

Consulting, patents, etc.:
Occasional consultant to Arkansas and U.S. industry on manufacturing energy efficiency

State(s) in which registered:
Arkansas Professional Engineer

Principle publications during the last five years:
1) Tomasula, P. M. and Nutter, D. W., 2011. "Mitigation of Greenhouse Gas Emissions in the Production of Fluid Milk", *Advances in Food and Nutrition Research*, Academic Press (book chapter), 62: 41-88, doi: 10.1016/B978-0-12-385989-1.00002-8.
2) Nutter, D. W., Kim, D., Ulrich, R., and Thoma, G., "Greenhouse Gas Emission Analysis for U.S. Fluid Milk Processing Plants: Processing, Packaging, and Distribution", *International Dairy Journal*, in press.
3) Guo, W. and Nutter, D., 2012. "The effects of barometric relief dampers on internal static pressure, air quality, and energy consumption for a typical large-scale retail building", *HVAC&R Research*, 18(5): 1011-1029, doi: 10.1080/10789669.2012.663858.
4) Milani, F., Nutter, D. W., and Thoma, G., 2011. "Environmental Impacts of Dairy Processing and Products: A Review", Invited Paper: *Journal of Cleaner Production*, 94: 4243–4254, doi: 10.3168/jds.2010-3955.
5) Nutter, D. W., Harding, A. C., and McKnight, S., 2011. "Arkansas Industrial Energy Clearinghouse - Success and Lessons Learned from Creation to Implementation", Proceedings of the IETC 2011 Thirty-third Industrial Energy Technology Conference, May 18-19, New Orleans, Louisiana.
6) Tan, A., Nutter, D. W., and Milani, F., 2011. "GHG emissions and energy use from a multi-product dairy processing plant", Proceedings of the 2011 ASME Early Career Technical Conference (ECTC), March 31 – April 2, Fayetteville, Arkansas; http://districts.asme.org/DistrictE/E-ECTC.htm.
7) Guo, W. and Nutter, D. W., 2010. "Derivation of Air Flow Characteristics for Back-Draft Dampers", *Building Simulation*, 3(4): 327-330, doi:10.1007/s12273-010-0016-1.
8) Davis, J. A. and Nutter, D. W., 2010. "Occupancy Diversity Factors for Common University Building Types", *Energy and Buildings*, 42(9): 1543–1551, doi:10.1016/j.enbuild.2010.03.025.

9) Guo, W. and Nutter, D. W., 2010. "Setback and Setup Temperature Analysis for a Classic Double-Corridor Classroom Building", *Energy and Buildings*, 42(2): 189-197, doi:10.1016/j.enbuild.2009.08.014.

Scientific and professional societies membership:
ASME, 12-94 to present; ASHRAE, 9-89 to present

Honors and awards:

2011	Fellow, Amer. Society of Heating, Refrigerating, and Air-conditioning Engineers
2008-2009	UA College of Engineering Outstanding Researcher in Mechanical Engineering
2007-2008	UA College of Engineering Outstanding Teacher in Mechanical Engineering
2002-2003	UA College of Engineering Outstanding Teacher in Mechanical Engineering
1999-2000	UA College of Engineering Outstanding Teacher in Mechanical Engineering
1998-1999	UA College of Engineering Outstanding Teacher in Mechanical Engineering
1996-1997	Texas Instruments University of Arkansas Outstanding Teacher in Mechanical Engineering

Subjects or courses taught during the most recent academic year, by terms:

Fall 2012	MEEG 4473	Indoor Environmental Control, 3 hr/wk, plus prep
Spring 2013	MEEG 4453	Industrial Waste and Energy Mngt., 3 hr/wk, plus prep

Other assigned duties performed during the academic year with average hours/week: **Research and Outreach, 30 hours/week**

Institutional and professional service in the last five years:
Innovation Center for U.S. Dairy, Chair, Dairy Plant Smart Initiative, 6-08 to present
American Society of Heating, Refrigerating, and Air-conditioning Engineers (ASHRAE):
Member, Standing Committee, Professional Development Committee, 7-10 to present
Student Branch Advisor, University of Arkansas, 10-99 to present
T.C. 8.11, Unitary and Room Air-Conditioners and Heat Pumps, Member, 7-11 to present

University of Arkansas FAMA Engineering Consultant Selection Comm, 2008 to present
University of Arkansas Patent and Copyright Committee, 2003 to present
University of Arkansas Sustainability Council's Energy Working Group, co-chair, 2008 to 2011.
College of Engineering Freshman Engineering Committee, 2007 to present
Mechanical Engineering P&T Unit Committee, 2010 to present (chair AY 2013)
Mechanical Engineering Department Thermal Systems Committee, 1995 to present

Professional development activities during the last five years:
Attend numerous national and international conferences per year, averaging 3 or more per year

Vita

GREGORY S. PARNELL, Ph. D.
Research Professor
Director, M.S. in Operations Management Program
Department of Industrial Engineering
4207 Bell Engineering Center
University of Arkansas
Fayetteville, AR 72701
gparnell@uark.edu
Mobile: (914) 720-3989

PROFESSIONAL SUMMARY

TEACHING

Research Professor and Director, M.S. in Operations Management, Department of Industrial Engineering, College of Engineering, University of Arkansas. Previous academic positions: U.S. Military Academy at West Point (Professor of Systems Engineering), U.S. Air Force Academy (Distinguished Visiting Professor), Virginia Commonwealth University, and the Air Force Institute of Technology (AFIT). Served as the first Class of 1950 Chair of Advanced Technology at West Point and Department Head at AFIT.

RESEARCH

Received $2.0 M funding. Research focuses on decision analysis, risk analysis, systems engineering, and resource allocation. Publications in leading archival journals and conference proceedings; lead editor for Wiley Systems Engineering text (2 editions); lead author for Wiley Handbook of Decision Analysis; and author of 15 book chapters. Current research is on intelligent adversary decision and risk analysis and model based systems engineering.

PROFESSIONAL SERVICE

Serve on five editorial boards and referee for several journals. Previous service includes: board of Society for Decision Professionals (SDP), President of the Decision Analysis Society of INFORMS; President of the Military Operations Research Society (MORS); and Editor of the Military Operations Research journal.

Served on three National Research Council studies; chair of Methodological Improvements to the DHS's Biological Agent Risk Analysis (2007-8), member of Metrics for Cooperative Threat Reduction Committee (2011-12), and member of Evaluating the Effectiveness of the Global Nuclear Detection Architecture Committee (2012-13). Served a Peer Reviewer for National Science Foundation Civil, Mechanical and Manufacturing Innovation Division (2013). Participant in eight National Security Agency Advisory Board panels to advise senior leaders since 911. Currently serve on Compliance Panel (since 2009).

AWARDS

Received several publication and service awards. Elected Fellow of MORS, INFORMS, International Committee on Systems Engineering (INCOSE), SDP, and Lean Systems Society.

EDUCATION

Ph.D., Engineering-Economic Systems, Stanford University, 1985
M.S., Systems Management, University of Southern California, 1980
M.E., Industrial & Systems Engineering, University of Florida, 1974
B.S., Aerospace Engineering, State University of New York at Buffalo, 1970

ACADEMIC EXPERIENCE

Research Professor, Department of Industrial Engineering, University of Arkansas, 2014 -
Director, M.S. in Operations Management Program, Department of Industrial Engineering, University of Arkansas, 2014 -
Visiting Professor of Industrial Engineering, Department of Industrial Engineering, University of Arkansas, 2013-2014
Professor of Systems Engineering, Department of Systems Engineering, USMA, 2003- 2013
Distinguished Visiting Professor, Department of Management, U.S. Air Force Academy, 2011-2012
Class of 1950 Chair of Advanced Technology, USMA, 1999-2005 (Chair rotated to another dept)
Associate Professor, Systems Engineering Department, USMA, 1999-2003
Associate Professor, Mathematical Sciences Department, VCU, 1998-1999
Assistant Professor, Mathematical Sciences Department, VCU, 1995-1998
Head & Assistant Professor, Operational Sciences Department, AFIT, 1993-1995
Part-time Instructor, University of Southern California Systems Management Program (later managed by Capitol University) in Washington, DC, 1989-1992
Assistant Professor, Operational Sciences Department, AFIT, 1985-1988
Senior Fellow, National Defense University, 1988-1989
Fellow, Center for International Security & Arms Control, Stanford University, 1984-85

COURSES TAUGHT (33 Courses) (* New courses developed)

Undergraduate Courses
INEG 4433, Systems Engineering and Management
INEG 4443, Project Management
INEG 4904, Industrial Engineering Design
OR310, Systems Analysis
SE310, Introduction to Systems Engineering
SE 300, Introduction to Systems Engineering *
SE 301, Fundamentals of Engineering Design and Systems Management *
SE 385, Decision Analysis
SE 401, Introduction to Systems Design
SE 402, Systems Design I
SE 403, Systems Design II
SE 420, Production Operations Management
SE 489, Independent Study
EM 384, Analytical Methods for Engineering Management *
EM 381, Engineering Economy
MAT 327, Mathematical Modeling *
HON 399, Multiple Objective Decision Analysis *

HON 399, Decision Analysis *

Graduate Courses
OMGT 5003, Introduction to Operations Management
INEG/OMGT 5443, Decision Models
MAT 643, Decision & Risk Analysis *
MAT 647, Multiple Objective Decision Analysis *
MAT 691, Special Topics in Mathematics: Multiattribute Utility Theory *
MAT 641, Mathematical Programming
MAT 527, Mathematical Foundations of Operations Research I
STA 503, Introduction to Stochastic Processes
OPER 645, Decision Analysis *
OPER 646, Environmental Decision & Risk Analysis *
OPER 520, Probabilistic Modeling
OPER 555, Knowledge Systems Engineering *
OPER 562, Introduction to Management Science
OPER 592, Space Operations Planning
OPER 655, Artificial Intelligence & Operations Research *
OPER 666, Systems Simulation
OPER 763, Stochastic Methods in Operations Research
EENG 592, Artificial Intelligence
SSM 525, Probabilistic Decision-Making
SSM 553, Systems Acquisition Management

REFEREED PUBLICATIONS (36 publications in 15 journals)

Parnell, G. S., Hughes, D. W., Burk, R. C., Driscoll, P. J., Kucik, P., Morales, B. L., & R. Nunn, L. R., Survey of Value-Focused Thinking: Applications, Research Developments, and Areas for Future Research, *Multi-Criteria Decision Analysis*, Vol 20: 2013. Pp. 49–60.

Parnell, G. S., Buckley, M., Ernesto, A., McGrath, D., Miller, M., Acquisition Program Information Assurance Assessment Model, *Military Operations Research,* Vol 16, No. 4, 2011, pp. 41-56.

Merrick, J. and Parnell, G., A Comparative Analysis of PRA and Intelligent Adversary Methods for Counterterrorism Risk Management, *Risk Analysis*, Vol 31, No 9, 2011, pp. 1488-1510.

Geis, J. P. II, Parnell, G. S., Newton, H., Bresnick, T. A., "Towards Blue Horizons," *Interfaces*, June-July 2011, Vol 41, No 4. Pp. 338-353.

Dees, R., Dabkowski, M., and Parnell, G., "Decision-Focused Transformation of Additive Value Models to Improve Communication," *Decision Analysis*, June 2010, Vol 7, pp. 172-184

Parnell, G.S., Smith, C. M., Moxley, F. I., Intelligent Adversary Risk Analysis: A Bioterrorism Risk Management Model, *Risk Analysis*, January 2010, pp 32-48.

Parnell, G. S., Borio, L. L., Cox, L. A., Brown, G. G., Pollock, S., Wilson, A. G., Commentary, Response to Ezell and von Winterfeldt, *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science*, Volume 7, Number 1, 2009, Mary Ann Liebert, Inc., http://www.liebertonline.com/doi/pdfplus/10.1089/bsp.2009.0927

Parnell, G. S., Borio, L. L., Brown, G. G., Banks, D., Wilson, A. G., Scientists Urge DHS to Improve Bioterrorism Risk Assessment, *Biosecurity and Bioterrorism Biodefense Strategy,*

Practice, and Science, Mary Ann Liebert, Inc., Volume 6, Number 4, 2008, http://www.liebertonline.com/doi/pdfplus/10.1089/bsp.2008.0930

Dillon-Merrill, R. L., Parnell, G. S., Buckshaw, D. L., Hensley, W. R., Jr., Caswell, D. J., "Avoiding Common Pitfalls in Decision Support Frameworks for Department of Defense Analyses," *Military Operations Research*, 2008, Vol 13, No 2, pp. 19-31

Trainor, T., Parnell, G., Kwinn, B., Brence, J., and Tollefson, E., Downes, P., "The US Army Uses Decision Analysis in Designing Its Installation Regions", *Interfaces*, Vol 37, No 3, May-June 2007, pp. 253-264

Ewing, P., Tarantino, W., and Parnell G., "Use of Decision Analysis in the Army Base Realignment and Closure (BRAC) 2005 Military Value Analysis," *Decision Analysis*, Vol 3, No1, March 2006, pp. 33-49.

Westphal D., Szafranski R., and Parnell G., "Strategic Planning for the Air Force: Leveraging Business Planning Insights to Create Future Value," *Air Power: Journal of Air Power and Space Studies*, Center for Air Power Studies, New Delhi, India, Vol 2, No 2, Summer 2005 (April-June), pp. 119-139 [Reprinted from Aerospace Power Journal]

Buckshaw, D. L., Parnell, G. S., Unkenholz, W. L., Parks, D. L., Wallner, J. M. and Saydjari, O. S., "Mission Oriented Risk and Design Analysis of Critical Information Systems," *Military Operations Research*, 2005,Vol 10, No 2, pp. 19-38.

Merrick, J., Parnell, G., Barnett, J., Garcia, M., "A Multiple Objective Decision Analysis of Stakeholder Values to Identify Watershed Improvement Needs," *Decision Analysis,* Vol. 2, No. 1, March 2005, pp. 44–57

Parnell, G., Burk, R., Schulman, A., Westphal, D., Kwan, L, Blackhurst, J., Verret, P, and Karasopoulos, H., "Air Force Research Laboratory Space Technology Value Model: Creating Capabilities for Future Customers," *Military Operations Research*, 2004, Vol 9, No 1, pp. 5-17

Parnell, G., Engelbrecht, J., Szafranski R., & Bennett, E, "Improving Customer Support Resource Allocation within the National Reconnaissance Office," *Interfaces*, Vol 32, No. 3, May-June 2002, pp. 77-90

Parnell, G., Gimeno, B., Westphal, D, Engelbrecht, J., and Szafranski, R., Multiple Perspective R&D Portfolio Analysis for the National Reconnaissance Office's Technology Enterprise, *Military Operations Research*, 2001, Vol 6, No 3, pp. 19-34

Parnell, G., Practice Abstract, "Work Package Ranking System for the Department of Energy's Office of Science and Technology," *Interfaces*, 2001, Vol 31, No 4, July-August 2001, pp. 109-111

Parnell, G., Metzger, R., Merrick, J., and Eilers, R., "Multiple Objective Decision Analysis of Theater Missile Defense Architectures," *Systems Engineering*, Vol 4, No 1, 2001, pp. 24-34.

Parnell, G., Frimpon M., Barnes, J., Kloeber, J., Deckro, R., J., Jackson, "Safety Risk Analysis of an Innovative Environmental Technology," *Risk Analysis*, Vol 21, No 1, 2001, pp. 143-155

Delano, G., Parnell, G., Vance, M. & Smith, C., "Quality Function Deployment and Decision Analysis: A R&D Case Study," *International Journal of Operations and Production Management*, Vol 20, No. 7, August 2000, pp. 591-609

Bauer, K., and Parnell, G., and Meyers, D., "Response Surface Methodology as a Sensitivity Analysis Tool in Decision Analysis," *Journal of Multi-Criteria Decision Analysis*, Vol 8, 1999, pp. 162-180

Parnell, G., Jackson, J., Burk, R., and Lehmkuhl, L., and Engelbrecht, J., "R&D Concept Decision Analysis: Using Alternate Futures for Sensitivity Analysis," *Journal of Multi-Criteria Decision Analysis*, Vol 8, 1999, pp. 119-127

Westphal D., Szafranski R., and Parnell G., “Strategic Planning for the Air Force: Leveraging Business Planning Insights to Create Future Value,” *Airpower Journal*, Winter 1998, Vol XII, No. 4, pp. 29-40

Heidelberg, H., Parnell, G., and Ames, J. “An Off-Line Bin Parking Algorithm for Cargo Conveyance Systems,” *Naval Research Logistics*, 1998, Vol 45, pp. 751-768

Parnell, G., Conley, H., Jackson, J., Lehmkuhl, L, and Andrew, J., “Foundations 2025: A Framework for Evaluating Future Air and Space Forces," *Management Science,* 1998, Vol 44, No 10, pp. 1336-1350

Grelk, B. J., Kloeber, J. M., Jackson, J. A., Deckro, R. F., and Parnell, G. S., “Quantifying CERCLA Using Site Decision Maker Values,” *Remediation*, Spring 1998, pp. 87-105

Jackson, J. A., Parnell, G. S., Jones, B. L., Lehmkuhl, L.J., Conley, H., and Andrew, J., "Air Force 2025 Operational Analysis," *Military Operations Research*, 1997, Vol 3, No 4, pp. 5-21

Hale, G., Jackson, J. & Parnell, G., “Assessing Communications Systems for the Australian Defense Force,” *Asia-Pacific Journal of Operational Research*, Vol 14, 1997, pp. 45-67

Papatyi, A. F., Deckro, R. F., Parnell, G. S., Jackson, J. A., & Kloeber, J. M., “Screening Technology Trains for DNAPL Remediation,” *Remediation*, Winter 1997, pp. 87-105

Rayno, B., Parnell, G., Burk, R., and Woodruff, B., “A Methodology to Assess the Utility of Future Space Systems,” *Journal of Multi-Criteria Decision Analysis*, Vol 6, 1997, pp. 344-54

Stafira, S., Parnell, G., and Moore, J., “A Method for Evaluating Military Systems in a Counterproliferation Role,” *Management Science*, Vol 43, No 10, October 1997, pp. 1420-1430

Griggs, B., Parnell, G., and Lehmkuhl, L., “An Air Mission Planning Algorithm Using Decision Analysis and Mixed Integer Programming,” *Operations Research*, Vol 45, No 5, September-October 1997, pp. 662-676

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RI/FS Process, Technical Report, VCU-MAS-99-1, Department of Mathematical Sciences, Virginia Commonwealth University, April 15, 1999

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Homeland Security Risk Assessment, Volume I. Setting, Homeland Security Institute, RP05-024-01a, May 2006

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Parnell, G. S., Decision Analysis in One Chart, Decision Line, Newsletter of the Decision Sciences Institute, May, 2009

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Kwinn, M. J., Edward Pohl, Gregory Parnell, Patrick Magras, Richard Richkowski., Building Achilles: Vulnerabilities of the Future Combat System. A White Paper Summary of 16-17 January 2002 Workshop. West Point, New York: Department of Systems Engineering, January 2002

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Parnell, G., "Space-Imaging and Virtual Modeling & Simulation for Education," Beyond 2000 Column for Imaging Notes, Spring 2000

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WORKING PAPERS

Snyder, F. J., Parnell, G. S., & Klimack, W. K., "Modeling the Cost Objective in Multiple Objective Decision Analysis, United States Military Academy at West Point, November 2002

SPONSORED RESEARCH (Total $1.992M)

Army Stationing Military Value Analysis. Conducting research for the Center for Army Analysis on military value analyses for Army stationing. ($66.7K)

Small Unmanned Aviation Systems (UAS). Conducted capstone research on min UASs for the Army's Aviation and Missile Research, Development, and Evaluation Center at Redstone Arsenal in Huntsville, AL. Developing simulation models to evaluate the effectiveness of swarming UAS. ($20k) [2012 – 2013]

Air Force Space Command Cyber Model. Conducted research on Air Force Space Command cyberspace investment planning for Air Force's 3.5B annual cyberspace budget. Developed the Air Force Cyber Value Model using multiple objective decision analysis and probabilistic modeling to assess Air Force cyberspace programs and guided model implementation for cyberspace FY15-24 resource allocation decision making. [2011-2012]

Ground Combat Vehicle Trade Studies. Provided decision analysis support to Army Armament Research and Development Center for development of the Armament Analytics Multiple Objectives Decision Tool. ($15k) [2011-2012]

Mini Unmanned Aviation Systems (UAS). Conducted capstone research on min UASs for the Army's Aviation and Missile Research, Development, and Evaluation Center at Redstone Arsenal in Huntsville, AL. Developing simulation models to evaluate the effectiveness of swarming UAS. ($80k) [2010 – 2011]

Systems of Systems Engineering Cost Benefit Analysis. Performed a cost benefit analysis for the Assistant Secretary of the Army Acquisition, Technology and Logistics, ASA (AT&L) office of Systems of System Engineering office. The mission of the SoSE office is to

architect and enable the incremental delivery of relevant, integrated and affordable capabilities in support of the Army's modernization strategy and Army Force Generation model. We assessed the benefits and costs of five alternative manning levels for the office ($20k).

Ground Combat Vehicle (GCV) Analysis of Alternatives. Conducted review of the AoA methodology for TRAC Ft Leavenworth and facilitated the development of a new value model using Value-Focused Thinking and multiobjective decision analysis. Provided decision analysis technical guidance to the AoA team leaders. Gave presentation at the first meeting with stakeholders to implement the new value model.

