

Alice Elaine Smith C.V.

CONTACT INFORMATION

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ACADEMIC POSITIONS

2015-present	JOE W. FOREHAND/ACCENTURE DISTINGUISHED PROFESSOR
2012–2015	W. ALLEN AND MARTHA REED PROFESSOR
2013-present	JOINT APPOINTMENT with Department of Computer Science and Software Engineering
1999-2011	PROFESSOR AND CHAIR
2001-2004	<i>Philpott—WestPoint Stevens Professor (2001 –2004)</i> Department of Industrial and Systems Engineering Auburn University Auburn University, Alabama
2017- present	VISITING PROFESSOR Department of Industrial Engineering Pontifical Catholic University of Valparaíso Valparaíso, Chile
March 2020	FULBRIGHT SPECIALIST AND VISITING PROFESSOR School of Engineering University of La Sabana Chia (Bogota), Colombia
March – June 2017	SENIOR FULBRIGHT FELLOW Department of Industrial Engineering Pontifical Catholic University of Valparaíso Valparaíso, Chile
March 2016	FULBRIGHT SPECIALIST AND VISITING PROFESSOR Department of Production Engineering Universidad EAFIT Medellin, Colombia
January – June 2013	SENIOR FULBRIGHT FELLOW AND VISITING PROFESSOR Department of Industrial Engineering Bilkent University Ankara, Turkey
1996-1999	ASSOCIATE PROFESSOR <i>Board of Visitors Faculty Fellow (1994 -1999)</i> Department of Industrial Engineering University of Pittsburgh Pittsburgh, Pennsylvania

1991 -1996 ASSISTANT PROFESSOR
Department of Industrial Engineering
University of Pittsburgh
Pittsburgh, Pennsylvania

Synopsis of Administrative Achievements: During tenure as Chair, the Industrial and Systems Engineering Department at Auburn University witnessed unprecedented growth in student enrollments (+200%), research funding (+500%) and private donations (+400%). Over ten endowments were founded. Facilities expanded significantly and the department became a leader of three federally funded research centers funded by NSF, DoD, CDC/NIOSH and private industry. Interdisciplinary educational programs were developed including systems engineering, MBA / MISE dual program, automotive manufacturing systems, and occupational safety and ergonomics. Hiring all but one of the current faculty and staff, diversity of student body and faculty improved. New faculty and staff positions were defined, created and filled. International collaborations flourished and an industrial advisory board was established. Ranking (*U.S. News*) reached the top 25% of all IE departments nationally. The ISE department at Auburn University had approximately 250 undergraduate students, 140 graduate students, 12 tenure stream faculty positions, four staff positions, \$3M annual hard money budget, \$1.5M annual research expenditures, \$200K annual donations and \$4M in endowments when I concluded my leadership.

Research Focus: Modeling, analysis and optimization of complex systems using computational intelligence (artificial neural networks, meta-heuristics and fuzzy systems) combined with techniques from probability and statistics and from operations research. Primary application areas include manufacturing process control, advanced materials microstructure, design of reliable wired and wireless telecommunications networks, facilities design for healthcare, retail and manufacturing enterprises, and financial modeling.

INDUSTRIAL POSITIONS

Southwestern Bell Corporation, General Headquarters
One Bell Center, St. Louis, Missouri

1988-1989 : AREA MANAGER - TRANSMISSION ENGINEERING

Direction and evaluation of research at Bell Communications Research Inc. (Bellcore) and representative to American National Standards Institute (ANSI) working groups concerning fiber optic systems, synchronous voice/data transport and digital video services.

1987-1988 : AREA MANAGER - CAPITAL DEPLOYMENT

Development of information systems for engineering design and facilities management. Supervision of one engineer, four programmers and multiple vendors with \$500,000 annual development budget.

1984-1986 : STAFF MANAGER - ENGINEERING DESIGN

Project planning, financial analysis and system design of computer systems.

1981-1983 : STAFF SPECIALIST - BUDGET MANAGEMENT METHODS

High level allocation and analysis of construction budgets totaling \$700 million annually.

1979-1981 : SUPERVISOR - ENGINEERING (HOUSTON, TEXAS)

Planning and design of telephone facilities with annual capital expenditures of \$500,000.

EDUCATION

B.A. SPANISH, 2022

Auburn University (Auburn, Alabama).

Global Seal of Biliteracy with Functional Proficiency Level in Spanish.

PH.D., ENGINEERING MANAGEMENT AND SYSTEMS ENGINEERING, 1991.

Missouri University of Science and Technology (Rolla, Missouri).

Chancellor's Fellowship.

M.B.A., 1988.

Saint Louis University (St. Louis, Missouri).

B.S., CIVIL ENGINEERING, 1979.

Rice University (Houston, Texas).

National Merit Scholar, George R. Brown Engineering Scholar, Tau Beta Pi Engineering Honor Society, *cum laude* graduate.

HONORS AND AWARDS

Auburn University Author Award 2023

Global Seal of Biliteracy with Functional Proficiency Level in Spanish (awarded 2022)

Named Life Fellow of IEEE 2023

Named IEEE Computational Intelligence Society Distinguished Lecturer, 2023-2025

Named Editor for *Surveys of Computers & Operations Research* (Elsevier) 2022

Named Fellow of INFORMS 2021

INFORMS Diversity, Equity, and Inclusion Ambassador 2021

2020 Yellowhammer Women of Impact Award (20 women are honored each year in the State of Alabama <https://alabamawomen.org/#2020>)

Auburn University Author Award 2020

Fulbright Specialist (La Sabana University, Colombia) 2020

Best Paper Award at the Optima 2019 XIII Congreso Chileno de Investigación Operativa (Santa Cruz, Chile)

2019 International INFORMS Conference Keynote Speaker (Cancun)

Named *INFORMS Journal on Computing* Editor in Chief, 2019

2018 IEEE World Congress on Computational Intelligence Plenary Speaker (Rio)

Named IEEE Computational Intelligence Society Distinguished Lecturer, 2018-2021

100 Women Strong Leadership in Diversity Faculty Award (2017, Inaugural Awardee)

Named Fellow of the Institute of Electrical and Electronic Engineers (2017)

Systems Engineering Research Center UARC Best Student Paper 2016 Research Review, "Manufacturing cost prediction in the presence of categorical and numeric design attributes" by Eren Sakinc* and Alice E. Smith

Fulbright Senior Fellow (Pontifical Catholic University of Valparaíso, Valparaiso, Chile) 2017

Wellington Award (the highest honor given in the field of engineering economics) 2016

Fulbright Specialist (EAFIT, Medellin, Colombia) 2016

Named Joe W. Forehand / Accenture Distinguished Professor (\$1M chaired position) (2015)

Fulbright Senior Fellow (Bilkent University, Ankara, Turkey) 2013

Named Area Editor of *Computers & Operations Research* (Elsevier) 2013

Named Area Editor – Heuristic Search and Learning, *INFORMS Journal on Computing* (INFORMS) 2013

IIE Albert G. Holzman Distinguished Educator Award (2012)

Named W. Allen and Martha Reed Endowed Professor (2012)

Selected to be a member of the INFORMS Speakers Program (2011)

INFORMS WORMS Award for the Advancement of Women in OR/MS (2009)

E. L. Grant Award for the Best Paper published in *The Engineering Economist*, Volume 50 (2006)

ASEE Zone II Best Paper Award (2004)

Named Fellow of the Institute of Industrial and Systems Engineers (2003)

William A. J. Golomski Award for the Best Paper by an IIE member at the *2002 Reliability and Maintainability Symposium* (RAMS) (2003)

Named Philpott-WestPoint Stevens Distinguished Professor by Auburn University College of Engineering (partially endowed position) (2001-04)