Army Utilities Privatization Budget Estimate Tool. The Army resource community challenged the budget for the Army Utilities Privatization (UP) Program. ASA(I&E) and Installations Command required a new budget estimate that was more credible. We developed a UP budget estimate tool using cost estimating relationships based on installation system data from Army databases. An Excel tool was provided to calculate the cost, develop budget options, and perform sensitivity analysis. ($250k), [2008-2010]

Swarming Small Unmanned Aviation Systems (UAS). Conducting capstone research on arming small UASs, swarming UASs, and mini UASs for the Army's Aviation and Missile Research, Development, and Evaluation Center at Redstone Arsenal in Huntsville, AL. Developing simulation models to evaluate the effectiveness of swarming UAS. ($200k) [2008 – 2010]

Weaponization of Lightweight Unmanned Aviation Systems (UAS). Conducted capstone research project for the Army's Aviation and Missile Research, Development, and Evaluation Center at Redstone Arsenal in Huntsville, AL. Developed and evaluation lethal and nonlethal weapons concepts for small UASs in urban operations. ($50k) [2007 – 2008]

Hypersonic Technologies for Counter Rockets, Artillery, and Mortar. Conducted two capstone research projects for the Army's Aviation and Missile Research, Development, and Evaluation Center at Redstone Arsenal in Huntsville, AL. The first project involves a technology assessment and life cycle cost model for hypersonic technologies. The second project involves a capability assessment for the use of hypersonic, directed energy, and conventional technologies for countering rockets, artillery, and mortars. ($50k) [2006 – 2007]

Army Residential Community Imitative Study. Conducted a study of the Residential Communities Initiative (RCI) Portfolio and Asset Management (PAM) process to identify potential conflicts of interest, assess if the Army is getting the best value for its RCI resources, benchmark with private real estate developers, and assess current RCI training program. Recommendations were presented to ASA(I&E) and many of the recommendations were implemented. [2005 – 2006]

Army Installation Management Agency Study. *Study of the Installation Management Agency CONUS Regional Structure.* At the request of the Assistant Secretary of the Army for Installations and Environment, ASA (I&E), conducted an organizational analysis of the IMA continental United States regional structure for the ASA(I&E) and the Assistant Chief of Staff for Installation Management to evaluate the effectiveness and efficiency of the current structure and provide recommendations for potential alternative structures. Recommendations presented to ASA(I&E). [2004]

Army Base Realignment and Closure (BRAC) 2005 Study. Performed stakeholder analysis with senior army leader and developed develop Army Military Value Methodology. This research provided BRAC 2005 infrastructure analysis support to Deputy Assistant Secretary of the Army (Infrastructure Analysis) and the Total Army Basing Study (TABS) Group. A key task was the development and implementation of the Installation Military Value model to analyze the military value of Army infrastructure for BRAC 2005. FY 03-05 funding was $300k. [2003 – 2005]

Land Warrior Soldier System, *Storage Systems and Infantry Capability Model.* Our research has two objectives. The first objective was to develop a methodology for the design and analysis of Land Warrior equipment storage systems. The methodology was developed and presented to the program office. The second objective is to develop an analytical model to evaluate the technology alternatives for the Land Warrior system. This research will be conducted in AY03. The project was funded by the Program Element Office: Soldier System. Funding has been $20k. [2001 – 2003]

Army G-3 Operations, *Prioritization of the Army Budget*. Our research has two objectives. The first objective is to develop techniques to improve Army POM prioritization process. The techniques must be an objective, credible, and traceable *analytical process and use* optimization to determine the best program. The second objective is to develop a methodology to effectively capture Army senior leader guidance. The methodology should not be labor intensive for senior leader and should use the Army resource framework construct. The project was funded by the Department of the Army for $25k. [2001 – 2003]

National Ground Intelligence Center, *Intelligence Support to Operations other Than War (OOTW),* OOTWs have become an increasing challenge to military and intelligence planners. The Intelligence Community does not know with certainty where future OOTWs will occur, what the operation will involve, when they will occur, or how much advance warning will be provided. To prudently deal with these challenges, the Army's National Ground Intelligence Center (NGIC) has developed a plan to systematically identify knowledge needs to support future OOTWs. The NGIC team includes researchers from the Center for Risk Management of Engineering Systems at the University of Virginia and the Department of Systems Engineering at the United States Military Academy at West Point. We developed a preliminary knowledge framework for collection of intelligence information to help national security planners plan for future OOTWs. Total funding was $80,000 over two years [1999- 2001]

National Science Foundation, *Multiple Objective Decision Analysis of Upham Brook Watershed*: Developed an urban planning model to apply to a polluted watershed flowing from a declining inner city to a growth-oriented county. A Multiple Objective decision analysis model was developed to assess alternative urban land management practices to improve stream water quality and enhance species richness and aquatic diversity. Model inputs cover physical infrastructure, catchment hydrology, aquatic biodiversity, resident attitudes and practices, and local governmental policy. The model includes biological processes that sustain plant and animal life, social processes that foster community growth, human psychology behind sustaining health-threatening behaviors, and the political momentum that generates institutional barriers to new land management policies. Total funding was $500,000 over three years. [1998-2000].

MSE Technology Applications Inc. *Decision & Risk Analysis Project.* VCU Principal Investigator for research to establish a decision and risk analysis methodology for the EM-50 Focus Areas in the Department of Energy's (DOE) Environmental Management Program. Decision & risk analyses are being performed for Idaho National Environmental Engineering Laboratory (INEEL) and the Paducah sites. Three technical reports were completed in 1996 involving cost and risk guidance for EM-50s Principal Investigators, lessons learned from commercialization of new environmental technologies, comparison of environmental cost models. Two technical reports were completed in 1997 on a CERCLA-based Decision and Risk analysis methodology and a technology risk analyses for INEEL. Helped EM-50 Office of Science & Technology develop a Multiple Objective value model that was successfully used to prioritize Focus Area Work Packages for the FY 00 budget. Currently updating the Work Package Ranking System for use in FY 01 budget. Total funding was $230,000 [1996-1999].

Computer Sciences Corporation, *Development of an Air and Missile Defense Joint Mission Area Architecture Multiple Objective Value/Cost Analysis and Assessment Tool*. VCU Principal Investigator for research to develop a Multiple Objective decision analysis methodology for analysis of ballistic missile defense architectures. The purpose of the tool is to conduct Air and Missile Defense architecture, architecture functions, systems, and system function trade-off analyses and assessments. Total funding was $85,000 [1998-1999].

CONTINUING EDUCATION COURSES TAUGHT (68 courses)

"Multiple Objective Decision Making with Value-Focused Thinking," 21-24 Aug 2014, NAVAIR Systems Command, Patuxent River, MD

"Decision Analysis for Policy Analysis," 14-18 Jul 2014, Argonne National Laboratory, Lemont, IL.

"Introduction to Decision Analysis for Policy Analysis," 11 Jul 2014, Argonne National Laboratory, Lemont, IL.

"Systems Decision Making," 23-27 Jun 2014, NAVAIR Systems Command, Patuxent River, MD

"Multiple Objective Decision Analysis with Value-Focused Thinking," 19-22 Aug 2013, Marine Corps Systems Command, Quantico, VA

"Multiple Objective Decision Analysis with Value-Focused Thinking," 12-16 Aug 2013, Marine Corps Concept Development Command, Quantico, VA

"Multiple Objective Decision Analysis with Value-Focused Thinking," 23-26 Jul 2012, Marine Corps Systems Command, Quantico, VA

"Multiple Objective Decision Analysis with Excel," 25-29 Jul 2011, US Army Logistics University, Fort Lee, VA

"Value-Based Decision Making for Systems Engineering and Management," 31 May -3 Jun, 2011, Lockheed-Martin, Palmdale, CA

"Value-Based Decision Making for Systems Engineering and Management," 14-17 Mar, 2011, Lockheed-Martin Aeronautics, Ft Worth, TX

"Value-Based Decision Making for Systems Engineering and Management," 30 Nov – 3 Dec 2010, Lockheed-Martin, Suffolk, VA with Pat Driscoll

"Multiple Objective Decision Analysis and Value-Focused Theory," 21- 24 Sep 2010, Marine Corps Systems Command, Quantico, VA with Pat Driscoll

"Value-Focused Thinking using Multiple Objective Decision Analysis," 26-30 Jul 2010, United States European Command, Patch Barracks, Stuttgart, Germany

"Value-Focused Thinking using Multiple Objective Decision Analysis," 19-23 Jul 2010, US Army Logistics University, Fort Lee, VA

"Value-Based Decision Making for Systems Engineering and Management," 18-20 May, 2010, Lockheed-Martin Aeronautics, Ft Worth, TX

"Value-Focused Thinking using Multiple Objective Decision Analysis," March 15-18, 2010, Lockheed Martin Missiles and Fire Control, Dallas, TX

"Value-Focused Thinking using Multiple Objective Decision Analysis," October 19, and October 23, and November 23, 2009, MIT Lincoln Laboratories, Burlington, MA

"Value-Focused Thinking using Multiple Objective Decision Analysis," 6, 10, and 19 Nov 2009, Lockheed-Martin Aeronautics, Ft Worth, TX

"Value-Focused Thinking using Multiple Objective Decision Analysis," Aug 3-7, 2009, Center for Army Analysis, Ft Belvoir, VA

"Strategic Decision Analysis," Jul 15-17, 2009, UNI Strategic, Novotel Singapore Clarke Quay, Singapore

"Value-Focused Thinking using Multiple Objective Decision Analysis," Jul 6-10, 2009, Marine Corps Systems Command, United States Marine Corps, Quantico, VA

"Value-Focused Thinking using Multiple Objective Decision Analysis," Jun 1-5, 2009, Lockheed-Martin Aeronautics, Marietta, GA

"Value-Focused Thinking using Multiple Objective Decision Analysis", March 16-20, 2009, US Army Logistics Management College, Fort Lee, VA

"Systems Decision Process," Jan 4-5, 2009, U.S. Army Training and Doctrine Command (TRADOC), Ft Eustis, VA

"Decision Analysis for Leaders, November 21, 2008, Center for Devices and Radiological Health, Food and Drug Administration, Rockville, MD

"Multiple Objective Decision Analysis using Value-Focused Thinking," July 28-August 1, 2008, US Army Logistics Management College, Hoffman Building, Alexandria, VA

"Multiple Objective Decision Analysis using Value-Focused Thinking," June 23-24, 2008, Naval Surface Warfare Center, Dahlgren, VA

"Value-Focused Thinking using Multiple Objective Decision Analysis," June 2-6, 2008, Marine Corps Systems Command, United States Marine Corps, Quantico, VA

"Value-Focused Thinking using Multiple Objective Decision Analysis March 17-21, 2008, US Army Logistics Management College, Fort Lee, Virginia

"Systems Decision Process," March 13-14, 2008, National Security Agency, Ft Meade, MD, with Pat Driscoll

"Systems Decision Process," January 10-11, 2008, National Security Agency, Ft Meade, MD, with Pat Driscoll

"Systems Decision Process," October 30, 2007, National Security Agency, Ft Meade, MD, with Tim Trainor and Pat Driscoll

"Value-Focused Thinking and Multiple Objective Decision Analysis for Stakeholders and Analysts", August 1, 2007, Mitre Corporation, Colorado Springs, CO

"Value-Focused Thinking using Logical Decisions," February 14-16, 2007, Battelle Crystal City Operations, DC, with Gary Smith

"Value-Focused Thinking and Multiple Objective Decision Analysis, January 18 – February 7, 2007 (one day per week) Lockheed-Martin Missiles and Fire Control, Dallas, TX

"Value-Focused Thinking and Multiple Objective Decision Analysis", June 5-9, 2006, Marine Corps Operational Test and Evaluation Activity, Quantico, VA

"Value-Focused Thinking and Multiple Objective Decision Analysis," February 14-15, 2006, Applied Research Associates, Arlington, VA

"Value-Focused Thinking and Multiple Objective Decision Analysis, January 16-20, 2006, Lockheed-Martin Missiles and Fire Control, Orlando, FL

"Decision Analysis Skills," December 13-15, 2005, Aerospace Corporation, Chantilly, VA (Co-taught with Dennis Buede and Freeman Marvin)

"Advanced Value-Focused Thinking and Multiple Objective Decision Analysis," June 16-17, 2005, Johns Hopkins Applied Physics Lab, Laurel, MD

"Value-Focused Thinking and Multiple Objective Decision Analysis, June 13-15, 2005, Johns Hopkins Applied Physics Lab, Laurel, MD

"Value-Focused Thinking and Multiple Objective Decision Analysis, March 16-18, 2005, Johns Hopkins Applied Physics Lab, Laurel, MD

"Value-Focused Thinking for Capability-Based Planning," September 13-14, 2004, J-8, Joint Staff, The Pentagon, Washington, DC

"Multiple Objective Decision Analysis with Spreadsheets," July 12-16, 2004, Office of Aerospace Studies, Kirtland AFB, NM

"Multiple Objective Decision Analysis with Spreadsheets," June 7-11, 2004, Marine Corps Systems Command, United States Marine Corps, Quantico, VA

"Multiple Objective Decision Analysis with Spreadsheets," U.S. Army Logistics Management College, December 8-12, 2003, Center for Army Analyses, Ft Belvior, VA

"Multiple Objective Decision Analysis with Spreadsheets," November 3-7, 2003, Hosted by Mitre Corporation, Colorado Springs, CO

"Introduction to Operations Research with Spreadsheet Modeling," Five Modules (Introduction to OR for Senior Leaders, Single Objective Decision Analysis, Optimization, OR Project Planning, and Monte Carlo Simulation), October 22-24, 2003, National Security Agency, Fort Meade, MD

"Multiple Objective Decision Analysis with Spreadsheets," U.S. Army Logistics Management College, September 22-26, 2003, Warrior Preparation Center, Sembach, Germany

"Multiple Objective Decision Analysis with Spreadsheets," U.S. Army Logistics Management College, August 18-22, 2003, U.S. Army Recruiting Command, Ft Knox, KY

"Multiple Objective Decision Analysis with Spreadsheets," July 7-11, 2003, Office of Aerospace Studies, Kirtland AFB, NM

"Analysis of Alternatives using Multiple Objective Decision Analysis," May 28-30 May, 2003, National Security Agency, Fort Meade, MD

"Multiple Objective Decision Analysis with Spreadsheets," U.S. Army Logistics Management College, March 17-21, 2003, Center for Army Analyses, Ft Belvoir, VA

"Multiple Objective Decision Analysis and Economic Analysis," U.S. Army Logistics Management College, October 17-18, 2002, Air Education & Training Command, Randolph AFB, TX

"Analysis of Alternatives using Multiple Objective Decision Analysis," March 25-27, 2002, National Security Agency, Fort Meade, MD

"Analysis of Alternatives using Multiple Objective Decision Analysis," February 27 – 1 March, 2002, National Security Agency, Fort Meade, MD

"Multiple Objective Decision Analysis with Spreadsheets," US Army Logistics Management College, January 7-11, 2001, United States Marine Corps, Quantico, VA

"Analysis of Alternatives using Multiple Objective Decision Analysis," November 28-30, 2001, National Security Agency, Fort Meade, MD

"Introduction to Multiple Objective Decision Analysis for Senior Leaders," November 16, 2001, National Security Agency, Fort Meade, MD,

"Single Objective and Multiple Objective Decision Analysis," National Security Agency, June 25-27, 2001, Fort Meade, MD

"Multiple Objective Decision Analysis with Spreadsheets," US Army Logistics Management College, June 4-8, 2001, Army War College, Carlisle Barracks, PA

"Multiple Objective Decision Analysis with Spreadsheets," US Army Logistics Management College, January 8-12, 2001, Joint Warfare Analysis Center, Dahlgren, VA

"Multiple Objective Decision Analysis with Spreadsheets," US Army Logistics Management College, August 7-11, 2000, Kirtland AFB, NM

"Multiple Objective Decision Analysis with Spreadsheets," US Army Logistics Management College, June 5-9, 2000, Joint Warfare Analysis Center, Dahlgren, VA

"Multiple Objective Decision Analysis with Spreadsheets," January 25-29, 1999, Air Combat Command & Air Force Space Command, Norfolk, Virginia.

"Multiple Objective Decision Analysis with Spreadsheets," 99-002, December 14-18, 1998, US Army Logistics Management College, Fort Lee, Virginia.

"Multiple Objective Decision Analysis with Spreadsheets," 98-002, December 15-19, 1997, US Army Logistics Management College, Fort Lee, Virginia.

"Decision Analysis Using DPL and Spreadsheets," 97-002, January 27-31, 1997, US Army Logistics Management College, Fort Lee, Virginia.

PROFESSIONAL SOCIETY TUTORIAL PRESENTATIONS

Parnell, G., "Decision Analysis for Risk Analysts," Society for Risk Analysis Annual Meeting, Salt Lake City, UT, December 5, 2010

Parnell, G., "Decision Analysis for Risk Analysts," Society for Risk Analysis Annual Meeting, Baltimore, MD, December 6, 2009

Parnell, G., "Intelligent Adversary Risk Analysis: Defender-Attacker-Defender Probabilistic Risk Analysis Models" 90 minutes, Risk-Informed Decision Making for HLS Resource Allocation Workshop, April 13, 2009

Parnell, G., "Systems Decision Making", International INFORMS Meeting, San Juan, Puerto Rico, 90 minutes, July 11, 2007

Parnell, G. and Driscoll, P., "Systems Decision Making", Military Operations Research Society (MORS) Tutorial Meeting, John Hopkins Applied Physics Laboratory, Laurel, MD, Seven hours, February 2007

Parnell, G. and Pohl, E. "Multiple Objective Decision Analysis for Systems Engineering," TIES Presentation, INCOSE, Orlando, FL, Three hours, June 2006,

Parnell, G. and Grobman, J., Value-Focused Thinking for Capability-Based Planning, Military Operations Research Society, One hour, June 2005,

Parnell, G., "Marketing Operations Research", Military Operations Research Society (MORS), Monterey, California, Three Hours, June 1998

Parnell, G., Seiford, L., and Mumpower, J., "Marketing Operations Research", Institute for Operations Research/Management Science (INFORMS), Montreal, Quebec, Four Hours, April 1998

PROFESSIONAL SERVICE

- **UNIVERSITY/DEPARTMENT/COMMUNITY SERVICE**

Advisor, College of Engineering Strategic Planning Task Force, University of Arkansas, 2014
Program Advisor, Core System Engineering Sequence, Department of Systems Engineering 2012-2013
Facilitator for USMA Dean's Strategic Planning Offsite, October 22, 2010
Member, USMA Dean's Transition Team, 2010
Member, Mathematical Sciences Title 10 Professor Search Committee, 2009
Member, United States Military Academy Social Domain Committee, 2008 – 2011
Member, United States Military Academy Head Librarian Search Committee, 2008
Facilitator, Strategic Planning Offsite, West Point Garrison Commander and leadership Team, February, 2008
President, Parish Council, West Point Community Chapel, 2003 – present
Program Advisor, Information Systems Engineering, Department of System Engineering, 2003-2005
Chair, United States Military Academy Library Committee, 2000 – 2005
Program Director, Information Systems Engineering, Department of System Engineering, 2000 - 2003
Chair, West Point Higher Ground Men's Ministry, 2000 – 2003
Member, USMA, Head Librarian Search Committee, 2001-2002
Member, USMA, EE&CS Academy Professor Search Committee - 2001
Member, USMA Information Technology Goal Team – 2001-2002
Member, USMA Academic Freedom Committee, 1999- 2000
Member, USMA Library Committee, 1999-2000
Member, USMA Ethics Committee, 1999-2000
Title 10 Faculty Search Committee, Department of Systems Engineering, 2000-2001
Title 10 Faculty Search Committee, Department of Systems Engineering, 1999-2000
Member, VCU Center for Environmental Studies Advisory Committee, 1997- 1999
Member, VCU Mathematical Sciences Dept, Executive Committee, 1997-1999
Member, VCU Center for Environmental Studies Internal Advisory Committee, 1996-1997
Member, VCU H&S College Promotion & Tenure Review Committee, 1996-1997
Member, VCU Mathematical Sciences Dept, Undergraduate Credentials Committee, 1995-1997

- **PROFESSIONAL ORGANIZATIONS/SERVICE**

Member, INCOSE Corporate Advisory Board, 2014-
Member, Decision Analysis Society Practice Award Committee, 2013-2014
Chair, INCOSE Doctoral Award Committee, 2013, 2014
Member, All of Government Approach to Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) Consequence Management Steering Committee, National Research Council, 2013-
Body of Knowledge and Curriculum to Advance Systems Engineering (BKCASE) Editorial Committee, (includes Guide to the Systems Engineering Body of Knowledge (SEBoK) and Graduate Reference Curriculum for Systems Engineering (GRCSE), 2013 -
Peer Reviewer, National Science Foundation, Civil, Mechanical and Manufacturing Innovation, 2013
Member, Institute of Industrial Engineers, 2013 – present
Chair, Decision Analysis Best Practice Award Committee, 2012
Editorial Board, "Environment, Systems, and Decisions," Springer, Igor Linkov and James Lambert, Co-Editors, 2012 -

Advisory Editor for Decision and Risk Analysis, Wiley Series in Operations Research and Management Science, 2012 -
Member, Committee on Evaluating the Effectiveness of the Global Nuclear Detection Architecture, National Academy of Science, 2012 - 2013
Member, United States Air Force Academy Engineering Program Advisory Council, November 2011
Chair, Decision Analysis Society Publications Committee, 2010 - 2011
Member, Committee on Improving Metrics for the Department of Defense Cooperative Threat Reduction Program, National Academy of Science, 2010 – 2011
Member, Department of Homeland Security, Office of Science and Technology, Center for Risk Analysis, Operations Research, and Economics Peer Review Committee, 2010
Member, INCOSE Foundation Doctoral Award Committee, 2010 - 2011
Member, Governance Council for the new Society of Decision Professionals, 2009 -2014
Member, Editorial Board, Decision Analysis Journal, 2009 – present
Participant, National Security Agency Advisory Board (Compliance Panel) 2009 - present
Member, Decision Analysis Society Practice Award Committee, 2009-2010
Chair, Decision Analysis Journal and Editor Review Committee, 2009
Editorial Board, A Taylor and Francis Book Series, Complex and Enterprise Systems Engineering, 2008 - present
INFORMS Strategic Planning Committee, 2008-2011
Participant, National Security Agency Advisory Board (Technology Directorate Panel), 2007 - 2014
Participant, National Security Agency Advisory Board (Information Assurance Panel), 2007 - 2011
Associate Editor, INFORMS Decision Analysis Journal, 2007 – 2009
Guest Editor, Military Operations Research Special Issue on Value-Focused Thinking, 2008
Past President, Decision Analysis Society, INFORMS, 2006-2008
Member, Decision Analysis Society Ramsey Medal Review Committee, 2006-2007
Participant, National Security Agency Advisory Board (Architecture Panel), 2006-2007
Participant, National Security Agency Advisory Board (Data Center Panel), 2006-2007
Chair, National Research Council Study on Methodological Improvements to the Department of Homeland Security's Biological Agent Risk Analysis, 2006-2007
EdMember, Department of Homeland Security, Office of Science and Technology, Critical Infrastructure Protection Decision Support System, Technical Review Panel, 2006
Member, INFORMS Decision Analysis Journal Editor Search Committee, 2006
Member, Distinguished Review Board for the Air Force Institute of Technology's Center for Operational Analysis, 2005 - present
Participant, National Security Agency Advisory Board (Transformation Panel) 2005-2006
President, Decision Analysis Society, INFORMS, 2004-2006
Participant, National Security Agency Advisory Board (Technology Panel) 2003-2007
Vice President/President-Elect, Decision Analysis Society, INFORMS, 2002-2004
Participant, National Security Advisory Board (Signals Intelligence Directorate Technology Panel), 2001-2003
Member, INFORMS Subdivisions Council, 2002-2004
Council Member, Decision Analysis Society of INFORMS, 2000-2002
Advisor, MORS Decision Analysis Working Group, 1996-1998, 2000-2002
Editor, Military Operations Research, 1996-2001
Military Applications Society, Counselor at Large, 1998-2002
Member, International Council on Systems Engineering (INCOSE), 1999-present

Chairman, INFORMS Chapters Committee, 1999-2001
President, Richmond-Tidewater INFORMS Chapter, 1997-1998
Vice President, Richmond-Tidewater INFORMS Chapter, 1997
Treasurer, Richmond-Tidewater INFORMS Chapter, 1996-1997
Advisory Director, Military Operations Research Society, 1996-1998
Full Member, Institute for Operations Research/Management Science
Judge, INFORMS Decision Analysis Section, Student Paper Competition, 1993-1995
Decision Analysis Working Group Co-Chair, MORS Symposium, 1995-96
President, Military Operations Research Society, 1993-94
Vice President for Meeting Operations, Military Operations Research Society, 1992-93
Working Group/Composite Group Coordinator, MORS Symposium, 1991-1992
Director, Military Operations Research Society, 1989-94
Member, Military Operations Research Society, 1985-present

- **PROFESSIONAL JOURNAL REVIEWER/PAPER JUDGE**

INCOSE International Symposium, 2014
Operations Research, 2013
Conference on Systems Engineering Research (CSER) 2013
Systems Engineering, 1999 - present
Risk Analysis, 2001, 2006, 2007, 2010-present
Decision Analysis, 2004-present
Military Operations Research, 2001-present
MARA Student Decision Analysis Projects Judge, 2005-2006
Journal of Military Modeling & Simulation, 2004
Management Science, 1996, 1998, 2002
IEEE Transactions on Systems, Man, and Cybernetics, 2000
Interfaces, 1999
Multi-Criteria Decision Analysis, 1998-2000, 2003
Naval Research Logistics, 1998
IEEE Transactions on Knowledge and Data Engineering, 1998
Environmental Management, 1997

- **REVIEWS FOR NATIONAL STUDIES**

National Research Council Report, "Developing Modeling, Simulation, and Analysis: Meeting the Challenge," 2006

- **BOOK REVIEWS**

The Foundations of Decision Analysis, Ali Abbas and Ronald Howard, McGraw-Hill, 2006

CONSULTING

Argonne National Laboratory, *Consultant*, Provide decision and risk analysis guidance and peer review technical assistance. [2014 – present]

Innovative Decisions Inc. *Executive Senior Principal*. Perform strategic planning; decision analysis and risk analysis; systems engineering; and operations research studies for

defense, intelligence, and commercial clients. Teach systems engineering; decision and risk analysis; and operations research short courses. [2003 – present]

Toffler Associates. *Principal*. Developed the Future Value Analysis Practice. Developed Multiple Perspective Portfolio Analysis for government R&D organizations. Performed a portfolio analysis for a large information services organization. Developed a decision analysis model to help the Air Force Space Battlelab generate, evaluate, and select initiatives to improve space support for joint warfighters. Developed resource allocation models to help a customer support organization prioritize its products and services. Developed a strategic planning model for an international air force. Developed a market segmentation plan for a customer support organization. Developed Multiple Objective decision models to support wargames. Advised a large defense corporation on how to establish a decision analysis internal consulting program. [1996 - 2003]

International Missions Board, Southern Baptist Convention. Provided strategic planning assistance to for international missions planning. Met with IMB staff and regional directors. Introduced them to Multiple Objective value models as a technique to help them decide how best to assign mission resources to achieve their strategic objectives. [1988-1999]

Air University, *Air Force 2025 Study*. The purpose of this major CSAF-directed Air Force study was to identify and assess future systems and technologies. Assisted the Operational Analysis Team develop and perform the operational analysis. The *2025* operational analysis was the study's quantitative analysis to determine the most promising systems and highest leverage technologies. Three papers were published in technical journals. [1995 - 1996]

Institute for Defense Analyses, *Deep Attack Weapons Mix Study*. The purpose of this study is to identify the best weapons mix**.** Phase I of the study uses factors for intelligence quality, weapons cueing, and battle damage assessment. For Phase II we developed an improved framework for modeling command, communications, computers, intelligence, surveillance and reconnaissance. Key events were defined as uncertain variables and the framework was modeled using DPL. [1996]

TASC, *Forward Focus II*. Developed a multiattribute value model to capture operators' values for information in a wargame. The key functions were know, plan, and execute. The know tasks included detect, recognize, and understand. Critical objects types were identified and measures of merit for each object type. Several operational objectives were examined in the Forward Focus II wargame in July 1996. The value model was implemented using Logical Decisions. [1996]

MSE Technology Applications Inc. Identified cost methodologies and cost data requirements for the DOE environmental management focus areas. Summarized private industry and DoD analysis methodologies used in similar stage and gate R&D decision processes. [1996]

Air University, *SPACECAST 2020 Study*. The purpose of this major CSAF-directed Air Force study was to identify and assess future space systems and technologies. Led the Operational Analysis Team that developed and performed the operational analysis. The operational analysis was the study's quantitative analysis to determine the most promising

systems and highest leverage technologies. Two papers were published in technical journals. [1994]

EXPERIENCE

Research Professor/Visiting Professor of Industrial Engineering. Department of Industrial Engineering, University of Arkansas, AR. Teach undergraduate and graduate courses in systems engineering, project management, decision analysis, and industrial engineering design. Perform research and service activities. Teach courses and supervised 9 senior design projects.

Professor/Associate Professor of Systems Engineering, Department of Systems Engineering, United States Military Academy at West Point. Taught undergraduate courses in decision analysis, systems engineering, engineering management, and operations research. Served on national advisory boards for the National Security Agency, the National Research Council, and the Department of Homeland Security. Supervised cadet capstone system engineering projects. Perform research and consulting. Taught 2 classes and supervised 2 capstone research projects per year. 1999-2013.

Distinguished Visiting Professor, Department of Management, United States Air Force Academy, Colorado Springs, CO. Taught undergraduate systems analysis and systems engineering courses. Supervised cadet capstone system project for On-Orbit Spacecraft Refueling for Air Force Space Command, academic year 2011-2012.

Associate/Assistant Professor of Mathematical Sciences, Department of Mathematical Sciences, College of Humanities and Sciences, Virginia Commonwealth University. Taught undergraduate and graduate courses in operations research, decision & risk analysis, mathematical programming, mathematical modeling, and mathematics. Performed research and consulting. Supervised seven MS theses. Taught four courses per year. 1995-1999

Head, Operational Sciences Department, Graduate School of Engineering, Air Force Institute of Technology. Supervised three 18 month MS programs (Operations Research, Operational Analysis, and Space Operations) and an Operations Research Ph.D. program. The programs averaged 45 MS and 5 Ph.D. students per year. Managed teaching, consulting, and research efforts of 16 full-time graduate faculty and 3 staff members. Taught four courses per year. 1993-95

Chief, Resource Analyses Division, AF Studies & Analyses Agency, The Pentagon. Provided analyses of combat capability and resources to the Secretary of the Air Force and Air Force Chief of Staff to support AF resource allocation decision-making. Supervised 35 analysts. 1991-93

Chief, Force Analyses Division, AF Center for Studies & Analyses, The Pentagon. Directed studies of strategic nuclear forces and strategic arms control. Lead AF analyst team supporting the SECDEF's B-2 Major Aircraft Review. Directed force structure drawdown studies that directly lead to START Treaty provisions. Supervised eight analysts. 1989-91

R&D Program Manager. Served in a variety of R&D management assignments. Held three key management positions at the Ballistic Missile Office: Chief, Missile Systems Engineering; Project Manager, M-X Transporter for the Multiple Protective Structures basing mode; and Project Manager, Minuteman III, Mark 12-A Re-entry Vehicle Production Program. Managed aircraft equipment development and production programs at Aeronautical Systems Division. 1972-80

Space Operations Officer. Assigned as a surveillance officer in the Space Defense Center. Coordinated the worldwide space surveillance network to detect foreign launches. Subsequently served as a systems controller in Diyarbakir, Turkey, supervised operation of space surveillance radars used to detect foreign launches. 1970-72

AWARDS AND HONORS

Frank P. Ramsey Medal, Decision Analysis Society, 2014
Best Paper, International Council on Systems Engineering (INCOSE) International Symposium, June 30-July 3, 2014, Las Vegas, NV, 2014
Department of the Army Exceptional Civilian Service Award, 2013
Wanner Award, Outstanding Contributions to Military Operations Research, Military Operations Research Society, 2013
Fellow, Lean Systems Society, 2012
Contributor to one of the ten most important accomplishments in risk analysis over past 30 years; one of 146 papers noted. Found in: Greenberg, M., Haas, C., Cox A., Lowrie, K., McComas, K., and North, W. "Ten Most Important Accomplishments in Risk Analysis, 1980-2010." Risk Analysis, 2012; 32(5): 771-781.
Decision Analysis Publication Award Finalist, 2012
Fellow, Society for Decision Professionals, 2011
Award for "Contribution to Best Issue-Linked Paper Set" for debates in risk analysis, Risk Analysis Journal, Society for Risk Analysis, 2010
Fellow, International Council on Systems Engineering, (INCOSE), 2009
Fellow, Institute for Operations Research and Management Sciences (INFORMS), 2008
Koopman Prize, INFORMS Military Applications Society, 2007
Army Outstanding Civilian Service Award, 2006
Military Operations Research Journal Award, 2005
Dr. Wilbur B. Payne Memorial Award, Special Award, 2005
Who's Who in Engineering Education, 2005
United States Military Academy, Phi Kappa Phi Scholastic Achievement Award, 2004
Clayton Thomas J. Award Laureate, Military Operations Research Society, 2002
Class of 1950 Chair of Advanced Technology at USMA, 1999-2005
Fellow, Military Operations Research Society, 1997
Koopman Prize, INFORMS Military Applications Society, 1996
Air Force Institute of Technology Graduate School of Engineering, Instructor of the Quarter, Spring 1995
David Rist Prize for Outstanding Paper, Military Operations Research Society, 1991
Air Force Legion of Merit, 1995
Air Force Meritorious Service Award with 3 Oak Leaf Clusters
Air Force Commendation Medal with 3 Oak Leaf Clusters
Air Force Institute of Technology General Bernard A. Schriever Award, 1987
Air Force Systems Command, Certificate of Merit, 1981

Distinguished Graduate, Air Force Institute of Technology Civilian Institutions, 1974
Elected to Alpha Pi Mu, 1974
Distinguished Graduate, Air Force Reserve Officer Training Corps, 1970
Elected to Tau Beta Pi, Engineering Honor Society, 1968

Edward A. Pohl, Associate Professor

EDUCATION

Academic: Ph.D., Systems and Industrial Engineering, University of Arizona, 1995.
MS, Reliability Engineering, University of Arizona, 1993.
MS, Systems Engineering, Air Force Institute of Technology, 1988.
MS, Engineering Management, University of Dayton, 1988.
BS, Electrical Engineering, Boston University, 1984

Military: Air Command and Staff College, 1998.
Squadron Officers School, 1990

ACADEMIC EXPERIENCE

Director, Distance Education, College of Engineering, University of Arkansas, Fayetteville, Arkansas, August, 2010 – Present.

Director, Operations Management Program, Department of Industrial Engineering, University of Arkansas, Fayetteville, Arkansas, August 2007 – Present.

Associate Professor of Industrial Engineering, Department of Industrial Engineering, University of Arkansas, Fayetteville, Arkansas Jan 2004 – Present.

Associate Professor of Systems Engineering & Deputy Director of the Operations Research Center(ORCEN), Department of Systems Engineering, United States Military Academy, West Point, New York. June 2003 - Dec 2003.

Assistant Professor of Systems Engineering, Department of Systems Engineering, United States Military Academy, West Point, New York. July 2001 - May 2003.

Assistant Professor of Systems Engineering, Department of Aeronautics & Astronautics, Air Force Institute of Technology, Wright-Patterson AFB, OH. June 1995-July 1998.

Instructor of Systems Engineering, Department of Aeronautics & Astronautics, Air Force Institute of Technology, Wright-Patterson AFB, OH. Sept 1994 - May 1995.

NON-ACADEMIC EXPERIENCE

Operations Research Analyst, Office of The Secretary of Defense, Program Analysis and Evaluation, Operations Analysis and Procurement Planning Directorate, The Pentagon, Washington DC. August 1998 – June 2001.

Munitions Logistics Analysis Manager, Directorate of Logistics, Headquarters Air Force Operational Test and Evaluation, Kirtland AFB, NM. Mar 1989 - July 1991.

Training Systems Engineer, B-2 Systems Program Office, Aeronautical Systems Division, Air Force Systems Command, Wright-Patterson AFB OH. Sep 1984- May 1987.

Summer Intern, Supervisor of Shipbuilding, U.S. Navy, South Boston Mass, May 82 – Aug 82, May 83- Aug 83.

Work Study Student, Athletic Business Management Office, Boston University, Sep 1980- May 1984.,

SCIENTIFIC AND PROFESSIONAL SOCIETY MEMBERSHIP

Senior Member, Institute for Electrical and Electronic Engineers (IEEE)
Senior Member, Institute of Industrial Engineers (IIE)
Senior Member, American Society of Quality Control (ASQC)
Member, American Society for Engineering Education (ASEE)
Member, International Council on Systems Engineering (INCOSE)

Member, Institute for Operations Research and Management Science (INFORMS)
Member, American Society of Engineering Management (ASEM)
Member, Society of Reliability Engineers (SRE)
Member, Military Operations Research Society (MORS)
Member, Society of Risk Analysis (SRA)

HONORS & AWARDS

Military

Defense Meritorious Service Medal
Air Force Meritorious Service Medal, 1 Bronze Oak Leaf
Air Force Commendation Medal, 1 Bronze Oak leaf

Academic

2012 A.J. Golomski Award, QCRE Division of IIE, Best Paper Presented at RAMS 2011
2004 Alan O. Plait Award for Tutorial Excellence
1998 Alan O. Plait Award for Tutorial Excellence

INSTITUTIONAL AND PROFESSIONAL SERVICE (Past 5 years)

Associate Editor, *Journal of Risk and Reliability*, 2005 - Present
Associate Editor, *The Journal of Military Operations Research*, 2002 - present
Associate Editor, *IEEE Transactions on Reliability*, 2003 - 2008
Chairman of the Board of Directors, Reliability and Maintainability Symposium, 2012
Co-Chair, Homeland Security Track, Industrial & Systems Engineering Research Conf., 2012-13
Cluster Co-Chair, Supply Chain Risk, INFORMS, 2011, 2012
INFORMS Consortium for Mathematics & Its Applications, COMAP Subcommittee, 2012-2016
Awards Committee, Military Applications Section, INFORMS, 2011, 2012
Conference Chair, American Society of Engineering Management Conference, 2010
Awards Chair, Military Applications Section, INFORMS, 2009 - 2010
President, Military Applications Section, INFORMS, 2007 - 2008
Member, Reliability and Maintainability Symposium Management Committee, 1999 - 2011

Conference Chair, 2011
Conference Vice-Chair, 2010
Program Chair 2007, 2009
Tutorial Program Vice-Chair, 2008

PRINCIPAL PUBLICATIONS (Past 5 years)

Refereed Journal Articles: 21; Refereed Conference Papers: 27 ; Other Technical Papers and Presentations: 66

Refereed Journal Article Citations:

1. Varghese, V., Rossettie, M., Pohl, E., Apras, S., and Marek, D., “Applying Actual Usage Inventory Management Best Practices in a Healthcare Supply Chain,” *International Journal of Supply Chain Management*, Vol. 1, No. 2, 1-10, 2012.

2. Schneider*, K., Rainwater, C., Pohl, E., Hernandez, I., and Ramirez-Marquez, J.,, "Social Network Analysis via Multi-State Reliability and Conditional Influence Models," *Reliability Engineering and System Safety*, Vol. 109, 99-109, 2013.

3. Guzman*, M., Pohl, E., Schneider, K.*, and Rainwater, C., "Application of Reliability Methods to Social Networks," *Journal of Military Operations Research*, Vol. 17, No. 4, 51-58, 2012

4. Ertem*, M., Buyurgan, N., and Pohl, E., "Using Announcement Options in the Bid Construction Phase for Disaster Relief Procurement," *Journal of Socio-Economic Planning Sciences:* Special Issue on Disaster Planning and Logistics, Vol. 46, 306-314, 2012.

5. Nachtmann, H., Pohl, E., and Farrokhvar*, L., "Decision Support for Inland Waterways Emergency Response," *Engineering Management Journal:* Special Issue on Transportation Management, Vol. 24, 3-14, September 2012.

6. Xiang*, Y., Cassady, C., and Pohl, E., "Optimal Maintenance Policies for Systems Subject to a Markovian Operating Environment," *Computers & Industrial Engineering*, Vol. 62, No. 1, 190-197, February 2012.

7. Smith*, B.K., Nachtmann, H., and Pohl, E., "Improving Healthcare Supply Chain Processes via Data Standards," *The Engineering Management Journal*, Vol. 24, No. 1, March 2012.

8. Smith*, B.K., Nachtmann, H., and Pohl, E., "Quality Measurement in the Healthcare Supply Chain," *The Quality Management Journal*, Vol. 18, No. 4, 50-60, 2011.

9. Medal*, H., Sharp*, S.J., Pohl, E., Rainwater, C. and Mason, S.J., "Models for Reducing the Risk of Critical Networked Infrastructures," *International Journal of Risk Assessment and Management*, Vol. 15, Nos. 2/3, 99-127, 2011.

10. Jampani*, J., Pohl, E., Mason, S., and Monch, L., "Integrated Heuristics for Scheduling Multiple Jobs in a Complex Job Shop," *International Journal of Metaheuristics*, Vol. 1, No. 2, 156-180, 2010.

11. Gade*, D. and Pohl, E. "Sample Average Approximation Applied to the Capacitated Facilities Location Problem with Unreliable Facilities," *Journal of Risk and Reliability*, Vol. 223, No. 4, 259-268, 2009.

12. Miman*, M. and Pohl, E. "Uncertainty Assessment Techniques for System Availability," *International Journal of Reliability, Quality, and Safety Engineering*, Vol. 16, No. 1 39-57, 2009.

13. Miman*, M. and Pohl, E., "Modeling and Analysis of Risk and Reliability for Contingency Logistics Supply Chain," *Journal of Risk and Reliability*, Vol. 222 No. 4, 463-476, 2008.

14. Yeung*, T., Cassady, R., and Pohl, E., "Multi-State Selective Maintenance Decisions," *Journal of Military Operations Research*, Vol. 12, No. 1, 19-34, 2007.

15. Salman*, S., Cassady, C.R., and Pohl, E.A., "Evaluating the Impact of Cannibalization on Fleet Performance," *Journal of Quality and Reliability Engineering International*, Vol. 23, 445-457, 2007.

PROFESSIONAL DEVELOPMENT ACTIVITY (Past 5 years)

Workshops Attended

- none

Technical Conferences Attended

Annual Reliability & Maintainability Symposium (RAMS), 2007-2012
European Safety and Reliability Conference (ESREL), 2012
Industrial & Systems Engineering Research Conference, 2007-2012
American Society of Engineering Management Conference, 2009, 2010
Association for Healthcare Resource and Material Management, 2010, 2011
Applied Reliability Symposium, 2008-2011
INFORMS, 2007-2012

Letitia M. Pohl
Instructor and Academic Advisor
University of Arkansas

EDUCATION

University of Arkansas	Industrial Engineering	Ph.D.	May 2009
Air Force Institute of Technology	Systems Engineering	M.S.	December 1988
Tulane University	Mechanical Engineering	B.S.	May 1984

TEACHING EXPERIENCE

Introduction to Operations Management, OMGT 5003 (2012)
Economic Decision Making, OMGT 5463 (2011-2012)
Engineering Economic Analysis, INEG 2413 (2008, 2012)
Public Works Economics, CVEG 3022 (2010-2012)

INDUSTRIAL EXPERIENCE

2012-present Instructor and Academic Advisor, Department of Industrial Engineering, University of Arkansas

2009-2012 Assistant Director, Mack-Blackwell Rural Transportation Center, DHS National Transportation Security Center of Excellence, University of Arkansas

2004-2009 Research Assistant, University of Arkansas

1993-1994 Engineering Consultant, Sargent Controls, Tucson, AZ

1984-1992 U.S. Air Force Officer

- Engineer for ACES II ejection seat
- Logistics Analyst for F-15E aircraft in Operational Test & Evaluation

RELEVANT PUBLICATIONS

Pohl, Letitia M., Meller, Russell D. and Gue, Kevin R., "Turnover-Based Storage in Non-Traditional Unit-Load Warehouse Designs," *IIE Transactions on Design & Manufacturing*, Vol. 43, 703–720, 2011.