Senior Faculty Research Award, College of Engineering, Auburn University (given annually as the highest honor in research) (2001)

IIE Gold Award, Quality Control and Reliability Engineering Division Director (2001)

ADVANCE Leadership Grant from the National Science Foundation (2001-2004)

E. L. Grant Award for the Best Paper published in *The Engineering Economist*, Volume 43 (1999)

Board of Visitors Faculty Award, School of Engineering, University of Pittsburgh (given annually for outstanding achievements in research and scholarly activity) (1996)

Faculty Early Career Development Grant (CAREER) from the National Science Foundation (1995-1999)

Named Board of Visitors Faculty Fellow by University of Pittsburgh School of Engineering (partially endowed position) (1994-99)

Missouri Society of Professional Engineers, St. Louis Young Engineer of the Year (1990)

Society of Women Engineers, St. Louis Distinguished New Engineer of the Year (1989)

Southwestern Bell Key Contributor Award (1989)

RESEARCH GRANTS

(PRINCIPAL INVESTIGATOR ON OVER \$12 MILLION IN RESEARCH CONTRACTS)

1. "Help from Above: Manufacturing Using Drones, Part II", JULIO JIMENEZ*, **Interdisciplinary Center of Advanced Manufacturing Systems (ICAMS) with funding from the Industrial Base Analysis & Sustainment Program of the Industrial Base Policy Office of the Office of the Secretary of Defense**, \$30,000, 2023-24.
2. "Next Generation Digital Ports," ROSA GONZALEZ WITH ALICE E. SMITH AND OTHERS, University of Los Andes, Santiago, Chile, **Agencia Nacional de Investigacion y Desarrollo, Ministerio de Ciencia, Tecnologia, Conocimiento e Innovacion, Federal Government of Chile**, grant # FOVI220133, \$30,000,000 Chilean pesos,

- 2022-2023. <https://www.agendamaritima.cl/puerto-inteligente-tecnologia-universidad/investigadores-desarrollaran-estudio-sobre-logistica-y-puertos-digitales/1473505>
3. "Analytical and Simulation Modeling Framework to Support Wargaming and Strategic Planning (WASP) - SBIR Phase 3," ALICE E. SMITH AND ALEXANDER VINEL, **AFMC through Frontier Technology, Inc**, \$325,582.43, 2022-24.
 4. "Help from Above: Manufacturing Using Drones", JULIO JIMENEZ*, **Interdisciplinary Center of Advanced Manufacturing Systems (ICAMS) with funding from the Industrial Base Analysis & Sustainment Program of the Industrial Base Policy Office of the Office of the Secretary of Defense**, \$27,760, 2022-23.
 5. "INFORMS Diversity, Equity, and Inclusion Ambassador," ALICE E. SMITH, **INFORMS**, \$2,500, 2021.
 6. "SBIR Phase III – Analytical Framework and Modeling to Support Wargaming Logistics," ALICE E. SMITH, JEFFREY S. SMITH, ALEXANDER VINEL AND LEVENT YILMAZ, **AFMC through Frontier Technology, Inc**, \$678,000, 2020-22.
 7. "RAPID: Collaborative Research: Quantifying Social Media Data for Improved Modeling of Mitigation Strategies for the COVID19 Pandemic," KONSTANTINOS MYKONIATIS AND ALICE E. SMITH, **National Science Foundation**, #CMMI 2029739. \$141,527. Collaborative Project with Columbus State University, ANASTASIA ANGELOPOULOU, \$25,812. 2020-22. <http://covidatanalyze.auburn.edu>.
 8. "Sustainable logistics of the future (FutureLOG)," FABIO SGARBOSSA AND 18 INTERNATIONAL RESEARCHERS INCLUDING ALICE E. SMITH, **Research Council of Norway**, Project 309528, 5,910,000 Norwegian Kroner (about \$700,000) (Auburn share 500,000 Norwegian Kroner), 2020-24.
 9. "Forward pick area: Design and Operation, A White Paper," ALICE E. SMITH, **Material Handling Institute**, \$5,000, 2020.
 10. "REAL-time Rural Medicine Handling and Transport Using a Coordinated Fleet of Trucks and Drones," DANIEL SILVA AND ALICE E. SMITH, **Toyota Material Handling North America**, \$207,754, 2019-20. <http://drones.auburn.edu/>.
 11. "Multi-Stage Stochastic Optimization Production Planning Models in Agriculture: Integrating Operational and Resource Flexibility," ALEJANDRO MAC CAWLEY WITH ALICE E. SMITH as international visiting professor, Pontificia Universidad Católica de Chile, Santiago, Chile, **Fondecyt Grant of CONICYT Chile**, grant # 11180502, \$2,000, 2019-21.
 12. "Academy of Aerospace Quality – Phase XI," ALICE E. SMITH AND JEFF SMITH, **NASA**, \$100,000, 2018-19.
 13. "Planning Grant: Engineering Research Center for Resilient Rural Infrastructure (RRI)," ANDRZEJ S. NOWAK, MARK BARNETT, GERRY V. DOZIER, ROBERT A. NORTON, AND ALICE E. SMITH, **National Science Foundation**, \$97,750, 2018-22.
 14. "SBIR Phase III – Analytical Framework and Modeling to Support Wargaming Logistics," JEFFREY S. SMITH, ALICE E. SMITH, ALEXANDER VINEL AND LEVENT YILMAZ, **AFMC through Frontier Technology, Inc**, \$796,464, 2018-20.
 15. "Academy of Aerospace Quality – Phase X," ALICE E. SMITH AND JEFF SMITH, **NASA**, \$120,000, 2017-18.
 16. "Pricing And Bundles Composition Under Competition: The Effects Of Customers' Willingness to Pay Via Constrained Multinomial Logit and Dynamic Decision Making Processes," JUAN PEREZ WITH ALICE E. SMITH as international visiting professor, Universidad de Los Andes, Santiago, Chile, **Fondecyt Grant of CONICYT Chile**, \$2000, 2016-19.
 17. "Academy of Aerospace Quality – Phase IX," ALICE E. SMITH AND JEFF SMITH, **NASA**, \$120,000, 2016-17.
 18. "Fulbright Senior Fellow - Chile," ALICE E. SMITH, **Fulbright Commission**, \$13,000, 2017.
 19. "RT 159: Agile Systems Engineering Management," ALICE E. SMITH AND JEFF SMITH, **Office of the Secretary of Defense / National Security Agency** (subcontracted from the Systems Engineering Research Center / Stevens Institute of Technology, Richard Turner, Stevens PI), \$52,373, 2016-17.
 20. "Academy of Aerospace Quality – Phase VIII," ALICE E. SMITH AND JEFF SMITH, **NASA**, \$150,000, 2015-16.
 21. "Fulbright Specialist - Colombia," ALICE E. SMITH, **Fulbright Commission**, \$5,000, 2016.

22. "A Model-Driven Generative Domain Architecture for Simulation Experiment Lifecycle Management and System Optimization," LEVENT YILMAZ AND ALICE E. SMITH, **Missile Defense Agency**, \$592,252, 2015-18.
23. "Integracion de tecnicas de simulacion y de diseno de instalaciones para manejo de contenedores," ALICE E. SMITH, ROSA GONZALEZ AND JIMENA PASCUAL (both, Pontificia Universidad Catolica de Valparaiso), **Comision Nacional de Investigacion Cientifica y Tecnologica- CONICYT - of Chile**, 8,300,000 Chilean pesos (about \$14,000), 2015-2016.
24. "RT 126: Agile Systems Engineering – Kanban Scheduling," ALICE E. SMITH, JEFF SMITH AND LEVENT YILMAZ, **Office of the Secretary of Defense / National Security Agency** (subcontracted from the Systems Engineering Research Center / Stevens Institute of Technology, Richard Turner, Stevens PI), \$172,874, 2014-15.
25. "Academy of Aerospace Quality – Phase VII," ALICE E. SMITH AND JEFF SMITH, **NASA**, \$120,000, 2014-15.
26. "An Integrated Framework for Engineering Replicability into High Assurance Ballistic Missile Defense System Simulations - Supplement," LEVENT YILMAZ AND ALICE E. SMITH, **Missile Defense Agency**, \$57,172, 2014-15.
27. "Academy of Aerospace Quality – Phase VI," ALICE E. SMITH AND JEFF SMITH, **NASA**, \$112,500, 2013-14.
28. "Facility Design for Grocery Stores," HALUK YAPIOCIOGLU, ALICE E. SMITH AND BAHAR YETIS KARA, **Coca Cola Turkey**, \$5,000, 2013.
29. "Facility Design and Redesign for Retail Enterprises," ALICE E. SMITH AND IHSAN SABUNCUOGLU, **The Scientific and Technological Research Council of Turkey (TUBITAK)**, Visiting Scientist Fellowship Program, with the participation of Migros Corporation, \$15,000, 2013.
30. "Fulbright Senior Fellow - Turkey," ALICE E. SMITH, **Fulbright Commission**, \$15,000, 2013.
31. "An Integrated Framework for Engineering Replicability into High Assurance Ballistic Missile Defense System Simulations," LEVENT YILMAZ AND ALICE E. SMITH, **Missile Defense Agency**, \$434,504, 2012-15.
32. "Pan American Advanced Studies Institute (PASI) on Modeling, Simulation and Optimization of Globalized Physical Distribution Systems," ALICE E. SMITH AND JORGE F. VALENZUELA, **National Science Foundation**, #OISE-1242239, \$100,000, 2012-14.
33. "Academy of Aerospace Quality – Phase V," ALICE E. SMITH AND JEFF SMITH, **NASA**, \$100,000, 2012-13.
34. "Iraqi Scholar Rescue Project," ALICE E. SMITH, **Institute of International Education**, \$32,500, 2012-13.
35. "Collaborative Research: Non-Traditional Designs for Order Picking Warehouses," Kevin Gue and Alice E. Smith, **National Science Foundation**, #CMMI-12005677, \$255,000 with REU Supplements of \$12,000, 2012-16. Associated project at University of Arkansas (PI – Russ Meller and now Ashlea Bennett Milburn) for \$200,000.
36. "A Framework for Complexity Management in Virtual Forward Operating Base Camps - Phase II," STEVEN CORNS, MARIESA CROW, CIHAN DAGLI, CURT ELMORE, SCOTT GRASMAN, SUZANNA LONG (all Missouri University of Science and Technology) and ALICE E. SMITH, **Army Research ERDC, U.S. Department of Defense**, \$398,932 (Auburn portion = \$60,000), 2012-13.
37. "Academy of Aerospace Quality – Phase IV," ALICE E. SMITH AND JEFF SMITH, **NASA**, \$100,000, 2011-12.
38. "Systems Engineering Using Secure Open Source Technology," DAVID UMPHRESS, DREW HAMILTON AND ALICE E. SMITH, **U.S. Department of Defense**, \$179,993, with subcontract to Tuskegee University, 2011-12.
39. "A Framework for Complexity Management in Virtual Forward Operating Base Camps," STEVEN CORNS, MARIESA CROW, CIHAN DAGLI, CURT ELMORE, SCOTT GRASMAN, SUZANNA LONG (all Missouri University of Science and Technology) and ALICE E. SMITH, **Army Research ERDC, U.S. Department of Defense**, \$398,932 (Auburn portion = \$60,000), 2011-12.
40. "Workshop: Empowering Women in Industrial Engineering Academia – International Collaborations for Research and Education," ALICE E. SMITH AND JANET M. TWOMEY (Wichita State University), **National Science Foundation**, #OISE-1042980, \$60,000, 2010-12.

41. "Academy of Aerospace Quality – Phase III," ALICE E. SMITH AND JEFF SMITH, **NASA**, \$180,000, 2010-11.
42. "Systems Engineering in a Secure Computing Intensive Environment," DAVID UMPHRESS, DREW HAMILTON AND ALICE E. SMITH, **U.S. Department of Defense**, \$200,000, 2010-11.
43. "Iraqi Scholar Rescue Project," ALICE E. SMITH, **Institute of International Education**, \$31,700, 2010-11.
44. "Systems Engineering Research Center (SERC)," ALICE E. SMITH AND DREW HAMILTON, University Affiliated Research Center (UARC) consisting of 20 universities / research organizations, **U.S. Department of Defense**, 2009-onwards. <http://www.sercuarc.org/>
45. "Development of a Hot Mix Plan Production Process Control System," MICHAEL HEITZMAN, JEFF SMITH AND ALICE E. SMITH, **Department of Transportation / Federal Highway Administration**, \$372,438, 2009-10.
46. "US-Turkey Workshop: on Women in Industrial Engineering Academia - U.S. and Middle East," ALICE E. SMITH, **National Science Foundation**, #OISE-0728947, \$60,000, 2007-09.
47. "ADVANCE Partnerships for Adaptation, Implementation and Dissemination: SEM Transformation through "Small Wins"", DONNA SOLLIE, MARIE WOOTEN, OVERTOUN JENDA, DANIEL SVYANTEK AND ALICE E. SMITH, **National Science Foundation**, #SBE-0620000, \$450,000, 2006-11.
48. "Academy of Aerospace Quality – Phase II," ALICE E. SMITH AND JEFF SMITH, **NASA**, \$280,890, 2006-10.
49. "Planning Visit: Workshop on Industrial Engineering Women in Academia," ALICE E. SMITH, **National Science Foundation**, #OISE-0549304, \$14,705, 2006-07.
50. "Next Generation of Manufacturing Engineers for the Automotive Sector," ALICE E. SMITH, JOHN EVANS AND PETER JONES, **National Science Foundation**, #DUE-0422361, \$400,000, 2004-08.
51. "Enhancing the Fracture Strength of Advanced Ceramics by Process Control at the Microstructural Scale," IAN NETTLESHIP (University of Pittsburgh) and ALICE E. SMITH, **National Science Foundation**, #DMI-0301273, \$100,000 with RET Supplement \$6,000, 2003-05.
52. "Academy of Aerospace Quality," ALICE E. SMITH AND JEFF SMITH, **NASA**, \$405,000, 2003-06.
53. "Industry / University Cooperative Research Center for Advanced Vehicle Electronics (CAVE), Research Experiences for Teachers," ALICE E. SMITH, **National Science Foundation**, Supplements to #EEC-9907749, \$175,400, 2003-10.
54. "ADVANCE Leadership: Improving Success of Women Engineering Academics in Archival Publications," ALICE E. SMITH, **National Science Foundation**, #SBE-0123493, \$150,000 with REU Supplement \$15,000 and RET Supplement \$10,000, 2001-05. http://eng.auburn.edu/users/aesmith/backup/NSF_JournalPublication/
55. "Relating Field Data to Accelerated Life Testing," ALICE E. SMITH AND S. WAYNE JOHNSON, **National Science Foundation**, #EEC-0002669, \$50,000 with REU Supplement of \$6,000, RET Supplements of \$46,225, with another \$70,000 from the member companies of the NSF Center for Advanced Vehicle Electronics, 2000-02. This was a joint project with the NSF Center for Quality and Reliability Engineering of Rutgers University. The PIs there, ELSAYED S. ELSAYED AND DAVID W. COIT (both, Rutgers University), also received a similar amount for the same project.
56. "Comprehensive Redesign of Industrial Facilities," BRYAN A. NORMAN (University of Pittsburgh) and ALICE E. SMITH, **National Science Foundation**, #DMI-9908322, \$317,562 with REU Supplements \$22,000, 1999-2003.
57. "GOALI: Improving Manufacturability of P/M Superalloys by Microstructural Control," ALICE E. SMITH AND IAN NETTLESHIP (University of Pittsburgh), **National Science Foundation** with the participation of **Crucible Compaction Metals**, #DMI-9800430, \$311,526 with REU Supplements \$32,000 and International Supplement \$20,000, 1998-2001.
58. "Collaborative Research: Design of Communications Networks Using Computational Intelligence and Women in Engineering in the U.S. and Turkey," ALICE E. SMITH AND BERNA DENGIZ (Gazi University, Turkey), **National**

Science Foundation, #INT-9731207, \$34,965, with additional support from **TUBITAK** (Turkish equivalent of NSF), 1998-2004.