Nachtmann, Heather and Pohl, Letitia M., "Sustaining Resilient Inland Waterways via Renewable Energy," Final Project Report for Mack-Blackwell Rural Transportation Center, National Transportation Security Center of Excellence, July 2011.

Pazour, Jennifer A., Meller, Russell D., and Pohl, Letitia M., "A Model to Design a National High-Speed Rail Network for Freight Distribution," *Transportation Research Part A: Policy and Practice*, Vol. 44A (3), 119–135, 2010.

Pohl, Letitia M., Meller, Russell D. and Gue, Kevin R., "Optimizing Fishbone Aisles for Dual-Command Operations in a Warehouse," *Naval Research Logistics*, Vol. 56 (5), 389–403, 2009.

Pohl, Letitia M., Meller, Russell D. and Gue, Kevin R., "An Analysis of Dual-Command Operations in Common Warehouse Designs" *Transportation Research Part E: Logistics and Transportation Review*, Vol. 45E (3), 367–379, 2009.

Pohl, Letitia M., "Modern Thinking: Mastering Storage," *Modern Materials Handling Magazine*, September 2008.

PROFESSIONAL SOCIETY MEMBERSHIPS and CERTIFICATIONS

Member, Institute of Industrial Engineers (IIE)
Member, American Society for Engineering Education (ASEE)
Member, Institute for Operations Research and Management Science (INFORMS)
Member, INFORMS Education Committee, COMAP Subcommittee, 2012-2016

HONORS AND AWARDS

Outstanding Service Award, Mack-Blackwell Rural Transportation Center, 2011
Graduate Student Research Award, Department of Industrial Engineering, 2009
Best Paper Award in Facility Logistics Track, Industrial Engineering Research Conference (IERC), 2007 and 2008.
Doctoral Academy Fellowship, Graduate School, University of Arkansas, 2005-2008
Tiffin Metal Products Honor Scholarship from the Material Handling Education Foundation, 2008-2009
Modern Materials Handling Honor Scholarship from the Material Handling Education Foundation, 2007-2008
Frazier Industrial Honor Scholarship from the Material Handling Education Foundation, 2006-2007
Alpha Pi Mu Industrial Engineering Honor Society, 2008
Air Force Commendation Medal, 1987 and 1992
Air Force ROTC Distinguished Graduate and Regular Commission, 1984
Air Force ROTC Cadet Commander, 1984
Tau Beta Pi Engineering Honor Society, 1983
Pi Tau Sigma Mechanical Engineering Honor Society, 1983
4 year Air Force ROTC scholarship, 1980-1984

Chase Rainwater

4207 Bell Engineering Center
Fayetteville, AR 72701

Phone: 479-575-2687
cer@uark.edu

Professional Appointments

Associate Professor, Department of Industrial Engineering, University of Arkansas, August 2009-Present

Education

Ph.D. in Industrial and Systems Engineering, Summer 2009
University of Florida, Gainesville, FL

B.S. in Industrial Engineering, May 2004
University of Arkansas, Fayetteville, AR

Refereed Publications

Gedik, R., Zhang, S., and **Rainwater, C.**, Strategic level proton therapy patient admission planning: a Markov decision process modeling approach. Health care management science, 1-17, 2016.

Gedik, R., **Rainwater, C.**, Nachtmann, H. and Pohl, E. A., Analysis of a parallel machine scheduling problem with sequence dependent setup times and job availability intervals. European Journal of Operational Research, 251(2), 640-650, 2016.

Gedik, R., Medal, H., **Rainwater, C.**, Pohl, E. and Mason, S., Vulnerability assessment and re-routing of freight trains under disruptions: A coal supply chain network application, *Transportation Research Part E*, 71: 45-57, 2014.

Hernandez, I., Ramirez-Marquez, J., Medal, H., **Rainwater, C.** and Pohl, E., Robust Facility Location: Hedging Against Failures, *Reliability Engineering and System Safety*, 123:73-80, 2014.

Medal, H., **Rainwater, C.**, Pohl, E. and Rossetti, M, On the r-all-neighbor p-center problem, *Computers and Industrial Engineering*, 72:114-128, 2014.

Nachtmann, H., Mitchell, K.N., **Rainwater, C.**, Gedik, R. and Pohl, E., Optimal dredge fleet scheduling within environmental work windows. *Transportation Research Record: Journal of the Transportation Research Board*, 2426: 11-19, 2014.

Nguyen, H.N., **C. Rainwater**, E. Pohl and Mason, S., Quantity discount with freight consolidation, *Transportation Research Part E*, 66:66-82, 2014.

Rainwater, C., Geunes, J.P. and Romeijn, H.E., Capacitated Facility Location Problem with Single-Source Constraints and Flexible Demand, *INFORMS Journal on Computing*, 26(2):290-302, 2013.

Schneider, K., **Rainwater, C.**, Pohl, E., Hernandez, I. Ramirez-Marquez, J., Social Network Analysis: Conditional Influence-Based Models, *Reliability Engineering and System Safety*, 109:99-109, 2013.

M. Guzman, K. Schneider, E. Pohl and **C. Rainwater**, Application of Reliability Methods to Social Networks, *Military Operations Research*, 17(4):51-58, 2012.

Malaviya, A., **Rainwater, C.** and Sharkey, T.C., Multi-Period Network Interdiction Problems with Applications to City-Level Drug Enforcement, *IIE Transactions*, 44(5):368-380, 2012.

Rainwater, C., Geunes, J.P. and Romeijn, H.E., A Facility Neighborhood Search Heuristic for Ca-

pacitated Facility Location with Single-Source Constraints and Flexible Demand, *Journal of Heuristics*, 18(2):297-315, 2012.

McClure, B., Cassady, C.R., **Rainwater, C.** and Chimka, J., Optimizing the Sunday singles lineup for a Ryder Cup captain. *Interfaces*, 42(2):180-190, 2012.

Awards

2012, 2014, 2015 Outstanding Teacher, Department of Industrial Engineering, University of Arkansas

2013 Volunteer of the Year, Razorback Regional

2013 IIE Outstanding Advisor, South Central Region

2012 William A.J. Golomski Award

Sponsored Research

*PI in bold

Maritime Transportation Research and Education Center, Optimal Dredge Fleet Scheduling - Phase 2 Research, Nachtmann (50%), **Rainwater** (50%), 08/16–08/16, $49,903.00

Center for Excellence in Logistics and Distribution, Development of Logistics Risk Assessment Tool, **Zhang** (50%), Rainwater (50%), 06/15–12/16, $46,115.00

Maritime Transportation Research and Education Center, Optimal Dredge Fleet Scheduling within Environmental Work Windows, Nachtmann (50%), **Rainwater** (50%), 08/14–06/16, $151,153.00

National Science Foundation, Collaborative Research: The Physical Internet for a Sustainable Logistics Future – Advancing CELDis Leadership Position, **Rainwater** (100%), 07/13–12/14, $60,292.00.

National Science Foundation, Dynamic Resource Allocation Models for Law Enforcement Operations Against Illegal Drug Trafficking, **Rainwater** (100%), 06/13–05/16, $147,575.00.

Corps of Engineers, Resource Allocation for Dredge Scheduling and Procurement: A Mathematical Modeling Approach, **Nachtmann** (33%), Pohl (33%), Rainwater (33%), 03/12–08/13, $99,547.00

Department of Transportation, Mack-Blackwell Rural Transportation Center, Models for Disaster Relief Shelter Location and Supply Routing, **Milburn** (50%), Rainwater (50%), 08/11–07/12, $47,075.65

Arkansas Electric Cooperative Corporation, Center for Excellence in Logistics and Distribution, Design of a Car Coal Cooperative, **Root** (45%), Rainwater (45%), Meller (10%), $56,000, 09/11–08/12

Department of Homeland Security, Mack-Blackwell Rural Transportation Center, Mitigating Dynamic Risk in Multi-Modal Perishable Commodity Supply Chain, **Pohl** (25%), Milburn (25%), Rainwater (25%), Mason (25%), 07/10–06/12, $170,000

Doctoral Dissertations Directed

Kellie Schneider, Reliability Analysis of Social Networks, completed Spring 2013. Assistant Professor, Department of Engineering Management & Systems, University of Dayton.
Ridvan Gedik, Large-Scale Solution Approaches for Healthcare and Supply Chain Scheduling, completed Summer 2014. Visiting Professor, Department of Industrial and Systems Engineering, Mississippi State University
Huy-Nhiem Nguyen, Truckload Shipment Planning And Procurement, completed Summer 2014.

Teaching

Instructor, Decision Support Systems, University of Arkansas, Spring 2015 **- Rating: 4.56/5**

Instructor, Integer Programming, University of Arkansas, Spring 2015 **- Rating: 4.92/5**

Instructor, Linear Optimization, University of Arkansas, Fall 2014 **- Rating: 4.5/5**

Instructor, Decision Support Systems, University of Arkansas, Spring 2015 **- Rating: 4.55/5**
Instructor, Integer Programming, University of Arkansas, Spring 2014 **- Rating: 4.71/5**
Instructor, Linear Optimization, University of Arkansas, Fall 2013 **- Rating: 4.74/5**
Instructor, Decision Support Systems, University of Arkansas, Spring 2013 **- Rating: 4.41/5**
Instructor, Integer Programming, University of Arkansas, Spring 2013 **- Rating: 4.09/5**
Instructor, Applied Probability and Statistics I, University of Arkansas, Fall 2012 **- Rating: 4.5/5**
Instructor, Decision Support in Industrial Engineering, Spring 2012 **- Rating: 4.8/5**
Instructor, Applied Probability and Statistics I, University of Arkansas, Spring 2012 **- Rating: 4.4/5**

1. NAME

Ronald L. Rardin, John & Mary Lib White Systems Integration Chair and Distinguished Professor

2. EDUCATION

Ph. D. Industrial & Systems Engineering – Georgia Institute of Technology, 3/1974.
M.P.A Municipal Administration – University of Kansas, 6/1967.
B. A. Mathematics & Political Science – University of Kansas, 6/ 1965.

3. ACADEMIC EXPERIENCE

John & Mary Lib White Systems Integration Chair and Distinguished Professor: Department of Industrial Engineering, University of Arkansas, 01/2007 to present
Program Director for Operations Research & Service Enterprise Engineering, National Science Foundation, 08/2000 to 08/2003
Professor Emeritus, School of Industrial Engineering, Purdue University, 12/2006 to present
Professor, School of Industrial Engineering, Purdue University, 8/1982 to 12/2006
Assistant Professor & Associate Professor: School of Industrial & Systems Engineering, Georgia Institute of Technology, 1/1974 to 8/1982.

4. NON-ACADEMIC EXPERIENCE

Assistant Data Systems Director, Kimbell, Inc., Ft. Worth, Texas, 03/1970 to 09/1971.
Research Analyst, Stanford Research Institute, Menlo Park, California, 09/1967 to 03/1971.
Administrative Analyst, City of Ft. Worth, Texas, 06/1966 to 09/1967.
Consultant: Applied Process Combinatorics, West Lafayette, Indiana, 09/02 to 06/06;
Pritsker Corporation, West Lafayette, Indiana, 05/83 to 08/97;
Schimpeler-Corradino Associates, Louisville, Kentucky, 09/73 to 09/80.

5. REGISTRATION

None.

6. CURRENT MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Senior Member, Institute of Industrial Engineers
Senior Member Institute for Operations Research and the Management Sciences
Member, Mathematical Optimization Society

7. HONORS AND AWARDS

Fellow of the Institute of Industrial Engineers, 2006.
Baker Award for Career Research Contributions, Institute of Industrial Engineers, 2012
Fellow of the Institute for Operations Research and the Management Sciences, 2010
Listed in *Who's Who in America,* 2010
Listed in Cambridge *Who's Who among Executives, Professionals and Entrepreneurs,* 2008
Listed in *Strathmore's Who's Who*, 2001-2002.
Listed in *Who's Who in Engineering Education*, 2002.
Book *Optimization in Operations Research* winner of the Institute of Industrial Engineers Joint Publishers Book-of-the-Year Award, 1999.
Pritsker Award for outstanding undergraduate teaching, 1991, 1997, 1999, and 2005.
Phi Beta Kappa, Sigma Xi, Pi Sigma Alpha, Pi Mu Epsilon, and Omega Rho academic honor societies.

8. SERVICE ACTIVITIES

Research center leadership

Center for Innovation in Healthcare Logistics, Director, University of Arkansas, 2007 to present.
Purdue Energy Modeling Research Groups, Director, Purdue University, 2003 to 2006.
Regenstrief Center for Healthcare Engineering, Academic Director, Purdue University, 2003-06
Laboratory for Extended Enterprises at Purdue, Founding Co-PI, Purdue University, 2000-04.

Co-organizer and Founding Chair, Health Systems Engineering Alliance, 2012-present

Key organizer and Chair, Personnel Committee, Department of Industrial Engineering, University of Arkansas, 2008-present

College of Engineering Promotion and Tenure Committee, University of Arkansas 2008-present

Interim Head, Department of Industrial Engineering, University of Arkansas, 7/2007 to 7/2008

Founding Director of the National Science Foundation's Service Enterprise Engineering Program which focuses on innovation in service industries, especially healthcare, 2000-2003.

Associate Editor for *International Journal of Information Systems in the Service Sector, Operations Research, Management Science* and *INFORMS Journal on Computing*

Guest Associate Editor of *Institute of Industrial Engineers Transactions* special issue on Healthcare Engineering (2006-2007).

Numerous departmental committee responsibilities, School of Industrial Engineering, Purdue University, 08/1982 to 12/2006

Reviewer for NSF, numerous scholarly journals, and university promotion and tenure processes

.

9. PUBLICATIONS AND PRESENTATIONS

"IMRT with Field Rotation – A Time-Varying Fractionation Study," *Healthcare Management Science* 2, 138-154, 2012, co-authors S. Gumrukcu, D. Dink, M. Langer, J. Pekny, B. Saka, and G. Reklaitis.

"A Novel GS1 Data Standard Adoption Roadmap for Healthcare Providers," *International Journal of Healthcare Information Systems and Informatics,* 2011, co-authors N Buyurgan, R Jayaraman, V Varghese, A Burbano.

"Adaptive Intensity Modulated Radiation Therapy Planning Optimization with Changing Tumor Geometry and Fraction Size Limits," accepted for publication, *IIE Transactions on Healthcare Systems Engineering* 1, 247-263, 2011, co-authors B Saka, M Langer.

"IMRT Optimization with both Fractionation and Cumulative Constraints," *American Jounal of Operations Research,* 1, 160-171, 2011, co-authors D. Dink, M. Langer, S. Orcun, J. Pekny, B. Saka, and G. Reklaitis.

"Strong Valid Inequalities for Fluence Map Optimization under Dose-Volume Restrictions," accepted for publication, *Annals of OR*, 2011, co-authors: A. Tuncel, M. Langer, JP Richard.

"Robust Strategies for Natural Gas Procurement", *European Journal of Operational Research* 205, 151-158, 2010, co-authors: T Aouam, J Artalejo.

"A Load Factor Based Mean-Variance Analysis for Fuel Diversification," *Energy Economics*, 31, 249-256, 2009, co-authors: K Muthuraman and T Aouam.

"Production Planning with Resources Subject to Congestion," *Naval Research Logistics*, 56, 142-157, 2009, co-authors J. Asmundsson, R. Uzsoy, C. Turkseven.

"Regulation of Natural Gas Distribution Using Policy Benchmarks," *Operations Research*, 56, 1131-1145, 2008, co-authors: K Muthuraman and T Aouam.

"Matching Daily Healthcare Provider Capacity to Demand in Advanced Access Scheduling Systems," *European Journal of Operational Research*, 812-826, 2007, co-authors: X Qu, JA Williams, and D Willis.

10. PROFESSIONAL DEVELOPMENT

None

TRACEY M. RICHARDSON
25 East Casa Loma
Mary Esther, FL 32569
850 797 8103
tracey_richardson7430@yahoo.com

Education

DOCTORATE OF EDUCATION, ORGANIZATIONAL LEADERSHIP
Argosy University, School of Psychology and Behavioral Sciences, Sarasota, FL
MASTER OF SCIENCE, MANAGEMENT
Troy University, Summa Cum Laude
BACHELOR OF APPLIED SCIENCE, RESOURCE MANAGEMENT
Troy University, Summa Cum Laude

Teaching Experience

- Over 13 years of teaching experience in both synchronous and asynchronous environments
  -- Seven years graduate level teaching experience; Project Management, Leadership, Business
  -- Five years undergraduate level teaching experience; Leadership and Business
  -- Four years technical training teaching experience; Aerospace Ground Equipment Courses
- Assistant Professor, Embry-Riddle Aeronautical University – Worldwide, MS Project Mgt
- Adjunct Associate Professor, Amridge University, Montgomery, Alabama; MS Leadership
- Develops/Administers graduate classes through blended format of live-stream video, & distance learning curriculum. Participates on various academic committees
- Assistant Professor, USAF ROTC Commandant of Cadets, University of South Florida
-- Dynamic leadership curriculum preparing future military officers for real world situations
- Graduated USAF's Technical Training Instructor Course, Academic Instructor Course, and Training the Trainer; completed Instructional Systems Design/Practicum Certification
- Taught 3,500+ hours in technical Aerospace Ground Equipment Systems; 'Master Instructor'

Industrial Experience

- Small business owner rehabilitating single family homes/ providing real estate property mgt
-- Proven project manager: $130K renovation, $1.7M real estate inventory, $90K annual revenue
- Retired United States Air Force Aircraft Maintenance Officer
- Designed recovery effort of failing F-15 Aircraft Maintenance Unit; 34 aircraft/290 personnel
-- Less than 5 months every maintenance indicator exceeded command standards; best in wing!
- Developed aggressive 'get-well' plan for 27 assigned F-15s' isochronal maintenance actions
-- Increased average fleet time from 97 hours to peak at 131 hours in 4 months—36% increase
- Redesigned aircraft generation sequence preparing for Operational Readiness Inspection (ORI)
-- ORI "Superior Performer" top 10%; Fighter Wing "Outstanding" in aircraft generation

- Global perspective; Lived in Europe/traveled to 20 countries/deployed DESERT STORM, ENDURING FREEDOM & IRAQI FREEDOM
-- Prince Sultan Air Base, Saudi Arabia: within 22 hours of an Air Tasking Order, prepared and processed required equipment/people to stand up a forward operating location in Kuwait City
- Responsible for maintenance production of 150 active duty/civilian technicians on 23 C-17s
- Designed selective hiring process; led panel interviews to replace 25% of quality inspectors
- Expert in performance appraisal (PA) systems; PA doctoral dissertation examined all facets of

Professional Society Memberships and Certifications

PROJECT MANAGEMENT PROFESSIONAL, Project Management Institute Certified
RISK MANAGEMENT PROFESSIONAL, Project Management Institute Certified
Project Management Institute membership
Sloan Consortium Membership

Honors and Awards

July 2010	Faculty Member of the Year, ERAU-W Fort Walton Beach Campus (#1 of 25+)
May 2007	Educator of the Year, USAF Officer Accession Training School (#1 of 1,000+)
March 2007	Instructor of the Year, USAF Reserve Officer Training Corps (#1 of 500)

David Rieske
Adjunct Faculty
University of Arkansas

EDUCATION

M.S., Industrial Engineering, University of Arkansas, Fayetteville, AR
B.S., Industrial Engineering, University of Arkansas, Fayetteville, AR

ACADEMIC EXPERIENCE

University of Arkansas – Fayetteville, AR
Faculty- January 2008 –Present
Teach industrial safety and health management in the Operations Management Program
Key accomplishments: Design of the online environment for OMGT 4303 including the recorded lecture videos

University of Phoenix– Rogers, AR
Faculty- 2007 – 2010
Taught in the areas of statistics, research methods, and college mathematics.
Key accomplishments: Received outstanding faculty award for 2008
University of Arkansas CELDI (Center for Engineering Logistics and Distribution) – Fayetteville, AR

Research Tech - May 2003 – May 2005
Performed research in the Industrial Engineering Department in the area of supply chain and logistics.
Key accomplishments: Co-author on multiple publications in the area of scorecarding and logistics. Thesis discussing the effects of Inventory and POS inaccuracies at retail was published. Article on Inventory and POS inaccuracies was published in the first issue of 2010 of the Journal of Business Logistics. Findings and models still used for future research.

NON-ACADEMIC EXPERIENCE

SC Johnson – Lowell, AR
Supply Chain Consultant – Walmart US CPFR Lead – June 2011 - Present
Lead the WM US CPFR process for all businesses. Work to develop and optimize standard processes for CPFR. Responsible for achieving supply chain metrics and collaborating with Walmart on key business initiatives and strategies. Manage seasonal and feature execution, inventory markdown projections, and strategic planning.
Key accomplishments: developed phantom inventory analysis tool in collaboration with Walmart that yields significant incremental sales each year. Created forecasting algorithm analysis to determine appropriate supply chain echelon to apply seasonality to the forecast. Implementing best practices with Walmart in holding capacity, modular execution, and forecast accuracy.

Pfizer / Wyeth Consumer Healthcare – Bentonville, AR
Senior Replenishment Planner - January 2009 – June 2011
Senior Planner with responsibility for the overall team forecast and forecasting process. Direct inventory management, supply chain management, and customer relationship management.

Some responsibilities include Walmart settings monitoring and management for inventory, store traits, warehouse slotting, forecast adjustment. Responsibilities for Pfizer include allocation management, POS-to-Shipments analysis, Monthly pace reporting, Store and Warehouse script generation, pricing management, and maintenance of several databases. Work with pricing validation and management across multiple systems such as SAP, Siebel, and Retail Link.
Key accomplishments: Developed robust processes for forecasting as well as the management of daily, weekly, and monthly activities for our team. Development of a replenishment database which has significantly reduced the time to accomplish tasks such as instock analysis and script generation. Co-recipient of Supplier Collaboration Award for work to ensure MABD compliance. Worked on Siebel Rollout Core Team and currently on JDA Rollout Core Team. Co-Developed innovative ways to compare POS, Shipments, and Inventory levels to truly understand dynamics at Walmart. Managed the launch of Centrum Ultra and the Centrum Restage. Trusted partner to the Walmart Replenishment Team.