59. "Joint Research on Intelligent Manufacturing Techniques," MITSUO GEN (Ashikaga Institute of Technology, Japan), ALICE E. SMITH, BRYAN A. NORMAN (University of Pittsburgh) and GURSEL A. SUER (University of Puerto Rico - Mayaguez), **Monbusho** (Japanese Ministry of Education, Science and Culture) International Scientific Research Program, 6,900,000 yen, with supplemental funds from the University Center for International Studies, University of Pittsburgh, \$760, and the Japanese Science & Technology Management Program, University of Pittsburgh, \$6500. 1998-2000.
60. "Process Improvement for Low Oxygen Metal Powders," ALICE E. SMITH AND IAN NETTLESHIP (University of Pittsburgh), **Ben Franklin Technology Center of Western Pennsylvania** with Crucible Compaction Metals Corporation, \$172,035, 1997-99.
61. "Motor Vehicle Abrasive Flow Machining," ALICE E. SMITH AND WILLIAM S. SLAUGHTER (University of Pittsburgh), **National Institute of Standards** with Extrude Hone Corporation, Ford Motor Company and others, \$125,000 (part of larger Advanced Technology Program), 1996-99.
62. "Predicting Failures of Mechanical/Electrical Systems," ALICE E. SMITH, **Adtranz** (now Bombardier Transportation), \$83,376, 1996-2000.
63. "Faculty Early Career Development (CAREER) : Resampling Approaches to Neural Model Validation," ALICE E. SMITH, **National Science Foundation**, #DMI-9502134, \$309,574 with REU Supplements \$40,000, 1995-2000.
64. "Predictive Quality Control for Ceramic Casting," ALICE E. SMITH, **Ben Franklin Technology Center of Western Pennsylvania** with Eljer Plumbingware Corporation, \$141,782, 1993-96.
65. "Intelligent Control for Wave Soldering," ALICE E. SMITH, AMRO EL-JAROUDI (University of Pittsburgh) and WILLIAM CLARK (University of Pittsburgh), **Lockheed Martin Corporation**, \$100,000, 1993-94.
66. "Process Planning Using an Integrated Neural Network and Expert System Approach," ALICE E. SMITH, **National Science Foundation**, #DDM-9209424, \$21,235, 1992-94.
67. "An Empirical and Theoretical Analysis of Backpropagation Error Surface Initiation and Descent," ALICE E. SMITH, Central Research Development Fund Award, **University of Pittsburgh**, \$12,996, 1992-94.

EQUIPMENT GRANTS

1. "In-Process, Non-Destructive Analytical Equipment for Electronics Manufacturing Research," WAYNE JOHNSON, JEFFREY SUHLING, ALICE E. SMITH, ROY KNIGHT, GEORGE FLOWERS, HAREESH TIPUR, MICHAEL BOZAK, BRYAN CHIN AND WILLIAM GALE, **Auburn University Internal Infrastructure Grant**, \$100,000, 2000-01.
2. "Software for Simulation Research," ALICE E. SMITH, Systems Modeling Corporation, \$1,550, 1996.
3. "Interdisciplinary Fuzzy Logic Infrastructure for Education and Research," ALICE E. SMITH, ROBERT BOSTON (University of Pittsburgh) and GEORGE KLINZING (University of Pittsburgh), Faculty/Departmental Computing Infrastructure Grant, **University of Pittsburgh**, \$4,000, 1994.
4. "Artificial Intelligence Hardware," ALICE E. SMITH, Individual Faculty Initiative, Computing Proficiency Enhancement Program, **University of Pittsburgh**, \$4,993, 1992.

PATENT

"Light Rail Vehicle Having Predictive Diagnostic System for Motor Driven Automated Doors," CURTIS W. MCCULLERS, KENNETH A. KARG, DEAN J. CAMPBELL (all, Adtranz – now Bombardier Transportation), ANDREAS H. ETZEL (DaimlerChrysler Research, Germany) and ALICE E. SMITH, U.S. Patent 6,636,814 B1, granted 10/21/2003, International Patent PCT/US00/30348. European Patent Application 00976897.9-2422-US0030348.

BOOKS

1. *Women in Computational Intelligence: Key Advances and Perspectives on Emerging Topics* (ALICE E. SMITH, editor), Springer, E-book ISBN 978-3-030-79092-9 and hardbound ISBN 978-3-030-79091-2, 2022. <https://link.springer.com/book/10.1007/978-3-030-79092-9> Part of the series *Women in Engineering and Science*. <https://www.springer.com/series/15424>
2. *Women in Industrial and Systems Engineering: Key Advances and Perspectives on Emerging Topics* (ALICE E. SMITH, editor), Springer, E-book ISBN 978-3-030-11866-2 and hardbound ISBN 978-3-030-11865-5, 2019. <https://www.springer.com/us/book/9783030118655#aboutBook>. Part of the series *Women in Engineering and Science*. <https://www.springer.com/series/15424>
3. *Proceedings of the 1999 Second Japan-USA Joint Workshop on Intelligent Manufacturing Systems* (M. GEN. T. YOKOTA, A. E. SMITH, G. A. SUER, R. W. WOLFF AND G. YAMAZAKI, editors), Kanazawa, Japan, October 1999.
4. *Proceedings of the 1998 First Japan-USA Joint Workshops on Intelligent Manufacturing Systems* (M. GEN, A. E. SMITH, G. A. SUER AND S. S. OREN, editors), Ashikaga, Japan, November 1998.
5. *Intelligent Engineering Systems Through Artificial Neural Networks, Volume 7* (C. H. DAGLI, M. AKAY, O. ERSOY, B. R. FERNANDEZ AND A. E. SMITH, editors), ASME Press, New York, 1997.



REFEREED JOURNAL ARTICLES

ORCID ID: [HTTPS://ORCID.ORG/0000-0001-8808-0663](https://orcid.org/0000-0001-8808-0663)

(OVER 17,000 GOOGLE SCHOLAR CITATIONS AND H INDEX = 52)

* DENOTES STUDENT OR POST-GRADUATE SCHOLAR

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1. "Sustainable last mile parcel delivery and return service using drones," NAWIN YANPIRAT*, DANIEL SILVA, AND ALICE E. SMITH, *Engineering Applications of Artificial Intelligence*, special issue on Metaheuristics for Sustainable Supply Chain Management (accepted June 2023).
 2. "Manufacturing cost estimation using piecewise function approaches," EREN SAKINC* AND ALICE E. SMITH, *Journal of Economic Analysis*, vol. 2, no. 3, 2023, 113-140. <https://doi.org/10.58567/jea02030007>
 3. "A sequential space-syntax approach for healthcare facility layout design," ALEJANDRO TERAN SOMOHANO* AND ALICE E. SMITH, accepted to *Computers & Industrial Engineering* (accepted January 2023). <https://www.sciencedirect.com/science/article/abs/pii/S0360835223000621>
 4. "Analysis of public sentiment on COVID-19 mitigation measures in social media in the United States using machine learning," ANASTASIA ANGELOPOULOU, KONSTANTINOS MYKONIATIS, AND ALICE E. SMITH, *IEEE Transactions on Computational Social Systems* (accepted October 2022). <https://ieeexplore.ieee.org/document/9933456>
 5. "Design of empty container depot layouts using data and analytics, ERHAN KARAKAYA*, ALICE E. SMITH, ROSA G. GONZÁLEZ RAMÍREZ, AND JIMENA PASCUAL, accepted to *Flexible Services and Manufacturing Journal*, Special Issue on Data-Driven Optimization and Analytics for Maritime Logistics (accepted May 2022). <https://link.springer.com/article/10.1007/s10696-022-09452-z>
 6. "A tabu search algorithm for solving a green logistics bi-objective bi-level problem," JOSÉ-FERNANDO CAMACHO-VALLEJO, LILIAN LÓPEZ-VERA*, ALICE E. SMITH, AND JOSÉ-LUIS GONZÁLEZ-VELARDE, *Annals of Operations Research*, vol. 16, no. 2, 2022 <https://doi.org/10.1007/s10479-021-04195-w>.
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87. "Committee networks by resampling," JANET M. TWOMEY* AND ALICE E. SMITH, *Intelligent Engineering Systems Through Artificial Neural Networks, Volume 5* (C. H. Dagli, M. Akay, C. L. P. Chen, B. R. Fernandez and J. Ghosh, editors), ASME Press, 1995, 153-158.
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93. "Using designed experiments to produce robust neural network models of manufacturing processes," DAVID W. COIT* AND ALICE E. SMITH, *Proceedings of the Fourth Industrial Engineering Research Conference*, Nashville, TN, May 1995, 229-238.
94. "Neural networks as a metamodeling technique for discrete event stochastic simulation," ROBERT A. KILMER*, ALICE E. SMITH AND LARRY J. SHUMAN, *Intelligent Engineering Systems Through Artificial Neural Networks, Volume 4*, (C. H. Dagli, B. R. Fernandez, J. Ghosh and R. T. S. Kumara, editors), ASME Press, 1994, 1141-1146.
95. "Wave soldering process control modeling using a neural network approach," DAVID W. COIT*, JAY BILLA*, DARREN LEONARD*, ALICE E. SMITH, WILLIAM CLARK AND AMRO EL-JAROUDI, *Intelligent Engineering Systems Through Artificial Neural Networks, Volume 4* (C. H. Dagli, B. R. Fernandez, J. Ghosh and R. T. S. Kumara, editors), ASME Press, 1994, 999-1004.
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98. "Use of a genetic algorithm to optimize a combinatorial reliability design problem," DAVID W. COIT* AND ALICE E. SMITH, *Proceedings of the Third IIE Research Conference*, Atlanta, GA, May 1994, 467-472.
99. "Curve fitting using a genetic algorithm," MEHMET GULSEN*, ALICE E. SMITH AND DAVID M. TATE, *Proceedings of the Third IIE Research Conference*, Atlanta, GA, May 1994, 531-536.
100. "Nonparametric error estimation methods for validating artificial neural networks," JANET M. TWOMEY* AND ALICE E. SMITH, *Intelligent Engineering Systems Through Artificial Neural Networks, Volume 3*, (C. H. Dagli, L. I. Burke, B. R. Fernandez, J. Ghosh, editors), ASME Press, 1993, 233-238.
101. "Using artificial neural networks to approximate a discrete event stochastic simulation model," ROBERT A. KILMER* AND ALICE E. SMITH, *Intelligent Engineering Systems Through Artificial Neural Networks, Volume 3*, (C. H. Dagli, L. I. Burke, B. R. Fernandez, J. Ghosh, editors), ASME Press, 1993, 631-636.
102. "Neural network control charts for location and variance process shifts," HULYA YAZICI AND ALICE E. SMITH, *Proceedings of the World Congress on Neural Networks*, Portland, OR, July 1993, 1-265-268.
103. "Expected allele coverage and the role of mutation," DAVID M. TATE AND ALICE E. SMITH, *Proceedings of the Fifth International Conference on Genetic Algorithms*, Urbana, IL, July 1993, 31-37.
104. "Genetic optimization using a penalty function," ALICE E. SMITH AND DAVID M. TATE, *Proceedings of the Fifth International Conference on Genetic Algorithms*, Urbana, IL, July 1993, 499-505.
105. "Using artificial neural networks for estimation during cost analysis," ALICE E. SMITH, *Proceedings of the Second IIE Research Conference*, Los Angeles, CA, May 1993, 102-106.
106. "A neural predictive quality model for slip casting using categorical metrics," SERGIO MARTINEZ*, ALICE E. SMITH AND BOPAYA BIDANDA, *Proceedings of the Second IIE Research Conference*, Los Angeles, CA, May 1993, 265-269.
107. "A neural network model of the dynamic coefficient of friction," JANET M. TWOMEY*, ALICE E. SMITH AND MARK S. REDFERN, *Proceedings of the Second IIE Research Conference*, Los Angeles, CA, May 1993, 187-191.
108. "Genetic algorithm optimization applied to variations of the unequal area facilities layout problem," DAVID M. TATE AND ALICE E. SMITH, *Proceedings of the Second IIE Research Conference*, Los Angeles, CA, May 1993, 335-339.
109. "Power curves for pattern classification networks," JANET M. TWOMEY* AND ALICE E. SMITH, *Proceedings of the 1993 IEEE International Conference on Neural Networks*, San Francisco, CA, March 1993, 950-955.

110. "An examination of performance measures for pattern classification backpropagation neural networks," JANET M. TWOMEY* AND ALICE E. SMITH, in *Intelligent Engineering Systems Through Artificial Neural Networks, Volume 2* (C. H. Dagli, L. I. Burke and Y. C. Shin, editors), ASME Press, 1992, 343-348.
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112. "Estimating product performance and quality from design parameters via neural networks," SAFOUEN BEN BRAHIM*, ALICE E. SMITH AND BOPAYA BIDANDA, *Proceedings of the IIE Research Conference*, Chicago, IL, May 1992, 319-323.
113. "A composite system approach for intelligent quality control," HULYA YAZICI AND ALICE E. SMITH, *Proceedings of the IIE Research Conference*, Chicago, IL, May 1992, 325-328.
114. "Control chart representation and analysis via backpropagation neural networks," ALICE E. SMITH, *Proceedings of the 1992 International Fuzzy Systems and Intelligent Control Conference*, Louisville, KY, March 1992, 275-282.
115. "A prototype quality control expert system integrated with an optimization module," CIHAN H. DAGLI AND ALICE E. SMITH, *Proceedings of the World Congress on Expert Systems*, Orlando, FL, December 1991, 1959-1966.
116. "Controlling industrial processes through supervised, feedforward neural networks," ALICE E. SMITH AND CIHAN H. DAGLI, *Computers and Industrial Engineering*, vol. 21, no. 1-4, November 1991, 247-251.
117. "Quality control using backpropagation: An injection molding application," ALICE E. SMITH, *Intelligent Engineering Systems Through Artificial Neural Networks* (C. Dagli, S. Kumara and Y. Shin, editors), ASME Press, 1991, 729-734.
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119. "Relating binary and continuous problem entropy to backpropagation network architecture," ALICE E. SMITH AND CIHAN H. DAGLI, *Applications of Artificial Neural Networks II*, SPIE, 1991, 551-562.
120. "Women engineers as managers," ALICE E. SMITH, *Proceedings of the ASEM 11th Annual Conference*, St. Louis, MO, October 1990, 45-51.
121. "Cost justification of an expert system," ALICE E. SMITH AND CIHAN H. DAGLI, *Proceedings of IEEE Conference on Managing Expert Systems Programs and Projects*, Washington, D.C., September 1990, 114-121.
122. "Violating the equivalent repetition assumption of EAC," TED G. ESCHENBACH AND ALICE E. SMITH, *Proceedings of the International Industrial Engineering Conference*, San Francisco, CA, May 1990, 99-104.
123. "Packaging your technical project for executive approval," ALICE E. SMITH, *Proceedings of the Society of Women Engineers Convention*, San Juan, P.R., June 1988, 257-265.
124. "What's it worth? - Cost benefit analysis of an AM/FM system," ALICE E. SMITH, *Proceedings of the Automated Mapping/Facilities Management Regional Conference*, Orlando, FL, February 1987, 261-273 and *Proceedings of the Automated Mapping/Facilities Management Conference*, Snowmass, CO, August 1986, 531-542.