Pratt & Whitney – Springdale, AR
EH&S Compliance and Continuous Improvement - May 2005 – September 2007
Worked in the areas of EH&S and Continuous Improvement. Developed standard processes, conducted safety inspections, corrected critical safety issues, and provided training to team member.
Key accomplishments: in the area of ergonomics, recognized for innovative designs to solve critical safety risks. Created innovative fixture designs for lifting equipment used throughout Pratt & Whitney. Cell re-designs increased productivity and efficiency while increasing safety as well.

HONORS AND AWARDS
Outstanding Faculty of the Year
Most outstanding faculty during Calendar Year
SC Johnson Now Thanks
Received large cash award for work in phantom inventory reduction and forecast innovations.
Pfizer Circle of Excellence Award
Based on exceptional teamwork and diligence to the business, received the Pfizer Circle of Excellence Award. This is a coveted award that is only given to a select few people each year and comes with a very substantial cash prize.
Walmart Supplier Collaboration Award
Co-recipient of the supplier collaboration award for work in MABD compliance.

Curriculum Vitae

Name: Larry A. Roe
Department: Mechanical Engineering
Date of hire: August 1994
Years of service: 18
Present academic rank: Associate Professor, 2000

Degrees:

Ph. D., Mechanical Engineering, University of Florida, 1987
M.S., Engineering Science, University of Mississippi, 1976
B.S.M.E., University of Mississippi, 1971

Other related experience – teaching, industrial, etc.:

Virginia Tech, Assistant Professor, 1987-1994
Pratt & Whitney Aircraft, W. Palm Beach, FL, Contract Engineer, 1984-1985
Pratt & Whitney Aircraft, W. Palm Beach, FL, Senior Analytical Engineer, 1976-1980
Westinghouse Research Labs, Pittsburgh, PA, Associate Engineer, 1971-1973

Consulting, patents, etc.:

NASA/ASEE Summer Faculty Fellowship, Jet Propulsion Lab, May-August 2000.
NASA/ASEE Summer Faculty Fellowship, Jet Propulsion Lab, May-August 1998.

State(s) in which registered:

None

Principal publications during the last five years:

Luspay-Kuti, A., F. Wasiak, V. Chevrier, L. Roe, D. Welivitiya, T. Cornet, and S. Singh, "Experimental Simulations of Methane Ponding in the Deserts of Titan," submitted to Geophysical Research Letters, May 2012.

Wasiak, F.C., A. Luspay-Kuti, W.D.D.P Welivitiya, L.A. Roe, V.F. Chevrier, D.G. Blackburn, T. Cornet, "A Facility for Simulating Titan's Environment," Advances in Space Research, doi: 10.1016/j.asr.2012.10.020, 2012.

Couvillion, Rick J., and Larry Roe, "Crossflow Air-Liquid Heat Exchanger Design Rating and Design Using Excel," Computers in Education, vol. 3, no. 3, pp. 43-49, July-September, 2012.

Ulrich, R., T. Kral, V. Chevrier, R. Pilgrim, and L. A. Roe, "Dynamic Temperature Fields Under Mars Landing Sites and Implications for Supporting Microbial Life," Astrobiology, vol. 10, no. 6, pp. 643-650, July 2010.

El Shafie, A., V. F. Chevrier, R. Ulrich, and L. A. Roe, "Penetration Testing for the Optical Probe for Regolith Analysis (OPRA)," Advances in Space Research, vol. 46, no.3, pp. 327-336, August 2010.

Blackburn, D. G., K. L. Bryson, V. F. Chevrier, L. A. Roe, and K. F. White, "Sublimation Kinetics of CO_2 Ice on Mars," Planetary and Space Science, vol. 58, no. 5, pp. 780-791, April 2010.

Coleman, K. A., J. C. Dixon, K. L. Howe, L. A. Roe, and V. Chevrier, "Experimental Simulation of Martian Gully Forms," Planetary and Space Science, vol. 57, no. 5, pp. 711-716, May 2009.

Chittenden, J. D., V. Chevrier, L. A. Roe, K. Bryson, R. Pilgrim, and D.W.G. Sears, "Experimental Study of the Effect of Wind on the Stability of Water Ice on Mars, Icarus, vol. 196, issue 2, August 2008, pp. 477-487.

Scientific and professional societies membership:

AIAA, Senior Member
ASME, member

Honors and awards:

Carter Award, NASA/ASEE Summer Faculty Fellow (2), AFOSR Summer Faculty Fellow (3)

Subjects or courses taught during the most recent academic year, by terms:

Spring 2011	MEEG 2403 - Thermodynamics
	MEEG 4903H - Honors Research
	MEEG 5403 - Advanced Thermodynamics
Summer 2011	MEEG 2403 - Thermodynamics
	MEEG 4483 - Thermal Systems and Design
	MEEG 4523 - Astronautics
	SPAC 5613 - Astronautics
Fall 2011	MEEG 2403 - Thermodynamics
	MEEG 4423 - Power Generation

Other assigned duties performed during the academic year with average hours/week:

Proposal preparation, research, supervision of student research and projects, academic advising, committee assignments, administrative duties as associate department head: 30 hours/week

Institutional and professional service in the last five years:

Director of UA Center for Space and Planetary Sciences; chair of department awards committee; chair of department strategic planning committee; chair of department faculty search committee; member of various other department committees; department Honors advisor; member of college Honors committee; faculty advisor for university Amateur Radio Club; member of Board of Directors of Arkansas Air Museum; reviewer for ASME, NSF, and NASA.

Professional development activities during the last five years:

Organized and taught PE and FE review courses (FE each semester for engineering students)

Manuel D. Rossetti, **PhD. P. E.**

EDUCATION

Ph. D. Industrial & Systems Engineering - The Ohio State University, December 1992.
M. S. Industrial & Systems Engineering - The Ohio State University, June 1988.
B. S. Industrial Engineering - University of Cincinnati, June 1985, Magna Cum Laude.

EXPERIENCE

Tenure Full Professor of Industrial Engineering, University of Arkansas, 8/10-Present
Tenured Associate Professor of Industrial Engineering, University of Arkansas, 8/03-8/10.
Assistant Professor of Industrial Engineering, University of Arkansas, 8/99-8/03
Assistant Professor of Systems Engineering, University of Virginia, 9/93-6/99.
Research Associate, Dept. of Industrial & Systems Engineering, The Ohio State University, 9/89-9/92.
Teaching Associate, Dept. of Industrial & Systems Engineering, The Ohio State University, 9/86-6/89.
Systems Engineer: Electronic Data Systems, Troy, MI, 7/85-5/86.
Co-op Industrial Engineer: Union Metal Manufacturing Company, Canton, OH, 1/82-1/84.

CONSULTING AND PATENTS

Invistics, Inc, Norcross, GA, inventory management, 2009-present.

REGISTRATION

Professional Engineer State of Arkansas 2002- present, EIT Registration State of Ohio 1985

SCIENTIFIC AND PROFESSIONAL SOCIETY MEMBERSHIP

Associate Member of the Institute for Operations Research and Management Science (INFORMS)

Senior Member of the Institute of Industrial Engineers (IIE)
Member of American Society for Engineering Education (ASEE)

HONORS *AND AWARDS*

Elected as a Fellow for the Institute of Industrial Engineering, 2012
John L. Imhoff College of Engineering Outstanding Teacher Award, 2011-12
John L. Imhoff Chair in Industrial Engineering, 2012-2013
COE Outstanding Teacher Award, Department of Industrial Engineering 01/02, 07/08, 10/11
COE Outstanding Service Award, Department of Industrial Engineering 09/10
COE Outstanding Researcher Award, Department of Industrial Engineering 00/01
Voted Best IE Teacher by IE Students, 2007, 2009
2009, College of Engineering Outstanding Service to Students Award Industrial Engineering

INSTITUTIONAL AND PROFESSIONAL SERVICE (Past 5 years)

UA-University Program Review Committee
UA- College of Engineering Faculty Senate Representative, 2010-Present
UA-College of Engineering Academic Programs Committee, 2010-Present
UA-IE Personnel Committee Member, 2010-Present
UA-IE Undergraduate Curriculum Committee (Chair) 2000-2009
UA-IE ABET Committee (Chair) 2000-2009
Publicity Chair, 2013 Winter Simulation Conference
Program Chair, 2015 Winter Simulation Conference
National Science Foundation Proposal Review Panelist for SBIR Program
Proposal Reviewer for Research Grants Council Hong Kong China

Associate Editor for *International Journal of Modeling and Simulation*
Proceedings Editor 2004, 2009 Winter Simulation Conference
Referee for over 6 peer review journals, reviewer for WSC and ISERC Conferences

PRINCIPAL PUBLICATIONS

Refereed Journal Articles: 28; Refereed Conference Papers: 63; Books: 1, Edited Volumes & Book Chapters: 5

REFEREED JOURNAL ARTICLE CITATIONS (PAST 5 YEARS)

1. Varghese, V., Rossetti, M. D., Pohl, E. Apras, S., and Marek, D. (2012) "Applying Actual Usage Inventory Management Best Practice in a Healthcare Supply Chain", International Journal of Supply Chain Management, vol. 1., no. 2., pp. 1-10.
2. Rossetti, M. D. and Unlu, Y. (2011) "Evaluating the robustness of lead time demand models", International Journal of Production Economics, Vol. 134, pp. 159-176, DOI:10.1016/j.ijpe.2011.06.010
3. Tovia, F., Cassady, C. R., Rossetti, M. D., Brooks, R. (2011) "Modeling and Analysis of Service Parts Logistics Systems," International Journal of Operational Research, Vol. 10, No. 1, pp. 60-81.
4. Rossetti, M. D. and Achlerkar, A. (2011) "Evaluation of Segmentation Techniques for Inventory Management in Large Scale Multi-Item Inventory Systems", International Journal of Logistics Systems Management, Vol. 8, No. 4., pp. 403-424, DOI: 10.1504/IJLSM.2011.039598
5. Rossetti, M. D., Buyurgan, N., Bhonsle, A., Gumrukcu, S., Chittoori, K. (2010) "An Analysis of the Effect of Inventory Record Inaccuracy in a Two-Echelon Supply Chain", International Journal for Inventory Research, Vol. 1, No. 2, pp. 174-208, DOI: 10.1504/IJIR.2010.031462
6. Ertem, A., Buyurgan, N., Rossetti, M. D. (2010) "Multiple-Buyer Procurement Auctions Framework For Humanitarian Supply Chain Management", International Journal of Physical Distribution and Logistics Management, Vol. 40, No. 3, pp. 202-227, DOI 10.1108/09600031011035092
7. Buyurgan, N., Rossetti, M. D., and Walker, R. T. (2010) "An Analysis of Imperfect RFID Visibility in a Multi-echelon Supply Chain", International Journal of Logistics Systems Management, Vol. 7, No. 4, pp. 431-455, DOI: 10.1504/IJLSM.2010.035631

SUMMARY OF TEACHING ACTIVITY

Author / Co-author of 4 teaching related conference papers
Participant in 7 teaching related professional development workshops
Graduate and undergraduate teaching: 17 courses and a total of 64 course offerings
Evaluations from UVA: 25 offerings taught with average student evaluations of 4.2/5.00
Evaluations from UA: 39 offerings taught with average student evaluations of 4.12/5.00
7 Doctorial Dissertations Chaired (4 in progress)
14 Doctorial Dissertation Committees (3 in progress)
36 Masters Student Committees Chairs (23 Thesis, 13 Project)
1 Honors Thesis, Service to 1 Honors Student Committee
22 Honors Thesis at UVA
Author: *Simulation Modeling and Arena*, published by John Wiley & Sons

William R. Roy
Adjunct Faculty
University of Arkansas

EDUCATION

Master of Science, Operations Management
University of Arkansas, Fayetteville, Arkansas. 1996

Bachelor of Science Degree, Organizational Leadership,
University of Memphis, Memphis, Tennessee. 1994
The Institute for Executive Leadership, Rhodes College, Memphis,
Tennessee. 1997

Completed Media Training with Spaeth Communications, a major national public relations firm founded by Mary Spaeth, communications director for President Ronald Reagan 2001 and 2003. Mary Spaeth personally facilitated my class in 2001.

TEACHING EXPERIENCE

August 2001-present The University of Arkansas, Masters of Science in Operations Management, Millington, TN site. Also teach numerous courses in on-line environment.

Courses Taught—Project Analysis and Control, Operations Management and Global Competition, Economic Decision Making, Human Behavior Analysis, Organization and Control, Special Problems, and Introduction to Operations Management

INDUSTRIAL EXPERIENCE

<u>February 1980-November 2005</u>	Federal Express Corporation
11/2000-11/2005	Vice President, Network Computing
8/1985-10/2000	Managing Director, Telecommunications Systems
11/1983-7/1985	Sr. Manager, Voice and Data Networks
5/1982-10/1983	Manager of Voice, Data and Radio Communications Systems
2/1980-5/1982	Telecommunications Specialist
<u>November 1969-January 1980</u>	Supervisor Telecommunications, Memphis Light Gas and Water Division

RELEVANT PUBLICATIONS

Interviewed over many years by several industry publications, newspapers, radio programs and video tape productions.

PROFESSIONAL SOCIETY MEMBERSHIPS and CERTIFICATIONS

Certified Program Manager for Kepner-Tregoe, Project Management Workshop
Committee Member, Sprint Corporation Executive Customer Council. 2001-2003.
Board Member, Consortium for Artificial Intelligence "Things That Think". Media Lab, Massachusetts Institute of Technology. 1994-1999.
Board Member, the University of Memphis, University College Academic Advisory Committee. 1994-1998
Board Member, the University of Mississippi, College of Telecommunications Academic Advisory Committee. 1992-1995
Board Member and Vice President of communcations for the Mid-south Liver Foundation

HONORS AND AWARDS

Commencement Speaker for Class of 2012 Joint College Graduation exercises for colleges and universities represented in the Navy Support Activities Mid-south.

Keynote Speaker for Conference on Wireless Telecommunications in 2002, Sydney, Australia.

Awarded FedEx 5-Star Award in 1999 and 2001. The 5 Star Award is FedEx's highest honor for individual achievement.

Featured Speaker at MIT Media Labs on RFID and Smart Tag applications in transportation sector.

Featured speaker in 1998 for The Conference on Global Positioning Systems, National Academy of Sciences in Washington, DC.

Commencement speaker in 1997 for The University of Arkansas, Operations Management Program graduation exercises in Millington, Tennessee.

Elizabeth (Libby) Schott

Professor of Math and Engineering, Florida SouthWestern State College

239-477-3514 (office) eschott@fsw.edu 575-640-6216 (cell)

ACADEMIC AND PROFESSIONAL BACKGROUND

Civilian Education:

2009	PhD	Engineering *Specialization: Industrial Engineering*	New Mexico State University
2007	MS	Mathematics	New Mexico State University
2001	MS	Industrial Engineering	Georgia Institute of Technology
1991	BS	Mathematics	United States Military Academy

Military Education:

2004	Command and General Staff College	Fort Belvoir, VA
1999	Combined Arms & Service Staff School	Fort Leavenworth, KS
1996	Battalion Maintenance Officer Course	Fort Knox, KY
1996	Petroleum Officer Course	Fort Lee, VA
1996	Combined Logistics Officer Course	Fort Lee, VA
1991	Mortuary Affairs Course	Fort Lee, VA
1991	Quartermaster Officer Basic Course	Fort Lee, VA
1989	Airborne School	Fort Benning, GA

Honors and Awards:

Associate Professor, United States Military Academy (2015)
Best Paper, Engineering Management Division, American Society for Engineering Education (ASEE) 122nd Annual Conference, June 14-17, 2015 Seattle, Washington with P. Kaufmann, J. Farr, and D. Wyrick. (2015)
ASEM Founder's Award for Excellence in Academic Leadership of Undergraduate Education Programs in Engineering Management, USMA EM Program (2014)
Advisor for Winner of Best Student Paper, 2nd Annual Industrial Engineering World Conference (2013)
Order of the Engineer (Inducted 2009)
New Mexico State University Sociedad de Ingenieros (Inducted 2009)
Pi Mu Epsilon (Inducted 2003)
Honor Graduate/Commandant's List, Petroleum Officer Course (1996)
Commandant's List Graduate, Combined Logistics Officer Course (1996)
Honor Graduate/Commandant's List, Quartermaster Officer Basic Course (1992)
Phi Kappa Phi (Inducted 1991)
Omar N. Bradley Award Winner (Top USMA Mathematics Student) (1991)

Membership in Professional Societies:

American Society for Engineering Managers (ASEM)
Institute for Operations Research and the Management Sciences (INFORMS)
Institute of Industrial Engineering (IIE)
Military Operations Research Society (MORS)
Mathematical Association of America (MAA)
Force Sustainment Association
Quartermaster Association

TEACHING

Florida SouthWestern State College, School of Pure and Applied Sciences (SPAAS), 2015-Present

AT 16-2 and AT 16-1 (Spring 2016/Fall 2015): MAC1105 College Algebra. Topics include linear, quadratic, rational, radical, exponential, and logarithmic functions. Graphing and applications are emphasized.

AT 16-2 (Spring 2016): MAC1105 College Algebra, On-Line. Topics include linear, quadratic, rational, radical, exponential, and logarithmic functions. Graphing and applications are emphasized.

AT 16-2 (Spring 2016): MAT1100, Mathematical Literacy for College Students This course reinforces elementary algebra and quantitative reasoning skills and introduces basic statistical concepts through data analysis in preparation for college-level statistics and liberal arts mathematics. Topics include, but are not limited to, ratios, proportions, scaling, dimensional analysis, modeling with equations and inequalities, tables, graphs, linear functions, and exponential functions. Written and verbal communication skills will be emphasized along with critical thinking.

Florida SouthWestern State College, School of Business and Technology (SOBT), 2015-Present

AT 16-2 and AT 16-1 (Spring 2016/Fall 2015): EGS1001, Introduction to Engineering. This course presents an overview of engineering ethics, certification/registration, and opportunities in the various fields of engineering. Students are required to solve problems in selected fields of engineering. The job market and developing a resume and portfolio are studied.

AT 16-2 and AT 16-1 (Spring 2016/Fall 2015): EGS1001, Introduction to Engineering, On-Line. This course presents an overview of engineering ethics, certification/registration, and opportunities in the various fields of engineering. Students are required to solve problems in selected fields of engineering. The job market and developing a resume and portfolio are studied.

United States Military Academy, Department of Systems Engineering (DSE), 2011-2015

AY 15, AY 14, AY13 and AY12: SE402/EM402 and SE403/EM403, Systems and Engineering Management Design. (6 different Capstone Teams) This is a two-semester capstone experience for Engineering Management, Systems Management, Systems Engineering and Operations Research majors. The course applies the principles of systems design, engineering management, and/or reengineering to a real-world system. Cadets work under the supervision of a faculty member to address a problem presented by a real-world client, providing them an integrative experience for their education in engineering design. *Note: These capstones are also listed in more detail in Undergrad Research Mentorship.

AT 15-1 and AT 14-1 (Fall 2014/Fall 2013): Course Director, EM482, Supply Chain Engineering and Information Management. This course teaches cadets the strategic importance of supply chain design, planning, operations, business processes, and information management systems. Cadets will become familiar with engineering a supply chain network—from conducting inventory management to establishing proper sourcing and transportation strategies to understanding capacity and facility locations to constructing the proper information technology framework needed to be successful.

AT 15-2 and AT 14-2 (Spring 2015/Spring 2014): EM420, Operations Management. This course deals with the quantitative aspects of design and analysis of production operations management. Specific methods and techniques taught and applied are operations strategy, product design and selection, supply chain management,

total quality management, forecasting, capacity planning, facility location, facility layout, work system design, inventory management, material requirements planning, and scheduling.

AT 14-2 (Spring 2014): Course Director, SE400, Professional Engineering Seminar. This seminar course for SE and EM majors meets once a week to address the concerns of professional engineers such as engineering ethics and licensing procedures. The seminar also includes presentations by guest lecturers from the military, DoD industrial base, and academic communities.

AT 13-2 (Spring 2013): SE385, Decision Analysis. The course presents basic techniques of decision-making concentrating on both theoretical and modeling aspects. The focus of the course is modeling problem structure, uncertainty, risk and preference in the context of decision-making. Topics include influence diagrams, decision trees, sensitivity analysis, assessing subjective probability, value of information, risk and uncertainty.

AT 13-1 (Fall 2012): SE350, Systems Modeling and Design. SE350 is the second foundation course of a three-course sequence for non-engineering cadets. It focuses on the application of deterministic and stochastic models to help cadets analyze and understand different alternatives. Cadets practice uses of spreadsheets to develop and analyze models.

AT 12-1/2 (Fall 2011/Spring 2012): SE450, Applied Systems Design and Decision Making. This course is the third course of the three-course systems engineering sequence. The course serves as the culminating systems engineering experience for non-engineering cadets and integrates the principles, concepts, and models explored in previous courses. Capstone project topic: Retention and recruiting in the US Army Special Operations Command, Optimization of WB4, Cadet Barber Shop, and Cadet Arms Room for the USMA Director of Logistics, USMA Golf Course, and the Cadet First Class Club.

United States Military Academy, Department of Mathematical Sciences (D/Math), 2001-2004; 2009-2010

AT 11-1 (Fall 2010): MA100, Pre-Calculus. MA100 prepares cadets with limited backgrounds in algebra and trigonometry for the core mathematics program. The course develops fundamental skills in algebra, trigonometry, functions, vectors and matrices through an introduction to mathematical modeling and problem solving.
*Note: Did not teach the complete course this semester due to an operational deployment to Iraq.

AT 10-2 (Spring 2010): Course Director, MA101, Mathematical Modeling and Introduction to Calculus. This course continues the study of Discrete Dynamical Systems and begins the study of calculus for MA100 cadets. Pre-calculus concepts of algebra, trigonometry, functions, limits, and continuity are integrated into the study of differential calculus. Application problems are mathematically modeled and technology is used in their solutions.