OTHER PUBLICATIONS

1. "IEEE Fellows – Class of 2023 [Society Briefs]," Alice E. Smith, *IEEE Computational Intelligence Magazine*, vol. 18, no.2, May 2023, 8-10, Print ISSN: 1556-603X, Online ISSN: 1556-6048, Digital Object Identifier: 10.1109/MCI.2023.3248879.

2. "Flying pharmacies," Daniel F. Silva and Alice E. Smith, *MHI Solutions Magazine*, vol. 8, no. 2, Spring 2020. http://www.mhisolutions-digital.com/mhiq/0220_volume_8_issue_2/MobilePagedArticle.action?articleId=1562106#articleId1562106
3. "Conference report: 2011 IEEE Congress on Evolutionary Computation," ALICE E. SMITH, *IEEE Computational Intelligence Magazine*, vol. 7, no. 1, February 2012, 12-13.
4. "Evolving an adaptive optimization course," ALICE E. SMITH, *IEEE Computational Intelligence Magazine*, vol. 4, no. 1, February 2009, 52-54.
5. "Learning continents: A spotlight on Turkey's women academics and industry partners," ALICE E. SMITH, *Industrial Engineer Magazine*, vol. 41, no. 1, January 2009, 32-33.
6. "Application of statistical estimators to expanding Pareto fronts," H. P. LIU*, A. E. SMITH, H. YAPICIOGLU* AND G. DOZIER, in *JSM Proceedings*, Statistical Computing Section. Alexandria, VA: American Statistical Association, 2008, on line format.
7. "The correlation of spatial heterogeneity in partially sintered ceramics with pull-out damage on ground and polished surfaces." ALICE E. SMITH AND IAN NETTLESHIP, *Proceedings of the 2004 NSF Design and Manufacturing Research Conference*, Dallas, TX, January 2004, CD Rom format.
8. "Comprehensive redesign of industrial facilities," BRYAN A. NORMAN AND ALICE E. SMITH, *Proceedings of the 2003 NSF Design and Manufacturing Research Conference*, Birmingham, AL, January 2003, CD Rom format.
9. "Book review: *Multi-Objective Optimization using Evolutionary Algorithms*," ALICE E. SMITH, *IEEE Transactions on Evolutionary Computation*, vol. 6, no. 5, October 2002, 526.
10. "Comprehensive redesign of industrial facilities," BRYAN A. NORMAN AND ALICE E. SMITH, *Proceedings of the 2002 NSF Design and Manufacturing Research Conference*, San Juan PR, January 2002, CD Rom format.
11. "Improving manufacturability of P/M superalloys by microstructural control," IAN NETTLESHIP AND ALICE E. SMITH, *Proceedings of the 2001 NSF Design and Manufacturing Research Conference*, San Juan PR, January 2002, CD Rom format.
12. "Book review: *Genetic Algorithms and Engineering Optimization*," ALICE E. SMITH, *IIE Transactions*, vol. 33, no. 6, June 2001, 531-532.
13. "Comprehensive redesign of industrial facilities," BRYAN A. NORMAN AND ALICE E. SMITH, *Proceedings of the 2001 NSF Design and Manufacturing Research Conference*, Tampa, FL, January 2001, CD Rom format.
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15. "Update, Research 2000," ALICE E. SMITH, *IIE Facilities, Planning & Design Division Newsletter*, Fall 2000, 6.
16. "Book review: *Swarm Intelligence*," ALICE E. SMITH, *IEEE Transactions on Evolutionary Computation*, vol. 4, no. 2, 2000, 192-193.
17. "Improving manufacturability of P/M superalloys by microstructural control," IAN NETTLESHIP AND ALICE E. SMITH, *Proceedings of the 2000 NSF Design and Manufacturing Research Conference*, Vancouver, BC, January 2000, CD Rom format.
18. "Neural network models of industrial processes: Condition-based maintenance application," ALICE E. SMITH, *Proceedings of the 1999 NSF Design and Manufacturing Research Conference*, Vancouver, BC, January 2000, CD Rom format.
19. "Comprehensive redesign of industrial facilities," BRYAN A. NORMAN AND ALICE E. SMITH, *Proceedings of the 2000 NSF Design and Manufacturing Research Conference*, Vancouver, BC, January 2000, CD Rom format.

20. "Improving manufacturability of P/M superalloys by microstructural control," IAN NETTLESHIP AND ALICE E. SMITH, *Proceedings of the 1999 NSF Design and Manufacturing Grantees Conference*, Long Beach, CA, January 1999, CD Rom format.
21. "Neural network models for industrial applications where data sets are small," ALICE E. SMITH, *Proceedings of the 1999 NSF Design and Manufacturing Grantees Conference*, Long Beach, CA, January 1999, CD Rom format.
22. "Book review: Adaptive Computing in Design and Manufacture," ALICE E. SMITH, *IEEE Transactions on Evolutionary Computation*, vol. 3, no. 2, 1999, 159.
23. "New ways to consider production uncertainty and detailed design in facilities layout," ALICE E. SMITH AND BRYAN A. NORMAN, *IIE FAPAD Newsletter*, Spring 1998, 3-4.
24. "Book Review: Achieving Stretch Goals," ALICE E. SMITH, *IIE Transactions*, vol. 30, no. 4, 1998, 411.
25. "Neural network models of manufacturing processes: Technology transfer issues in development, validation and implementation," ALICE E. SMITH, *Proceedings of the 1998 NSF Design and Manufacturing Grantees Conference*, Monterrey, Mexico, January 1998, 311-312.
26. "Resampling validation of neural network industrial models under conditions of sparse data," ALICE E. SMITH, *Proceedings of the 1997 NSF Design and Manufacturing Grantees Conference*, Seattle WA, January 1997, 417-418.
27. "Process planning using an integrated neural network and expert system approach," MARK WILHELM*, ALICE E. SMITH AND BOPAYA BIDANDA, *Proceedings of the 1994 NSF Design and Manufacturing Grantees Conference*, Cambridge, MA, January 1994, 391-392.
28. "Southwestern Bell: Change molds an organization," ALICE E. SMITH, a case in *Modern Management: Quality, Ethics, and the Global Environment, Fifth Edition* by S. C. Certo, Allyn and Bacon, Boston, 1992, pp. 378-379.
29. "Graduate options for management education," ALICE E. SMITH, *U. S. Woman Engineer*, vol. 36, no. 3, May/June 1990, 19-20.