AT 10-1 (Fall 2009): Course Director, MA100, Pre-Calculus. MA100 prepares cadets with limited backgrounds in algebra and trigonometry for the core mathematics program. The course develops fundamental skills in algebra, trigonometry, functions, vectors and matrices through an introduction to mathematical modeling and problem solving.

AT 04-2 (Spring 2004): MA206, Probability and Statistics. In this course, the cadet learns the fundamentals of probability and simple hypothesis testing. The cadet completes a taxonomy of models (stochastic/deterministic, linear/non-linear, continuous/discrete) and completes two capstone projects.

AT 04-1 (Fall 2003): Course Director, MA103S, Mathematical Modeling and Introduction to Calculus. This course was a planned curriculum redesign of MA103, Discrete Dynamical Systems. This is the first of four courses in the USMA mathematics core curriculum. The focus of the course is to use effective problem solving

and modeling techniques to find solutions to complex and often ill-defined problems. The course lays the foundation for calculus and differential equations through difference equations.

AT 03-2 (Spring 2003): MA491, Research Seminar in Applied Mathematics. MA491 is the capstone course for the Mathematics Curriculum. It gives cadets the opportunity to integrate mathematical concepts and techniques learned in previous courses with the principles developed in the USMA curriculum to solve a current problem of interest from the broad field of applied mathematics.

AT 03-2 (Spring 2003): Course Director, MA101, Introduction to Calculus. This course continues the study of Discrete Dynamical Systems and begins the study of calculus for MA100 cadets. Pre-calculus concepts of algebra, trigonometry, functions, limits, and continuity are integrated into the study of differential calculus. Application problems are mathematically modeled and technology is used in their solutions.

AT 03-1 and AT 02-1 (Fall 2002/Fall 2001): MA103, Discrete Dynamical Systems. This is the first of four courses in the USMA mathematics core curriculum. The course lays the foundation for calculus and differential equations through difference equations.

AT 02-2 (Spring 2002): MA104, Calculus I. This course builds upon the foundation laid in MA103, as the cadet learns about differential calculus in single-variable problems.

Professional Development: 2012 Graduate of the Master Teacher Program, USMA Center for Faculty Excellence

ACADEMIC LEADERSHIP/FACULTY DEVELOPMENT

Community of Best Practices, Department of Math, SPAAS, Florida SouthWestern State College (2015 – present)
- Member of the Planning Committee

Program Director, Engineering Management Major, DSE, United States Military Academy (2013-2015)
- Curriculum development and assessment of the ABET Accredited Engineering Management Major
- Mentorship of six course directors and approximately ten instructors (EM381, EM384, EM411, EM420, EM481, and EM482)
- Currently an ABET record year with Program re-accredited in Fall, 2014
- USMA EM Program selected as winner of the 2014 Founder's Award for Undergraduate Education

Program Director, Core Engineering Sequence, DSE, United States Military Academy (2011-2013)
- Curriculum development and assessment of the System Engineering three course engineering sequence (SE300, SE350, and SE450)
- Mentorship of three course directors and approximately ten instructors

Program Director, Pre-Calculus, D/Math, United States Military Academy (2009-2010)
- Curriculum development and assessment of the MA100/MA101 Core Mathematics Courses
- Mentorship of Course Director each semester

Faculty Develop Workshops, United States Military Academy
- Conducted the Department of Systems Engineering Faculty Development Workshop (FDW), Summer of 2012. Developed the FDW calendar and execution plan, in-processed seven officers into the Department, coordinated and/or presented pedagogical topics, and coordinated and/or evaluated all practice classes.
- Assisted with the execution of the Department of Mathematical Sciences Faculty Development Workshops, Summer of 2010 and Summer of 2003. Work included presenting pedagogical topics and assisting with practice classes.

Faculty Research Supervision, DSE, United States Military Academy (2012-2015):
- Project: Life Cycle Costing for Engineered Resilient Systems, Funding: $75,000
  Client: Engineering Research and Development Center (ERDC), Faculty: MAJ Paul Santamaria (and one capstone team)
- Project: Life Cycle Costing for Army Acquisitions, Funding: $50,000
  Client: Engineering Research and Development Center (ERDC), Faculty: LTC Matt Dabkowski
- Project: Evaluation of Army Automated Test System (ATS) platforms and projected impact of modernization plans, Funding: $125,000
  Client: ARDEC Automated Test Systems Division (ATSD), Picatinny, NJ, Faculty: Mr. Dave Chennault
- Project: Technology Replacement Decision Model for Test, Measurement & Diagnostic Equipment, Funding: $20,000
  Client: Tobyhanna Army Depot, Faculty: Mr. Dave Chennault and one Cadet Capstone Team

RESEARCH AND SCHOLARSHIP

Publications:

Journal Editor:

- Currently working: Engineering Management Journal Special Issue, Topic: Military Applications in EM with Special Issue Editors, with Suzanna Long, PhD, PEM, Missouri University of Science and Technology. Due to be published 2016.

Refereed Journal Papers:

- "A Network Flow Model of the Complex Illicit Trafficking Network Operating in the El Paso-Juarez Area," Industrial and Systems Engineering Review, Volume 2, No 1, pp. 15-35, 2014 with A. Peña.
- "Modeling El Paso-Juarez Illicit Drug Networks: Policy Implications," Journal of the Washington Academy of Sciences, Volume 99, Number 4, Winter 2013 pp. 1-16 with A. Pena.
- "Inspiring Students to Unleash Simple Technological Tools to Provide Better Data Analysis to Decision Makers," Issues in Information Systems, Volume 14, Issue 2, pp.319-328, 2013 with S. Henderson.

Refereed Conference Papers:

- "A Review of Non-ABET Accredited Engineering Management Program" 2015 International Annual Conference of the American Society for Engineering Management, October 7-10, 2015, paper in conference proceedings with P. Kaufmann, J. Farr, and D. Wyrick.
- "Modeling the Chikungunya Virus: A System Dynamics Approach," 33rd International Conference of the System Dynamics Society, Cambridge, Massachusetts, USA, July 19-23, 2015, paper in the conference proceedings with J. Enos and R. Schott.
- "An Analysis of Engineering Credits in ABET Accredited Engineering Management Programs," American Society for Engineering Education (ASEE) 122nd Annual Conference, June 14-17, 2015 Seattle, Washington, paper in the conference proceedings with P. Kaufmann, J. Farr, and D. Wyrick.
- "Simulating the Impacts of Sending Officers to Functional Schools before BOLC-B," Third Annual World Conference of the Society for Industrial and Systems Engineering, San Antonio, TX, 22 October 2014, paper in conference proceedings with D. Blum.
- "Optimizing BOLC Scheduling for Commissioning Second Lieutenants in the United States Army," Third Annual World Conference of the Society for Industrial and Systems Engineering, San Antonio, TX, 22 October 2014, paper in conference proceedings with A. Kunkle.
- "Modeling El Paso-Juarez Illicit Drug Networks," Second Annual World Conference of the Society for Industrial and Systems Engineering, Las Vegas, NV, 6 November 2013, paper in conference proceedings with A. Pena.
- "Analysis of Changes to Tobyhanna Army Depot Maintenance Cycle," IEEE Systems and Information Engineering Design Symposium, 27 April 2013, paper in conference proceedings with C. Ezekannagha, T. Jasien, W. Kim, and J. Springer.
- "A Heuristic Algorithm to Solve Distribution Problems with Set-Up Costs: Building the Model," in the 13th Annual International Conference on Industrial Engineering Theory, Applications, and Practice, Las Vegas, NV, 8 September 2008, paper in proceedings, with E. Quiñonez-Rico and D. Valles-Rosales.
- "The Wireless Network in the Mathematics Classroom: One Year Later," 16th Annual International Conference on Technology in Collegiate Mathematics, Chicago, Illinois, Oct 31, 2003, paper in proceedings, with T. Rugenstein and K. Fields.

Other Significant Publications:

- ABET Self-Study Report for the Engineering Management Program at the United States Military Academy, West Point, NY, July 1, 2014
- "A Metaheuristic Algorithm for Solving a Distribution and Inventory Problems with Set-up Costs using Cross Entropy and Lagrangian Relaxation," Doctor of Philosophy Dissertation, New Mexico State University, May 2009.
- "The Support Leader Digital Assistant," Army Logistician, July-August 2005, pp 40-42 with H. West.
- "Curriculum Change in a Changing World," Mathematica Militaris, Spring 2004, pp 3-7, with A. Heidenberg, and J. Wasko.
- "Los Angeles Support Mission," Army Logistician, September-October, 1992, pp 18-21 with W. Causey.

Other Publications – Technical Reports:

- Technology Master Plan: Technology Enables Tobyhanna Army Depot. 15 March 2013, with R. Arnold, A. Borgacci, D. Carey, D. Chennault, P. Frantz, K. Fulk, R. Rowe, S. Shaw, and G. Wolfe.
- ASA(ALT) OCSE Concept Plan Technical Report, June 2012, with M. Kwinn and R. Kewley.
- The Support Leader's Digital Assistant. Operations Research Center of Excellence Technical Report DSE-TR-0510, June 2005, with W. Rittenhouse, H. West, and M. Kwinn.

Conference Presentations:

- "Modeling Military Supply Chains," 2015 International Annual Conference of the American Society for Engineering Management, October 7-10, 2015 with C. Green.
- "The Evolution of the Undergraduate Engineering Management Curriculum at West Point," American Society of Engineering Management International Annual Conference, Old Dominion University, Virginia Beach, VA, October 15-18, 2014 with D. Korycinski.
- "Modeling Army CRSP Yards," American Society of Engineering Management International Annual Conference, Old Dominion University, Virginia Beach, VA, October 15-18, 2014 with G. Lewis, J. Werner
- "Risk Management Perspectives for Aging Technology Infrastructure Challenges," American Society of Engineering Management International Annual Conference, Old Dominion University, Virginia Beach, VA, October 15-18, 2014 with D. Chennault and D. Carey.
- "Educating Tomorrow's Leaders – USMA DSE and ERS", presented at the 82nd Military Operations Research Society Symposium, Alexandria, Virginia, 17 June 2014, with M. Dabkowski.
- "Modeling Army CRSP Yard Operations", presented at the 82nd Military Operations Research Society Symposium, Alexandria, Virginia, 17 June 2014, with J. Werner, D. Musholt, J. Herbeck, and G. Lewis.
- "Analysis of Q37 Maintenance Cycle", presented at 81.1 Military Operations Research Society Symposium, Virtual Session, 17 June 2013 with C. Ezekannagha, T. Jasien, W. Kim, and J. Springer.
- "Rock Math: A Successful Implementation of a Curriculum Designed to Help Under-Prepared Students Make the Transition to College Mathematics," presented at the Joint Mathematics Meeting, San Francisco, CA, 13 January 2010 with R. Burks.
- "A Metaheuristic Algorithm for Solving Logistic Operations of Red Chile Peppers," presented at the Industrial Engineering Research Conference, Miami, FL, 1 June 2009 with E. Quiñonez-Rico and D. Valles-Rosales.
- "A Metaheuristic Algorithm for Solving a Distribution and Inventory Problem with Set-up Costs using Cross Entropy and Lagrangian Relaxation," presented at the Graduate Research and Arts Symposium of New Mexico State University, Las Cruces, NM, 23 April 2009.

- "A Heuristic Algorithm for Solving Distribution Problems with Set-up Costs," presented at the Institute for Operations Research and the Management Sciences (INFORMS) 2008 Annual Meeting, Washington, DC. 12 October 2008, with E. Quiñonez-Rico and D. Valles-Rosales.
- "Determining the Optimal Allocation of Critical Assets," presented at the Graduate Research and Arts Symposium of New Mexico State University, Las Cruces, NM, 3 April 2008.
- Evaluation of Research Program Structures Using Logic Models and Value Stream Management: A Pilot Study," poster presentation at the Evaluation 2007 Conference, Baltimore, MD, 7 November 2007, with B. Lugo and D. Valles-Rosales.
- "Using Logic Models to Evaluate the NM AMP Undergraduate Research Assistantship Program," presented at the Institute for Operations Research and the Management Sciences (INFORMS) 2007 Annual Meeting, Seattle, WA, 5 November 2007, with A. M. Auzenne, A. Hyde, R. Jacquez, B. Lugo, and D. Valles-Rosales.
- "Data Mining Applications and Procedures in Large-scale Simulation Models" presented at the 74th Military Operations Research Society Symposium, United States Air Force Academy, Colorado Springs, CO, 15 June 2006, with G. Lamm.
- "Logistics Decision Support System: A Tool for the Support Platoon Leader," presented at the 72nd Military Operations Research Society Symposium, Naval Postgraduate School, Monterey, CA, 11 June 2004, with H. West.
- "Estimating Number of Unseen Equipment Faults," presented at the Institute for Operations Research and the Management Sciences 2003 Annual Meeting, Atlanta, GA, 20 October 2003, with J. Myers and D. Whitten.
- "Logistics Decision Support System," presented at the 71st Military Operations Research Society Symposium, Quantico Marine Base, VA, 11 June 2003, with H. West and J. Jackson.
- "The Pencil vs. The Keyboard: One Approach to Incorporating Technology into Assessment," presented at the Joint Mathematics Meeting, Baltimore, MD, 17 January 2003, with A. Heidenberg, and J. Wasko.
- "Laptop Computers and the Handheld Calculator: Technology in the Classroom," presented at the Joint Mathematics Meeting, Baltimore, MD, 15 January 2003 with J. Wasko.
- "Logistics Decision Support System," presented at the Institute for Operations Research and the Management Sciences (INFORMS) 2002 Annual Meeting, San Jose, CA, 19 November 2002, with H. West.
- "Graphing Calculator: Friend or Foe?" presented at the Mathematical Association of America Mathfest 2002, Burlington, VT, 02 August 2002, with J. Wasko, and A. Heidenberg.
- "Determining Inventory Levels: Do We Have the Right Criteria?" presented at the 70th Military Operations Research Society Symposium, Fort Leavenworth, Kansas, 20 June 2002, with S. Vann-Olejasz.

Other Presentations:

- "Teaching Tools: Google Docs and Canvas," Community of Best Practices: Math, 11 September 2015, The Teaching and Learning Center, Florida SouthWestern State College.
- "Managing Your Career." Officer Professional Development Seminar, Keller Army Hospital, 17 October 2013.
- "Improving the Electronic Publication Process for 160th SOAR," Flightline of the Future Collaborative Competition, The Center for Innovation Lockheed Martin Corp. Suffolk, VA, 26 April 2013 with G. Campbell, J. Jung, M. Maley, C. Pawlik.
- "Experiences of FA49s during Deployment." Department of Mathematical Sciences Center for Faculty Development, 21 April 2012.
- "Give, Take and Incorporate Feedback." National Science Foundation Sponsored Workshop for the Improvement of College Mathematics Teaching Through Faculty Development, 6 June 2010.

- "Give, Take and Incorporate Feedback." Department of Mathematical Sciences Center for Faculty Development. 25 March 2010.
- "Common Sense Tips for Success in Any Workplace." Industry Night. New Mexico State University. 23 April 2009.
- "Determining the Optimal Allocation of Critical Assets" Presentation to the Dean's Advisory Council. New Mexico State University. 20 February 2008

Funded Research:

Date	Project	Funding
2015-2016	Incorporating Inquiry Based Learning into a FSW Mathematics Course, with D. Ransford, L. Garrett, and R. Axelrod	$8,225
2014-2015	Modeling Military Logistics, Engineering Research and Development Center (ERDC), Primary Investigator and Capstone Advisor	$65,000
2013-2014	Optimizing CRSP Yard Operations, Engineering Research and Development Center (ERDC), Primary Investigator and Capstone Advisor	$25,000
2013-2014	Life Cycle Cost Modeling, Engineering Research and Development Center (ERDC), Primary Investigator and Capstone Advisor	$50,000
2012-2013	External Assessment of C4ISR, Technology and Logistics drivers with potential impact to the C4ISR Sustainment Mission, Tobyhanna Army Depot, Primary Investigator, with D. Chennault	$80,000
2012-2013	Optimizing Depot Level Maintenance for the Firefinder (Q37) Radar, Tobyhanna Army Depot, Primary Investigator and Capstone Advisor	$20,000
2012-2013	Flightline of the Future, Lockheed Martin, Primary Investigator and Capstone Advisor	$10,000
2012	Establishment of a System-of-Systems Engineer (SoSE) organization within the office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA (ALT)), Office of the Chief Systems Engineer, with Primary Investigator M. Kwinn	$30,000
2011-2012	Evaluation Architecture for Handheld Devices, Brigade Modernization Command, Primary Investigator and Capstone Advisor	$10,000
2009-2010	Chili Pepper Distribution: An Algorithm for Solving DIPS, Army Research Laboratory Army Research Office through O/Dean by the Photonics Research Center	$1,830
2007-2008	Logic Models and Value Stream Mapping Structuring the Undergraduate Research Assistantship Program of New Mexico Alliance for Minority Participation (NM AMP), with B. Lugo	$2,000
2001-2002	Support Platoon Leader Digital Assistant, Project Manager, Logistics Information Systems (PM-LIS), Secondary Investigator with H. West, M. Kwinn and W. Rittenhouse	$125,000
	Total	$427,055

SERVICE

External/National Organizations:

- Track Chair, Operations and Supply Chain Management, International Annual Conference of the American Society for Engineering Management (2014 – present)
- Modeling Competition in Mathematics (MCM) and Interdisciplinary Competition in Modeling (ICM)
  - MCM Student Team Advisor (2003, 2004, 2010, 2012, 2013, 2014)
  - MCM/ICM Paper Triage Judge (2009- present)
  - MCM Final Judge (scheduled April 2016)
- Member, Board of Advisors, American Society for Engineering Management (2013-2015)
- Treasurer, Force Sustainment Association (2013-2015)
- Treasurer, Phi Kappa Phi, West Point Chapter (2012-2015)
  - 2013 USMA Student Chapter Selected as a Chapter of Excellence
- Logistics Officer for the National Science Foundation Sponsored Workshop for the Improvement of College Mathematics Teaching Through Faculty Development with COL Alex Heidenberg and LTC Jerry Kobylski, Summer of 2010
- USMA Preparatory School (USMAPS) Liaison (2009-2010)

FSW Committees:

- Hiring Committee for Construction Technology Professor (SoBT, 2015)
- Calculator Committee (SPAAS, Dept of Math, 2016)

Army:

- Army Competitive Category Major Promotion and ILE Selection Board Member, Fort Knox, Kentucky, October-November, 2012.

USMA Committees:

- Academy Professor Selection Committees (Math, 2012; EECS, 2013)
- Member of the Emerging Technology Committee (2012-2015)
- Member of the Engineering and Technology Goal Committee (2011-2013)
- Member of the Continued Intellectual Development (CID) Team of the Intellectual Domain Committee (2009-2011)
- Served as the Dean's SHARP representative (2011-2015)
- School certified (January 2012) SHARP Victim Advocate (2012 - 2015)
- Member of Committee for SHARP-related Education in the Core Curriculum (2012-2013)

USMA Cadet Development:

- Provided oversight for the American Society for Engineering Managers Student Chapter (2013-215)
  - 2013 Winner for the ASEM Student Chapter Award.
- Officer Representative for the Army Women's Tennis Team (2012-2015)
- Provided oversight for the Society for Women Engineers (2011-2015)
- A/OIC and Treasurer of Corbin Forum (2003-2004, 2009-2015)
- Officer Representative for the Army Men's and Women's Swimming and Diving Teams (2002-2004)
- Cadet Mentorship (2001-2004, 2009-2015)
  - Department Academic Counselor (DAC)
  - Quartermaster Corps Mentor
  - PL300 Mentor
  - Participant in the Cadet 4th Class Sponsorship Program

Community Service:

- PTO Volunteer (West Point Schools)
- Wife's Club Volunteer (Viva! Baskets, Bataan Memorial Death March)
- Member, Selection Committee for the Principle, White Sands Schools
- Coordinator for the White Sands PTA 5K/1 mi Walk/Run
- Assistant Coach, White Sands SAS Youth Soccer Team

OTHER MILITARY EXPERIENCE

11/10 to 5/11: ***J5 Chief of Strategic Assessments*** *(USF-I J5, Camp Victory, Iraq)* Senior Analyst in support of the United States Forces Iraq and United States Embassy Baghdad Joint Campaign Plan assessments.

- Conducted assessments on the Joint Campaign Plan (political, economic and energy, rule of law, and security, as well as the supporting lines of operation.)
- Results briefed directly to the US Ambassador and Commander, USF-I

10/04 to 7/06: ***Operations Research Analyst*** *(TRADOC Analyst Center, WSMR, NM)* Scenario and Post-processing Officer in the Scenario and Wargames Directorate. Responsible for the development of TRADOC Brigade and Below Operational Scenarios for use in simulated gaming (CASTFOREM and JANUS); responsible for post run data files for processing from Janus simulations.

- Responsible for the publishing of six new Brigade and Below Scenarios.
- Created a new post-processing system using Clementine that reduced processing time by over 200%.

10/97 to 5/99: ***Company Commander*** *(1st ID, Kitzingen, Germany)* Led a company of 218 soldiers. Responsible for the daily operations of the company and all life support (subsistence, maintenance, fuel, health support, movement, and defense) to the Division Rear Command Post and all elements operating in the sector.

- Won the Army Award for Maintenance Excellence. Successfully supported six field training exercises.
- Won the division award for best field dining facility, best overall site, and the division award for safety.

06/97 to 10/97: ***Support Operations Maintenance Officer*** *(1st ID, Schweinfurt, Germany)* Second in command of a support operations section responsible for the coordination of all logistics and health service support to an infantry brigade and all attached elements.

- Successfully supported the return and refit of the brigade from Bosnia, ensuring the brigade's maintenance level was maintained at above 90% throughout a brigade's entire training center rotation.
- Developed and implemented the Authorized Stockage List for the battalion's supply warehouse.

06/96 to 05/97: ***Rear Detachment Commander/Personnel Officer*** *(1st ID, Schweinfurt, Germany)* Led a detachment of over 160 soldiers. Responsible for the administrative operation of a 400 soldier battalion and the support of over 200 family members while the battalion was deployed to Bosnia.