MEDIA COVERAGE

Material Handling Institute Member Spotlight <http://s354933259.onlinehome.us/mhi-blog/cicmhe-member-spotlight-interview-with-professor-and-author-dr-alice-smith/>

"What's your story?," Alice E. Smith, *IIE Magazine*, vol. 52, no. 6, June 2020, pp. 64-65. Covered my career and the book I recently edited.

http://ocm.auburn.edu/newsroom/news_articles/2020/05/121356-public-health-order-compliance.php

"Series Highlights Women's Accomplishments," Jill S. Tietjen, *SWE Magazine*, vol. 65, no. 5, p. 64. Covered book edited by Alice E. Smith.

"Chilean Container Depot Project," Faculty Highlights, *Auburn Engineering Magazine*, 2017, <http://ecm.eng.auburn.edu/wp/emag/?p=4044>.

"Conference Report for the 2014 IEEE Symposium Series on Computational Intelligence," *IEEE Computational Intelligence Magazine*, vol. 10, no. 2, May 2015, pp. 10-12. Covered plenary talk of Alice E. Smith.

"Looking East for Diversity," *Industrial Engineer*, vol. 44, no. 12, December 2012, pp. 40-41. Covered 2012 NSF sponsored Women in Industrial Engineering Academia Workshop, Alice E. Smith, P.I.

"INFORMS News – People," *OR/MS Today*, vol. 39, no. 5, October 2012, p. 60. Discusses 2012 NSF sponsored Women in Industrial Engineering Academia Workshop, Alice E. Smith, P.I.

"Eastern Mediterranean Collaboration," *Industrial Engineer*, vol. 43, no. 11, November 2011, p. 15. Discusses 2012 NSF sponsored Women in Industrial Engineering Academia Workshop, Alice E. Smith, P.I.

"CIEADH Production Wins an Emmy," *Industrial Engineer*, vol. 43, no. 5, May 2011, p. 64. The CIEADH IE recruiting video that won an Emmy is discussed.

"Engineering Defense," *Industrial Engineer*, vol. 41, no. 8, August 2009, p. 15. Book of the month which highlights Chapter 2, authored by Tom Marechal, Alice E. Smith, Volkan, Ustun, Jeffrey S. Smith and Erjen Lefeber.

"Publish and Flourish," by Adedeji Badiru, *OR/MS Today*, vol. 35, no. 1, February 2008, 18-19. Article describing ADVANCE Leadership CD ROM project.

"On the Job," Alabama Public TV 30 minute program on the automotive manufacturing minor established by the Auburn University industrial and systems engineering department. The video was aired across Alabama in 2009 and can be found at <http://www.eng.auburn.edu/videos/automotive-minor.html>.

"Women make ADVANCES in Academia," *SWE Magazine*, vol. 51, no. 4, Fall 2006, p. 46. Article highlighting ADVANCE Leadership CD ROM project.

"Sabah" May 3, 2005 and "Hurriyet" October 23, 2004. These are newspapers in Turkey and they ran articles on the work on women in engineering in Turkey sponsored by NSF and TUBITAK.

"Are you experienced?," *Industrial Engineer*, vol. 35, no. 9, September 2003, 36-39. Article on the RET (Research Experiences for Teachers) project.

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

Registered Professional Engineer (Alabama and Pennsylvania, Industrial Engineering)

Institute for Operations Research and Management Science (INFORMS) - **Fellow**

INFORMS Journal on Computing Editor in Chief (2019-present)

Co-Chair INFORMS Diversity, Equity and Inclusion Best Paper Award (2023)

INFORMS Volunteer Service Award Committee member (2022-24)

INFORMS Diversity Ambassador (2021)

INFORMS Junior Faculty Interest Group Paper Competition Co-Chair (2021)

INFORMS Morse Lectureship Committee (2021-23)

INFORMS Computing Society Harvey J. Greenberg Research Prize Committee (2021)

INFORMS Task Force for educating reviewers (2019)

INFORMS Journal on Computing Area Editor (2012-2018)

INFORMS Speakers Program speaker (2011-present)

WORMS Award Chair (2011)

INFORMS WORMS Award for the Advancement of Women in OR/MS (2009).

ACORD (Association of Chairs of Operations Research Departments) President (2002-03)

ACORD (Association of Chairs of Operations Research Departments) Vice President and Secretary (2001-02)

INFORMS Journal on Computing Associate Editor (1995-2012)

Institute of Electrical and Electronics Engineers (IEEE) – **Life Fellow**

Named IEEE Computational Intelligence Society Distinguished Lecturer (2023-24)

Chair, Subcommittee for Senior Members, IEEE CIS Member Activity Committee (2023)

IEEE Computational Intelligence Society Administrative Committee (elected position) (2023-25)

IEEE Task on IEEE Task Force on Computational Intelligence for Diversity, Equity and Inclusivity (DEITY) Member (2022 – present)

IEEE CIS Fellows Committee Chair (2022)

IEEE CIS Awards Committee Chair (2021)

IEEE CIS Fellows Committee (2021)

IEEE CIS Ad Hoc Committee on *Computational Intelligence Magazine* Design (2021)

IEEC CIS WCI Webinar Panelist, August 2020

IEEE CIS Outstanding Early Career Award Subcommittee Chair (2020)

IEEE Computational Intelligence Society Administrative Committee (elected position) (2020-22)

IEEE CIS Liaison to IEEE Press (2020-2021)

IEEE CIS Membership Committee Strategic Planning Subcommittee Vice Chair (2019)
 IEEE Evolutionary Computation Technical Committee Vice Chair for Communication and Education (2019)
 Named IEEE Computational Intelligence Society Distinguished Lecturer (2018-22)
 IEEE Evolutionary Computation Technical Committee Vice Chair (2018)
 IEEE CIS Fellows Committee (2018)
 IEEE CIS Outstanding Early Career Award Subcommittee (2018, 2019)
 IEEE CIS Strategic Planning Committee (2017-18)
 IEEE CIS Strategic Planning Sub-Committee for Technical Activities (2017)
 IEEE CIS Membership Committee Strategic Planning Subcommittee Chair (2017-18)
 IEEE Computational Intelligence Society Administrative Committee (elected position) (2016-18)
 IEEE Computational Intelligence Society Nominations Committee (2016-17)
 IEEE Computational Intelligence Society Task Force on Formations of New Technical Committees (2016)
 IEEE Computational Intelligence Society CIM Best Paper Award Committee Co-Chair (2016)
 IEEE Evolutionary Computation Technical Committee Chair (2016-17)
 IEEE Women in Computational Intelligence Committee (2016-present)
 Computational Intelligence Society representative to the IEEE Society on Social Implications of Technology (SSIT) Board of Governors (2015-16)
IEEE Transactions on Automation Science and Engineering Associate Editor (2015-18)
 IEEE CIS Summer School Subcommittee (2014)
 IEEE Computational Intelligence Society Liaison to the IEEE-USA's Committee on Transportation and Aerospace Policy (2014-16)
 IEEE Computational Intelligence Society Distinguished Lecturers Program Committee Member (2014-16)
 IEEE Computational Intelligence Society Education Committee Member (2014-present)
 IEEE Transactions on Evolutionary Computation Ad Hoc Committee on Scope and Purpose Chair (2013)
 IEEE Computational Intelligence Society Administrative Committee (elected position) (2013-15)
 IEEE Evolutionary Computation Technical Committee Vice Chair (2012-2015)
 IEEE Evolutionary Computation Technical Committee Task Force on Education Vice Chair (2012-14)
 IEEE Women in Computational Intelligence Committee (2011)
 IEEE Congress on Evolutionary Computation 2011 General Co-chair
 IEEE Evolutionary Computation Technical Committee Member (1999-2000, 2007-2015)
IEEE Transactions on Evolutionary Computation Editorial Board (1998-2018)