12/94 to 06/95: ***A/Regimental Supply Officer*** *(9th Infantry Regiment, Guantanamo Bay, Cuba)* Second in command of a supply section responsible for supply and service acquisition, maintenance, transportation, budget and property accountability of a light infantry brigade during Operation Sea Signal.

02/94 to 11/94: ***Support Operations Supply Officer*** *(79th FSB, Fort Lewis, WA)* Second in command of a support operations section responsible for the coordination of all logistics and health service support to an infantry brigade and all attached elements.

9/93 to 02/94: ***Battalion Logistics Officer*** *(79th FSB, 9th Infantry Regiment, Fort Lewis, WA)* Led a six soldier logistics section of a 300 soldier battalion. Responsible for the battalion budget, supply and services, battalion road movements, facility repair and utilization, and property accountability.

6/92 to 8/93: ***Platoon Leader/Warehouse Accountable Officer*** *(7th ID, Fort Ord, CA)* Led a 50 soldier platoon responsible for the daily operation and management of the Division's supply warehouse, water purification and distribution to the division, and back-up fuel support to three forward support battalions.

11/91 to 5/92: ***A/Brigade Personnel Officer*** *(7th ID, Fort Ord, CA)* Second in command of 12 soldiers responsible for all administrative support of a 1500 soldier brigade. Deployed with the DISCOM in support of Joint Task Force Los Angeles during the civil disturbances.

R. PANNEER SELVAM, P.E., Ph.D.

ACADEMIC RANK: University Professor & James T. Womble Professor of Computational Mechanics and Nanotechnology Modeling

DEGREES:
BSCE University of Madras, 1978
ME (St.) University of Madras, 1980
MSCE South Dakota School of Mines & Tech, l982
Ph.D. Texas Tech University, l985

UNIVERSITY OF ARKANSAS SERVICE:
University Professor (2010-present)
James T. Womble Professor of Computational Mechanics & Nanotechnology Modeling, 2005 - present
Professor of Civil Engineering, University of Arkansas, 1999-2010
Associate Professor, University of Arkansas, l991-1999
Assistant Professor, University of Arkansas, 1986-1991

RELATED EXPERIENCE:
Teaching:
Instructor & Research Associate, Texas Tech University, 1982-1985
Associate Lecturer, Center for Appropriate Technology, University of Madras, India, 1980-1981
Research:
Visiting Faculty: Wright Patterson Air Force Base, Summer of 1997, 1998, 2004 & 2005.
Technical University of Denmark, Summer 1996
Industrial/Consulting:
Chief Technology Officer & Partner, Power Electronics Leveling Solutions Inc., Fayetteville, AR, 2004-2011

PROFESSIONAL REGISTRATION:
Professional Engineer, Arkansas

UNIVERSITY SERVICE ACTIVITIES LAST 5 YEARS
Assistant Depat. Head, Civil Engineering- Manage research & graduate program, 2011-present
Assistant Director, microEP Graduate Program, Manage Graduate seminar, Organize Industrial Advisory Committee meeting, 2008-present
Structures Faculty Search Committee, Chairman (2000) & Member (2003 & 2005)
Graduate Council, 2002 – present
College Promotion & Tenure Committee, Chairman (2003) & Member (2001-present)

PRINCIPAL PUBLICATIONS LAST FIVE YEARS:
S.K. Patro, R.P. Selvam and H. Bosch (2013), Adaptive h-finite element modeling of wind flow around bridges, **Engineering Structures,** 48, 569–577
S.K. Patro, R.P. Selvam and H. Bosch (2010), Bridge flutter modeling using H-adaptive FEM, **Journal of Wind and Engineering**, 7, 39-48. Also available from: http://iswe.co.in/journal.htm
Murray S.J, Jankiram Subramani V, Selvam R.P, Hall K.D (2010), Molecular dynamics to understand the mechanical behavior of cement paste, **Transportation Research Record**, 2142: 75-82
S. Sarkar and R.P. Selvam (2009), Direct numerical simulation of heat transfer in spray cooling through 3D multiphase flow modeling using parallel computing, **Journal of Heat Transfer**, 131, pp.121007-1 to 8.

R.P. Selvam, M. T. Hamilton, J.E. Johnston and E.A. Silk (2009), Thermal modeling of spray cooling: Gravitational effect on droplet and bubble dynamics, **Journal of Thermophysics and Heat Transfer**, 23, 560-570

R.P. Selvam, M. Sarkar, S. Sarkar, R. Ponnappan, and K.L. Yerkes (2009), Modeling thermal-boundary layer effect on liquid-vapor interface dynamics in spray cooling, **Journal of Thermophysics and Heat Transfer**, 23, 356-370

PROFESSIONAL AND TECHNICAL SOCIETY ACTIVITIES:

Editorial Board:

Wind & structures, An International Journal May 2006-present

Membership:

American Association for Wind Engineering (AAWE)- 2000- present
American Society of Civil Engineers (ASCE) Member 1986-present & Fellow 2004-present
American society of Mechanical Engineers (ASME) 2005-present
Order of the Engineer 1982-present (Life Member)

Committees:

Board of Director, Arkansas Renewable Energy Association, 2011-present
Vice Chairman of CSP Division, American Solar Energy Society, 2010-present

HONORS AND AWARDS:

James T. Womble Professor of Computational Mechanics & Nanotechnology Modeling, Aug. 2005-present

Fellow of ASCE, Jan. 2004- present

Member of the ***Civil Engineering Academy,*** Texas Tech University, April 4, 2003- present

College of Engineering ***Outstanding Researcher Award*** for the years: 2000, 2001 & 2006

Received Texas Instruments ***Outstanding Teacher Award*** for the year 1998

Received ***Recognition from Governor*** as the Outstanding Citizen of the State of Arkansas, 1994

Outstanding ***Public Service Award*** by Federal Emergency Management (FEMA) for his contribution to the States Earthquake Preparedness Program, 1990

Outstanding ***Paper Award,*** The Space Technologies and Applications International Forum (STAIF-2005) received Feb. 14, 2006

College of Engineering ***Outstanding Researcher Award*** for the years: 2000, 2001, 2006, 2008 & 2009

RECENT COURSES TAUGHT:

CVEG 3304 – Structural Analysis, CVEG 4803 – Structural Loading, CVEG 4301 Concrete Design
CVEG 5313 – Matrix Methods of Structural Analysis, CVEG 5383 – Finite Element for Civil Eng.

PROFESSIONAL DEVELOPMENT ACTIVITIES LAST 5 YEARS:

2012 World Renewable Energy Forum
US Conference on Wind Engineering
2011 International Conference on Energy Sustainability
2010 Indo-US workshop on Nanotechnology in the Science of Concrete
International Conference on Energy Sustainability
2009 ASME , Heat Transfer Summer Conference

DISTRIBUTION OF TIME COMMITMENTS

	Teaching	Service	Research/scholarly	Admin	TOTAL
2002 –present	50	10	40	0	100

Christopher M. Smith
Lieutenant Colonel, U.S. Army
Director
TRADOC Analysis Center (TRAC) - Monterey
Monterey, CA 93943

Personal Information

Residence: 28 Lupin Lane
Carmel Valley, CA 93924
(254) 681-0787

Current Position:
Director
TRAC-MTRY
700 Dyer Rd., Rm WA-180
Monterey, California 93943
Phone: (831) 656-3088
Fax: (831) 656-3084
christopher.m.smith.mil@mail.mil
cmsmith1@nps.edu

Family: Married (13 years to Jennifer), 3 children:
Alexandra (20 yrs)
Madeleine (16 yrs)
Everett (8 yrs)

Education

University of Virginia — Charlottesville, VA
Ph.D in Systems Engineering, May 2013

University of Texas — Austin, TX
M.S.E. in Operations Research, May 2007

Missouri University of Science and Technology — Rolla, MO
M.S. in Engineering Management, May 2002

United States Military Academy — West Point, NY
B.S in Systems Engineering, May 1997

Professional Certifications

Master Teacher Program. West Point, New York, 2010.
Assistant Professor. West Point, New York, 2010.

Operations Research/Systems Analyst (ORSA) Qualification Course. Fort Lee, Virginia, 2008.
Intermediate Level Education. 2008.
Combined Arms Services Staff School. Fort Leavenworth, Kansas, 2001.
Engineer Officer Career Course. Fort Leonardwood, Missouri, 2001.
Field Artillery Officer Basic Course. Fort Sill, Oklahoma, 1997.
Airborne School. Fort Benning, Georgia, 1996.

Professional Experience

TRADOC Analysis Center - Monterey Monterey, CA
Director (2013 – Present)

- Director of an organization with 6 military analysts (O4), 1 civilian analyst (GS-15) and 1 civilian administrative assistant (GS-7). Control a budget of up to $1.5 million in reimbursable research.
- Mission: to conduct relevant and credible applied research for a variety of stakeholders in order to address identified TRAC research requirements.
- Center accomplishes 13-15 funded research projects annually, along with supporting on average 3 Naval Postgraduate Students annually as the second reader on their theses.

Johns Hopkins University Applied Physics Laboratory (JHU/APL) Operational Tour Program Laurel, MD
Intern (January – February 2012)

- Competitively selected to work in JHU/APL's Command and Control Group for a six week immersion program.
- Result: detailed Ph.D dissertation outline, and paper entitled, "Quantitative Intelligence Analysis," submitted to Military Operations Research Journal April 2012.

Mathematics Department, American Public University System Online
Adjunct Professor (2012 - Present) Charles Town, WV

- Adjunct professor for the Mathematics Department at online school, one of U.S. News & World Report's Best Online Bachelor's programs, 2015.

Courses Taught:

- MATH 110 – College Algebra (19 Sections/ 365 Students)
- MATH 125 – Math for Liberal Arts Majors (4 Sections/ 80 Students)
- MATH 239– Data Analysis and Presentation (1 Section/ 12 Students)
- MATH 302 - Statistics (2 Sections/ 29 Students)
- MATH 320 – Mathematical Modeling (1 Section/ 5 Students)

Department of Mathematical Sciences, United States Military Academy, West Point West Point, NY
Instructor (2007 – 2010)

- Course Director for MA206 – Probability and Statistics: responsible for all aspects running of the course, with over 1000 students and 20 instructors, to include curriculum development and assessment.
- Assistant Course Director for MA206 – Probability and Statistics: responsible for assisting the course director in all aspects running of the course, with over 1000 students and 20 instructors, to include curriculum development and assessment.

Courses Taught:

- MA103 - Problem Solving and Introduction to Calculus (3 Sections/ 49 Students)
- MA104 – Differential Calculus (3 Sections/ 52 Students)
- MA206 – Probability and Statistics (14 Sections/ 231 Students)

United States Army
Summary of Officer Assignments (1997- 2007)

- Battery Commander, Headquarters Battery, 4th Battalion, 42 Field Artillery, Fort Hood, Texas. Led ~ 250 soldiers through resetting all equipment/vehicles/personnel from OIF1 deployment and preparing them to return in OIF3. Executed transformation to modular force: property book went from $50 mil down to $10 mil then back up to $20 mil.
- Fire Support Officer, 1st Battalion, 66th Armor, Fort Hood, Texas – wartime mission (OIF 1) including planning artillery fire plan, protection against indirect fires, some civil affairs missions.
- Division Artillery Supply/Support Officer, 4th Infantry Division Artillery, Fort Hood, Texas – wartime mission (OIF 1) including creating, planning and executing support plan for over 4000 soldiers and their equipment. Planned and executed deployment for entire Brigade's worth of vehicles/equipment/personnel/support.
- Battalion Personnel Officer, 1st Battalion, 41st Field Artillery, Fort Stewart, Georgia – personnel officer for over 400 soldiers.

Summary of Enlisted Assignments (1991-1993)

- Graduated United States Military Academy Preparatory School, matriculated to USMA.
- Military policeman assigned to 988th Military Police Company, Fort Benning, Georgia – deployed to Panama for annual deployment, 1 year after Operation Just Cause.

Academic Awards

- Paper (Parnell, G., Smith, C. and Moxley, F.) selected as contributing to one of the ten most important accomplishments in risk analysis over past 30 years; one of 146 papers noted. Found in: Greenberg, M., Haas, C., Cox A., Lowrie, K., McComas, K., and North, W. "Ten Most Important Accomplishments in Risk Analysis, 1980-2010." *Risk Analysis*, 2012; *32(5): 771-781.*
- Finalist for 2012 Publication Award from Decision Analysis Society of INFORMS for "Intelligent Adversary Risk Analysis: A Bioterrorism Risk Management Model."
- 2010 Contribution to Best Issue-Linked Paper Set, in category of Terrorism Risk for "Intelligent Adversary Risk Analysis: A Bioterrorism Risk Management Model."
- 2010 Contribution to Best Issue-Linked Paper Set, in category of Terrorism Risk for "Response to Letter to the Editor."
- Selected as Department of Mathematical Sciences 2012 GEN Omar Nelson Bradley Fellowship grant recipient.
- Omega Rho (Operations Research and Management Sciences Related Disciplines) International Honor Society, 2012.
- Pi Mu Epsilon (National Mathematics) Honor Society, 2006.
- Hollis Award for Excellence in Military Operations Research, United States Military Academy, May 1997.

Military Awards

Bronze Star
Combat Action Badge
Meritorious Service Medal (2 awards)
Army Commendation Medal (2 awards)
Army Achievement Medal (3 awards)

Publications

Smith, C., Scherer, W.T., Todd, A., and Maxwell, D.T. "Quantitative Approaches to Representing the Value of Information within the Intelligence Cycle." *International Journal of Strategic Decision Sciences (IJSDS)* 6.4 (2015): 1-21.

Smith, C., Scherer, W.T., and Carr, S. "Value of Information Applied to Networks." *Environment Systems and Decisions* 35.4 (2015): 1-7.

Smith, C. "A Collaborative Learning Experiment." *Mathematica Militaris* 18.2 (2010): 10-16.

Parnell, G., and Smith, C. "Response to Letter to the Editor." *Risk Analysis* 30.6 (2010): 876.

Parnell, G., Smith, C. and Moxley, F. "Intelligent Adversary Risk Analysis: A Bioterrorism Risk Management Model." *Risk Analysis* 30.1 (2010): 32-48.

Presentations

Smith, C., Scherer, W.T., Carr, S. (2012), "Quantitative Intelligence Analysis", Military Application Society session, INFORMS Annual Meeting, Phoenix, AZ, October 2012.

Smith, C., Scherer, W.T., Carr, S. (2012), "Applying Quantitative Intelligence Analysis", Military Operations Research Society Annual Symposium, Air Force Academy, Colorado Springs, Colorado, June 2012.

Smith, C., Scherer, W.T., Carr, S. (2012), "Quantitative Intelligence Analysis", International Studies Association (ISA) Annual Convention, San Diego, California, April 2012.

Smith, C., Parnell, G, Moxley, F. (2009), "Intelligent Adversary Probabilistic Risk Analysis", Society for Risk Analysis Annual Meeting, Baltimore, Maryland, December 2009.

Smith, C., Parnell, G, Moxley, F. (2009), "Intelligent Adversary Risk Analysis: Defender-Attacker-Defender Probabilistic Risk Analysis Models", Military Operations Research Society Annual Symposium, Fort Leavenworth, Kansas, June 2009.

Smith, C., Parnell, G, Moxley, F. (2009), "Intelligent Adversary Risk Analysis: a Bioterrorism Risk Management Model", Risk Analysis of Complex Systems for National Security Applications, Los Alamos National Labs, Santa Fe, New Mexico, April 2009.

Smith, C., Parnell, G, Moxley, F. (2008), "Comparison of homeland security risk assessment methodologies," Risk Analysis: the Science and the Art session, Society for Risk Analysis Annual Meeting, Boston, Massachusetts, December 2008.

Smith, C., Parnell, G., Moxley, F. (2008), "Comparison of Homeland Security Bioterrorism Risk Assessment Methodologies", Decision Analysis session, INFORMS Annual Meeting, Washington, DC, October 2008.

Smith, C., Roginski, J (2008), "Shocking Applications of Mathematical Modeling in the Undergraduate Classroom", Joint Mathematics Meetings, San Diego, California, January 2008.

Memberships

Association of the United States Army (AUSA)
Institute For Operations Research and the Management Sciences (INFORMS)
Military Operations Research Society (MORS)

Professional Service

President, Social Media Analysis Subdivision, INFORMS. 2016 – Present.

Vice President, Social Media Analysis Subdivision, INFORMS. 2013 – 2015.

Session Chair, Social Media Analysis, INFORMS Annual Meeting. 2013, 2014.

Session Chair, Systems and Information Engineering Design Symposium (SIEDS), IEEE Annual Symposium. 2011.

Co-Chair Decision Analysis Workshop, 78th MORS Symposium. 2010.

Thomas S. Soerens, Ph.D, P.E.
University of Arkansas, Department of Civil Engineering

EDUCATION:

Ph.D. (Civil Engineering) University of Oklahoma, April 1995
M.S. (Civil Engineering) University of Oklahoma, December 1991
B.S.C.E., University of Wisconsin - Milwaukee, August 1987

EMPLOYMENT:

7/96-present	Associate Professor (2002), University of Arkansas, Civil Engineering, Fayetteville, AR Assistant Professor (1996-2002)
7/95-6/96	Environmental Engineer, Trust Environmental Services, Norman, OK
1/92-6/96	Instructor, Research Assistant, Research Associate
1/90-6/91	University of Oklahoma - Civil Engineering and Environmental Science
6/91-1/92	Environmental Scientist, USEPA and Dynamac Corp., National Risk Management Research Laboratory, Subsurface Protection and Remediation Division, Ada, OK
8/88-12/89	Water and Sanitation Engineer, RAEMAS Project, Republic of Maldives
10/83-7/88	Computer Operator, JCPenney Data Center, Milwaukee, WI
9/82-10/83	Relief Worker, Shelter Now International, Juarez, Mexico and Peshawar, Pakistan

ACTIVITIES, MEMBERSHIPS, HONORS:

Professional Engineer - Arkansas #9119; American Society of Civil Engineers; Engineers Without Borders, International Water Association, National Ground Water Association, American Rainwater Collection Systems Assoc., American Water Resources Association, UA Civil Engineering Outstanding Teacher Award, 2008-2009.

COURSES TAUGHT:

CVEG 563sp Statistical Applications in Civil Engineering
CVEG 562sp Applied River Morphology
CVEG 3213 Hydraulics and Lab
CVEG 3243 Environmental Engineering and CVEG 3240 Environmental Engineering Lab
CVEG 4243 Environmental Engineering Design and CVEG 4811 Environmental Design Project
CVEG 4994 Civil Engineering Design (Senior Design) and CVEG 4852 Professional Practice Issues
CVEG 5243 Ground Water Hydrology and CVEG 563sp Ground Water Remediation
CVEG 5234 Water and Wastewater Analysis and CVEG 5230 Water and Wastewater Lab
GNEG 1122 Introduction to CAD
HUMN 4253 Community Development in a Global Context
FLAN 4253 Language and Culture – Belize; FLAN 4253 Language and Culture – India (studies abroad in India and Belize)

SERVICE ACTIVITIES:

Arkansas Department of Health Individual Sewage Disposal Advisory Board, 2009- present; ASCE-EWRI Rainwater Harvesting Technical Committee; UA Director for Service Learning 2007-2009; UA Housing Faculty in Residence, 2007-2008; UA Radiation Safety Chair 1998-2000; Associate Director, Arkansas Water Resources Center, 1998-present; Continuing Ed Committee 2007-present; English as a Second Language Committee 2009 – present; UA Housing Committee, 2007-2008; President of professional chapter and faculty advisor of student chapter of Engineers Without Borders; Board, Access Life International; Advisory Board, Lightbearers International.

CONSULTING, etc.:

City of Prairie Grove, AR – Improved settling and iron removal in water treatment system;
City of Leticia, state of Amazonas, Colombia – water collection and treatment systems in Amazon indigenous villages; Trust Environmental Services – risk assessment and ground water remediation;
FTN & Associates – evaluation of the TMDL process
WalMart Stores, Inc. – site sustainability water task force.

RESEARCH PROJECTS:

As PI:

Mack-Blackwell Transportation Center graduate student research fellowship for Austin Lee, 08-09.

Fluorescent Tracers as Partitioning Tracers for Field Identification and Quantification of Subsurface NAPL Contamination

Department of Defense - Defense Threat Reduction Agency $290,772, 9/97 - 8/00

Evaluating the Influence of Lake Frances on Phosphorus Concentrations and Transport at the Illinois River, NW Arkansas Arkansas Water Resources Center (AWRC) $60,003, 3/03 – 2/04

Beaver Lake Water Quality Enhancement Project - Data Analysis
U.S. Army Corps of Engineers – Little Rock District $24,728, 8/96 - 4/97

Continuation of Sampling and Analysis Station on the Illinois River at Arkansas Highway 59
Arkansas Soil and Water Conservation Commission $30,840, 2/98 – 2/99

Investigation of Optimum Sample Number and Timing for Determining Pollution Loads
US Department of the Interior, U.S. Geological Survey $461,121, 9/97 - 9/99

As Co-PI

Determination of the Pollutant Loads in the Kings River near Berryville
Arkansas Soil and Water Conservation Commission $91,107, 7/1/99 – 6/30/01

Monitoring and Evaluation of the White River at Wyman Bridge
Arkansas Soil and Water Conservation Commission $243,278, 11/1/99 – 6/30/03

Evaluation of Sampling Strategies on Load Estimation for Illinois River at Highway 59
Arkansas Soil and Water Conservation Commission $24,095, 2000-2001.

Water Quality Sampling, Analysis and Annual Load Determinations for TSS, Nitrogen and Phosphorus at the Washington County Road 195 Bridge on the West Fork of the White River
Arkansas Soil and Water Conservation Commission $117,907, 7/1/01 – 6/30/03

Construction Site Erosion Control BMP Workshops, Demonstrations, and Demonstration of Effectiveness
Arkansas Soil and Water Conservation Commission $218,858, 7/1/01 – 6/30/03

Determination of the Pollutant Loads in the Kings River near Berryville
Arkansas Soil and Water Conservation Commission $196,523 7/1/99 – 6/30/03

Water Sampling and Analysis – Illinois River at Arkansas Highway 59
AR/OK Illinois River Compact Committee $155,424 1/1/99 – 6/30/03

Phosphorus White Paper
Arkansas Department of Environmental Quality $10,000

EDUCATIONAL GRANTS

Development of "Community Development in a Global Context" interdisciplinary course and study-abroad program; UA Honors College, $25,000, 2006.

Development of a Service-Learning Program on the UA campus; UA Student Affairs, $72,000, 2007

Interdisciplinary Program in Belize; Office of the Provost, UA $50,000, 2008

PUBLICATION SUMMARY

Type	**Number**
Books	1
Refereed Journals	12
Refereed Proceedings	12
Abstract Reviewed Publication	2
Non-refereed Publication	7
Formal Research Reports	9
Presentations– National/International Meetings/Conferences	18
Presentations - Regional Meetings/Conferences	10
Presentations - State/Local Meetings/Conferences	2
Miscellaneous Publications	5
Total	78

Dale R. Thompson, Ph.D., P.E.

Education

B.S., Electrical Engineering, Mississippi State University, 1990
M.S., Electrical Engineering, Mississippi State University, 1992
Ph.D., Electrical Engineering, North Carolina State University, 2000

Academic Experience

Assistant Professor, Computer Science & Computer Engineering Dept., University of Arkansas, Fayetteville, Aug. 2000 – July 2006.
Associate Professor, Computer Science & Computer Engineering Dept., University of Arkansas, Fayetteville, Aug. 2006 – present.

Non-Academic Experience

NSF, Principal Investigator, Fingerprinting RFID Tags with Transfer-of-Ownership Capabilities research, CNS-1053286, Sept. 1, 2010 – August 31, 2012.
NSF, Principal Investigator, RFID Information Systems Security (INFOSEC) for Nation-wide Engineering Education research, DUE-0736741, Jan. 1, 2008 – Dec. 31, 2009.
NSF, Principal Investigator, Anti-Counterfeiting RFID Tags research, CNS-0716578, July 1, 2007 – June 30, 2009.
Consulting with LGW, LLC, 2010.
Consulting with LRDC Systems, LLC, 2010.
Electronics Engineer, US Army Corps of Engineers Waterways Experiment Station (WES), Information Technology Laboratory, Vicksburg, Mississippi, Jun. 1992 - Aug. 2000.

Professional Registration

Registered Professional Engineer in the State of Arkansas, License #11264

Professional Organizations

IEEE Senior Member, IEEE Computer Society, IEEE Communications Society
Tau Beta Pi, Eta Kappa Nu

Honors and Awards

Imhoff Outstanding Teaching Award, College of Engineering, University of Arkansas, 2009.
Dept. of Computer Science and Computer Engineering Teacher of the Year award for academic year 2010-2011, University of Arkansas, May 6, 2011.
Dept. of Computer Science and Computer Engineering Teacher of the Year award for academic year 2007-2008, University of Arkansas, May 2, 2008.

Service Activities

General Vice-Chair of *IEEE International Conference on RFID (IEEE RFID)*, April 3-5, 2012.
Technical Program Chair of *IEEE International Conference on RFID 2011*
UA College of Engineering Technology Committee chairperson, 8/07 – 8/12, member since 8/05
UA CSCE Dept. Personnel Committee, 9/20/10–8/15/11
UA CSCE Dept. – Wrote ABET Self-Study Report for the Computer Engineering Program at the University of Arkansas, Fayetteville, Arkansas, 7/1/08

Recent Publications

Senthilkumar Chinnappa Gounder Periaswamy, Dale R. Thompson, and Jia Di, "Fingerprinting RFID tags," *IEEE Transactions on Dependable and Secure Computing*, vol. 8, no. 6, pp. 938- 943, Nov./Dec. 2011.

Jia Di and Dale R. Thompson, “Security for RFID tags,” in *Introduction to Hardware Security and Trust*. Mohammad Tehranipoor and Cliff Wang, Eds. New York: Springer, 2012, pp. 283-304.

Debrup Banerjee, Jiang Li, Jia Di, and Dale R. Thompson, "Feature selection for RFID tag identification", in *Proc. Int'l Conf. on Communications and Networking in China (Chinacom)*, Kunming, China, Aug. 8-10, 2012. (Best paper)

Baha’ A. Alsaify, Dale R. Thompson, and Jia Di, “Identifying passive UHF RFID tags using signal features at different tari durations,” in *Proc. IEEE Intl Conf. RFID (IEEE RFID)*, Orlando, Florida, Apr. 3-5, 2012, pp. 40-46.

Senthilkumar Chinnappa Gounder Periaswamy, Dale R. Thompson, Henry P. Romero, and Jia Di, “Fingerprinting radio frequency identification tags using timing characteristics,” in *Proc. Workshop on RFID Security (RFIDsec’10 Asia)*, Singapore, Feb. 22-23, 2010, pp. 73-82.

Graduate and Postdoctoral Advisors:
Ph.D. Advisor: Griff L. Bilbro, North Carolina State University; Ph.D. Committee: Arne Nilsson, Harry Perros, and Keith Townsend.
M.S. Advisor**:** Robert J. Moorhead, Mississippi State University

Students
Graduated 3 Ph.D. and 19 M.S. students
3 M.S. students are in progress

John A. White, Distinguished Professor of Industrial Engineering and Chancellor Emeritus
University of Arkansas, Fayetteville, AR 72701

EDUCATION

Ph.D., The Ohio State University, 1969
M.S.I.E., Virginia Polytechnic Institute, 1966
B.S.I.E., University of Arkansas, 1962

TEACHING EXPERIENCE

University of Arkansas, 1997-present; Georgia Institute of Technology, 1975-97; Virginia Polytechnic Institute and State University, 1963-66, 1970-75; The Ohio State University, 1966-70

INDUSTRIAL EXPERIENCE

SysteCon Division, Coopers & Lybrand: Executive Consultant, 1984-93.
SysteCon, Inc.: Chairman, 1982-84; Founder and President, 1977-82.
North American Aviation Corporation, Sr. Research Engineer, Summers of 1967 and 1968; Research Engineer, Summer 1966).
Ethyl Corporation, Industrial Engineer, Summer 1965.
Tennessee Eastman Company, Industrial Engineer, 1961-63.
CAPS Logistics, Inc., member, board of directors,1989-98.
Eastman Chemical Company, member, board of directors, 1994-04.
J. B. Hunt Transport Services, Inc., member, board of directors, 1998-present.
Logility, Inc., member, board of directors, 1997-2009.
Motorola, Inc., member, board of directors, 1995-2011
Motorola Solutions, Inc., member, board of directors, 2011-present.
Russell Corporation, member, board of directors, 1992-2006.

RELEVANT PUBLICATIONS

White, J. A., K. E. Case, and D. B. Pratt, Principles of Engineering Economic Analysis, Sixth Edition, John Wiley & Sons, Inc., New York, NY, 2012
Canada, J. R., W. G. Sullivan, D. J. Kulonda, and J. A. White, Capital Investment Decision Analysis for Engineering and Management, Third Edition, Pearson Prentice-Hall, Inc., Upper Saddle River, NJ, 2005.

PROFESSIONAL SOCIETY MEMBERSHIPS AND CERTIFICATIONS

American Society for Engineering Education, Fellow
Institute of Industrial Engineers, Fellow
Institute for Operations Research and the Management Sciences, Fellow
Institution of Production Engineers, Life Fellow

HONORS AND AWARDS

Honor Society Selections

Alpha Pi Mu (Industrial engineering)
ANAK, Honorary Member (Georgia Tech)
Omicron Delta Kappa (University)
Phi Kappa Phi (University)

Golden Key, Honorary Member (University) *Society of the Sigma Xi* (Research)
Omega Rho, Honorary Member (Operations research) *Tau Beta Pi* (Engineering)

Honors and Awards (several not included in order to meet page limit)

- Academy of Engineering Excellence, College of Engineering, Virginia Tech, Blacksburg, VA, 2011.
- Gator Engineering Leadership Award, College of Engineering, University of Florida, Gainesville, FL, 2010.
- John L. Imhoff Global Excellence Award, American Society for Engineering Education, Chicago, IL, 2006.
- Distinguished Alumnus Award, University of Arkansas Alumni Association, Fayetteville, AR, 2005.
- Ozark Ambassador Award, North Arkansas Community College Foundation, Harrison, AR, 2002.
- Fellow, Institute for Operations Research and Management Sciences, 2002.
- Fellow, American Society for Engineering Education, 1997.
- Member, National Science Board, 1995-2000 and 2000-2006.
- Donald E. Marlowe Award for Distinguished Education Administration, American Society for Engineering Education, 1994.
- Frank and Lillian Gilbreth Industrial Engineering Award, Institute of Industrial Engineers, 1994.
- Rodney D. Chipp Memorial Award, Society of Women Engineers, 1994.
- Distinguished Alumnus Award, Department of Industrial and Systems Engineering, Virginia Polytechnic Institute and State University, 1993.
- Distinguished Service Award, National Science Foundation, 1991.
- Doctor of Science *honoris causa*, The George Washington University, Washington, D.C., 1991.
- David F. Baker Distinguished Research Award, Institute of Industrial Engineers, 1990.
- Educator of the Year Award, Society of Manufacturing Engineers, 1990.
- Kenneth Andrew Roe Award, American Association of Engineering Societies, 1989.
- Material Manager of the Year Award, International Material Management Society, 1989.
- Albert G. Holzman Distinguished Educator Award, Institute of Industrial Engineers, 1988.
- Outstanding IIE Publication Award, Institute of Industrial Engineers, 1988, co-recipient.
- Member, National Academy of Engineering, 1987.
- Member, Arkansas Academy of Industrial Engineering, 1987.
- Teacher of the Year Award, Georgia Tech IIE University Chapter, 1987.
- Joint Publishers Book of the Year Award, Institute of Industrial Engineers, *Facilities Planning*, 1986.
- Honorary Doctorate of Engineering, Katholieke Universitiet of Leuven, Belgium, 1985.
- Reed-Apple Award, Material Handling Education Foundation, 1985.
- Fellow, Institute of Industrial Engineers, 1985.
- Life Fellow, Institution of Production Engineers, 1984.
- Distinguished Alumnus Award, College of Engineering, The Ohio State University, 1984.
- Outstanding Teacher Award, Georgia Institute of Technology, 1982.
- Joint Publishers Book of the Year Award, Institute of Industrial Engineers, *Facility Layout and Location: An Analytical Approach*, 1974.

Dr. Charles C. Wilson
Adjunct Faculty
University of Arkansas

EDUCATION

Doctor of Education, 1991
University of Arkansas

Master of Education, 1984
University of Arkansas

Bachelor of Science, 1972
University of Arkansas

TEACHING EXPERIENCE

2005-present. The University of Arkansas, Masters of Science in Operations Management, Hurlburt Field, FL site. (Courses Taught – Project Management, Strategic Management, Organization and Control, Management in the Service Sector & Healthcare Policies and Issues)

2000-2002. John Brown University, MSLE and MBA. (Courses Taught – Organizational Behavior & Mission, Vision and Values)

ADDITIONAL TRAINING

Supervision hours completed for Licensure in AAMFT
Supervision hours completed for Licensure in LPC
Licensed Counselor in Arkansas
Kaset International, 1997
Crosby Quality College, 1996
Baxter Management and Leadership Program, 1991

PROFESSIONAL EXPERIENCE

Chief Executive Officer, Emerald International, 2003 - Present

Chief Executive Officer and Professor of Business, 2000-2002
Soderquist Center for Leadership and Ethics
John Brown University, Siloam Springs, Arkansas

Director of Education. (1990 – 2000)
Washington Regional Medical System, Fayetteville, Arkansas

HONORS AND AWARDS

Management in Food and Nutrition Systems, Webinar Presenter, 2012

Mentor for Leadership Walton, Walton County Chamber of Commerce. 2005 - Present

Commencement Speaker for Class of 2011 Joint College Graduation exercises for University of Arkansas and University of Oklahoma at Hurlburt Field.

Walton County, BUILD Council Certificate of Appreciation, 2010

Arkansas Volunteer Directions, Certificate of Appreciation, 2001

American Hospital Association "Nova Award", 1999, Washington DC.

State of Arkansas, 1999, Certificate of Recognition for program Development of "Kids for Health"

Hugh O'Brian Youth Foundation, Certificate of Appreciation, 1997

InterHealth and 3M Health Care "The Spirit of Innovation" award, 1996.

Nia S. Wright
Adjunct Faculty
University of Arkansas

EDUCATION
M.B.A., Tulane University, New Orleans, LA, 1997
B.S. Industrial Engineering, University of Arkansas, Fayetteville, AR,1993

ACADEMIC EXPERIENCE
UNIVERSITY OF ARKANSAS, College of Engineering/Fayetteville, AR, 2010-present
Instructor – Operations Management Masters Program

ARKANSAS NORTHEASTERN COLLEGE/Blytheville, AR, 2006 - 2010
Instructor – Advanced Manufacturing and Employability
Adjunct Instructor – Undergraduate Marketing, Customer Service, & Sales Strategy
MISSISSIPPI COLLEGE/Clinton, Mississippi, 2001-2002
TULANE UNIVERSITY COLLEGE/New Orleans, Louisiana,1999
Adjunct Instructor - Undergraduate Business Communications and Marketing

NON-ACADEMIC EXPERIENCE
TEXACO NATURAL GAS/New Orleans, LA, Account Representative,1997-2000

HAMBROS CORPORATE FINANCE/Melbourne, Australia,1996
Trainee - Corporate Finance Department

HONORS
Certified Engineer In Training, Arkansas
Freeport McMoRan Corporation Four Year Academic Scholarship

Jingxian Wu
Department of Electrical Engineering
University of Arkansas
Fayetteville, Arkansas 72701
E-mail: wuj@uark.edu, Tel: (479) 575-6584, Web: http://comp.uark.edu/~wuj/

Education

- **Ph.D.** in Electrical Engineering, University of Missouri - Columbia**,** July, 2005
- **M.S.** in Electrical Engineering, Tsinghua University, January, 2001
- **B.S.** in Electrical Engineering, Beijing University of Aeronautics and Astronautics, July, 1998

Employment

- **Assistant Professor** in Electrical Engineering, University of Arkansas**,** 2008 - Present
- **Assistant Professor** in Computer and Engineering Science, Sonoma State University, 2005 - 2008

Selected Recent Research Grants

[1] **Jingxian Wu**, "Distortion-tolerant communications for ultra-low power wireless networks," $279,425, funded by National Science Foundation, 07/01/2012 - 06/30/2015.

[2] **Jingxian Wu** and Kathy Fogel, "An interdisciplinary course on social, economic, and computer networks," $24,936, funded by Honors College of the University of Arkansas, 12/1/2011 - 07/01/2012.

[3] Lifeng Lai, Guoliang Huang, and **Jingxian Wu**, "Robust wireless networking for aircraft anomaly monitoring," $20,000, funded by Arkansas NASA EPSCoR Program, 9/1/2011 - 8/30/2012.

[4] Scott Smith and **Jingxian Wu**, "REU site: summer research experiences in wireless sensor networks - design and applications," $367,734, co-funded by National Science Foundation and Department of Defense, 05/01/2010 - 04/30/2013.

[5] Kazem Sohraby and **Jingxian Wu**, "Wireless relay network for environmentally sustainable communication," $24,795, funded by AT&T Technology and Environment Awards Program, 07/01/2010 - 06/31/2011.

[6] **Jingxian Wu**, "Cooperative detection in decentralized wireless information network," $181,710, funded by National Science Foundation, 08/01/2009 – 07/31/2012.

Selected Recent Journal Publications

[1] **Jingxian Wu** and Geoffrey Ye Li, "Collision-tolerant media access control wtih on-off accumulative transmission," accepted for publication by IEEE Trans. Wireless Commun., 2012.

[2] **Jingxian Wu** and Ning Sun, "Optimum sensor density in distortion tolerant wireless sensor networks," IEEE Trans. Wireless Commun., vol. 11, pp. 2056-2064, June 2012.

[3] **Jingxian Wu**, Neelesh B. Mehta, Andreas F. Molisch, and Jin Zhang, "Unified spectral efficiency analysis of cellular systems with channel-aware schedulers," IEEE Trans. Commun., vol. 59, pp. 3463-3474, Dec. 2011.

[4] Jun Tao, **Jingxian Wu**, Yahong Zheng, and Chengshan Xiao, "Enhanced MIMO LMMSE turbo equalization: algorithm, simulations, and undersea experimental results," IEEE Trans. Sig. Processing, vol. 59, pp. 3813-3823, Aug. 2011.

[5] Jun Tao, **Jingxian Wu**, and Yahong Zheng, "Reliability-based turbo detection," IEEE Trans. Wireless Commun., vol. 10, pp. 2352-2361, July 2011
[6] **Jingxian Wu** and Yahong Zheng, "Oversampled orthogonal frequency division multiplexing in doubly selective fading," IEEE Trans. Commun., vol. 59, pp. 815-822, Mar. 2011.
[7] Jun Tao, **Jingxian Wu**, and Chengshan Xiao, "Doppler spread estimation for broadband wireless OFDM systems," *Intern. J. Wireless Info. Networks*, vol. 16, pp. 197-208, Dec. 2009.
[8] **Jingxian Wu**, "On the connectivity of mobile vehicular ad hoc network with dynamic node population and delay constraint," *IEEE J. Selected Area Commun.*, vol. 27, pp.1218-1225, 2009.
[9] Jun Tao, **Jingxian Wu**, and Chengshan Xiao, "Estimation of channel transfer function and carrier frequency offset for OFDM systems with Phase noise," *IEEE Trans. Veh. Technol.*, vol. 58, pp.4380-4387, Oct. 2009.
[10] **Jingxian Wu**, and Chengshan Xiao, "Optimal diversity combining based on linear estimation of Rician fading channels," *IEEE Trans. Commun.*, vol. 56, pp. 1612-1615, Oct. 2008.

Recent Awards and Honors

- Certificate of Appreciation for IEEE International Conference on Communications in China (2012, IEEE Communication Society)
- Certificate of Appreciation for IEEE International Conference on Communications (2012, IEEE Communication Society)
- Outstanding Teaching Award (2012, University of Arkansas)
- William D. and Margaret A. Brown Faculty Excellence Award (2012, University of Arkansas)

Selected Professional Activities

- **Editor**, IEEE Transactions on Wireless Communications, 2011 - Present
- **Associate Editor**, IEEE Transactions on Vehicular Technology, 2007 – 2011
- **Chair** for the Graduate of the Last Decade (GOLD) Committee of the IEEE Communication Society, 2010-2012.
- **Review Panelist for National Science Foundation (NSF)**, 3 panels, 2009, 2010.
- **Chair** for Conferences
  - **Co-chair** for Publicity, IEEE International Conference on Communications in China (ICCC 2012), Beijing, China, Aug. 2012.
  - **Chair of Student Demos**, IEEE/IFIP Network Operations and Management Symposium (NOMS 2012), Maui, Hawaii, 2012.
  - **Wireless Communication Symposium Co-chair**, IEEE International Conference on Communications, Ottawa, Canada, 2012.
  - **Co-chair and Organizer** for the Graduate of the Last Decade (GOLD) Panel, IEEE Global Telecommunication Conference, 2011.
  - **Chair and Organizer** for the Graduate of the Last Decade (GOLD) Panel, IEEE Global Telecommunication Conference, 2010.

Milton "Mickey" P. Yeager, Jr.
Adjunct Faculty
University of Arkansas

EDUCATION
M.A., Religion
Liberty Baptist Theological Seminary, 2005
M.S., Operations Management, University of Arkansas, 1989
B.S., Chemistry & Microbiology, University of Southern Mississippi, 1973

ACADEMIC EXPERIENCE
August 1989-present, University of Arkansas, MS in Operations Management
Little Rock Air Force Base & on line classes
Courses taught: Quality Mgmt, Organization & Control, Supply Chain Mgmt, Human Behavior Analysis, Human Resource Mgmt, Production Inventory Control, and Special Problems

1987-1988 - Arkansas State Technical Institute, Associate Arts
Beebe, AR
Courses Taught: Team Problem Solving, lectures on FDA regulations & Cost of Quality

1985-1986 - University of Tennessee, School of Pharmacy
Memphis, TN
Courses Taught: lectures on "SQC in Industry" (application to tablet production)

NON-ACADEMIC EXPERIENCE

May1984-August 2008(retired)	L'Oreal USA/Maybelline	
1998-2008	Purchasing Mgr. (supply chain mgmt) -Subcontract mfg	
1987-1998	Quality Mgr- various depts. (Subcontractor & Supplier Certification, Incoming/Documentation, Process Control)	
1984-1987	Quality Engineer	
February 1980-April 1984	Texize (Div or Morton-Thiokol)	
1980-1984	Quality Manager	
March 1977-February 1980	Norwich-Eaton Pharmaceuticals, Inc.	
1977-1984	General Supervisor	
June 1973-February 1977	Baxter/Travenol Laboratories	
1973-1984	Quality Control Supervisor/Microbiologist	

PROFESSIONAL SOCIETY MEMBERSHIPS and CERTIFICATIONS
American Society for Quality (ASQ) Senior Member 1980 to 2008
Certified Quality Engineer, 1983
Certified Quality Audit, 1992

Six Sigma Black Belt Certification, 2009
Project Management Certification, 2009
Human Resource Management Certification, 2009
Lean Management Certification, 2008
DiSC Personality Profile Certified, 2000
Quality Circle Facilitator Certification, 1983

American Society for Microbiology	Member	1973-1975

HONORS and AWARDS

Employee of the Year, 2011	QA Administrator	Division of Youth Services
Nomination for ASC Fellow, 2006	Senior Member	American Society of Quality
Outstanding Performance, 2005	Purchasing Mgr	L'Oreal/Maybelline
Outstanding Performance, 2003	Purchasing Mgr	L'Oreal/Maybelline
Outstanding Chemistry Award, 1970	2nd place	USM

RELEVANT PUBLICATIONS
None-Not allowed by various companies due to proprietary formulas, processes, etc.