Institute of Industrial and Systems Engineers (IISE) – **Fellow**

Wellington Award Selection Committee (2020-22)
 Fellows Selection Committee (2018-21)
 Senior Vice President – Publications and Board of Trustees Member (2014-17)
 CIEADH Oversight Committee of the Industrial and Systems Engineering Research Conference Incoming Chair (2012-13)
 CIEADH (Council of IE Academic Department Heads) Past Chair (2011-12)
 CIEADH (Council of IE Academic Department Heads) Chair (2010-11)
 CIEADH (Council of IE Academic Department Heads) Secretary (2009-10)
 Fellow Selection Committee (2009-11)
 Educational Foundation Member (2002-05)
 Senior Vice President – Academics and Board of Trustees Member (2002-04)
 Judge, Golomski RAMS/IIE Best Paper Award Committee (2003)
 Chair, *IIE Transactions* Design & Manufacturing Best Paper Award (2003)
 Member, PE Exam Committee (2001-06)
 Director, Division of Quality Control and Reliability Engineering (2000-02)
 Member, IIE Outstanding Publication Award Committee (2000-01)
 Director-Elect, Division of Quality Control and Reliability Engineering (1999-2000)
 Newsletter Editor, Division of Quality Control and Reliability Engineering (1997-98)
IIE Transactions Editorial Board (1996-2008)

Society of Women Engineers (SWE) - **Senior Member**

National Women in Academia Committee (2012–present)
National Upward Mobility Award Judge (1999–2005, 2007–09, 2012)
National Career Guidance Committee Regional Representative (1995–96)
National Chair of Women in Academia (1991–93), National Chair of Awards Committee (1986–87)
University of Pittsburgh Student Section Faculty Advisor (1991–99)
Pittsburgh Section Student Coordinator and Executive Council Member (1992–99)
Pittsburgh Section Speaker's Bureau Chair (1991–1992)
St. Louis Section President (1987–89), Section Representative (1985–87), Treasurer (1984–85), Secretary (1983–84)

College Industry Council on Material Handling Education (CIC-MHE) of the Material Handling Institute of America
2022 and 2011 Teacher's Institute Organizer
Member (1999–2003) and (2018–2022)

Editor in Chief, *INFORMS Journal on Computing* (INFORMS), 2019 – present

Editor of Surveys, *Computers & Operations Research* (Elsevier), 2022 – present

Computers & Operation Research, Special Issue on Computational Operations Research for Drone Systems, co-guest editor with Chase Murray (2019) <https://www.sciencedirect.com/journal/computers-and-operations-research/special-issue/I069MBSLT3T>

Associate Editor, *IEEE Transactions on Automation Science and Engineering*, 2015 - 2018

Area Editor, *Computers & Operations Research* (Elsevier), 2013 – present

Area Editor, Heuristic Search and Learning, *INFORMS Journal on Computing* (INFORMS), 2012 - 2018

Associate Editor, *IEEE Transactions on Evolutionary Computation* (IEEE), 1998 - 2018

Editorial Board, *Suleyman Demirel University Journal of Engineering Sciences and Design*, Isparta, Turkiye 2016 – present

Editorial Board, *Computers & Operations Research* (Elsevier), 2005 – 2012

Associate Editor, *INFORMS Journal on Computing* (INFORMS), 1995 - 2012

Editorial Board, *International Journal of General Systems* (Taylor & Francis), 2004 – 2012

Design and Manufacturing Editorial Board, *IIE Transactions* (IIE), 1996 - 2008

Advisory Committee, *International Journal of Smart Engineering System Design* (Taylor & Francis), 2002 - 04

Editor, Eastern United States, *International Journal of Smart Engineering System Design* (Gordon & Breach), 1997 - 2001

Associate Editor, *Engineering Design and Automation Journal* (John Wiley & Sons), 1995 – 98

Newsletter Editor, IIE Division of Quality Control and Reliability Engineering, 1997 – 98

Co-Guest Editor, *Journal of Engineering Valuation and Cost Analysis*, Special Issue on Engineering Valuation and Computational Intelligence, vol. 2, no. 2, 1999

Co-Guest Editor, *Engineering Design and Automation Journal*, Special Issue on Intelligent Engineering Design, vol. 3, no. 2, Summer 1997

Co-Guest Editor, *Computers & Industrial Engineering*, Special Issue on Genetic Algorithms and Industrial Engineering, vol. 30, no. 4, September 1996

Dean's Advisory Council, University of Buffalo, Member (2020–present)

External Graduate Program Reviewer, Virginia Tech Industrial Engineering Department (2012)

External Department Program Reviewer, University of Central Florida Industrial Engineering Department (2012)

Member, University of Arkansas Industrial Engineering Department Liaison Committee (2010-2012)

External Ph.D. Examiner: University of Pretoria (South Africa); Dalhousie University (Canada); The National University of Singapore (Singapore); University of New South Wales / Australian Defence Force Academy (Australia)

Significant Seminars and Keynote Addresses:

1. Norwegian University of Science and Technology, June 2023
2. University of Alabama (Tuscaloosa), April 2023.
3. George Mason University, April 2023.
4. Northeastern University, April 2023.
5. University of Southern California, February 2023.
6. Rutgers University, Business School, November 2022
7. Keynote Speaker, International Symposium for Production Research 2022 (ISPR 2022), Antalya, Turkey, October 2022 (virtual).
8. Keynote Speaker, International Engineering Symposium 2022 (IES 2022), Izmir, Turkey, October 2022 (virtual).
9. Keynote Speaker, 5th International Conference on Intelligent Autonomous Systems (IEEE), Dalian China, September 2022 (virtual)
10. IEEE WCCI 2022 Women in Computational Intelligence Plenary, July 2022 (Padua, Italy)
11. Plenary Speaker, 7th IEEE Symposium on Analytics and Risk, China, July 2022 (virtual)
12. Alliance of International Science Organizations (ANSO) Training on Sustainable Development and Leadership Enhancement, June 2022 (virtual)
13. Pontificia Universidad de Chile (Santiago, Chile), June 2022
14. INFORMS Webinar https://www.youtube.com/watch?v=91bMRbWv_AU
15. EAFIT (Medellin, Colombia), March 2022
16. Texas Tech University, February 2022
17. University of Minnesota, February 2022
18. Clemson University, January 2022
19. International Conference on Cognitive & Intelligent Computing, ICCIC 2021 (<https://sites.google.com/view/iccicconference/about>) in Hyderabad, India, December 2021 (virtual)
20. Future LOG Sustainable Logistics of the Future, Norwegian University of Science and Technology, November 2021 (virtual)
21. Escuela de Verano en Inteligencia Computacional (EVIC) 2021, Keynote Address, IEEE, November 2021 (virtual)
22. Latin American Congress on Computational Intelligence (LA-CCI) 2021, Keynote Address, IEEE, November 2021 (virtual)
23. XV Brazilian Congress on Computational Intelligence October 2021 <https://www.cbic21.org/> (virtual)
24. International Symposium for Production Research, Keynote Address, October 2021 (virtual)
25. University of Hong Kong System Analytics Global Leaders Seminar, August 2021 (virtual) https://www.youtube.com/watch?v=Rvc_3DJMxes
26. 6th IEEE Symposium on Analytics and Risk Keynote, Beijing, July 2021 (virtual)
27. IEEE CIS Distinguished Lecture, IEEE Hyderabad Section, India R10, May 2021 (virtual)
28. Keynote Speaker, Troy University, College of Education, Annual Research and Scholarship Conference, April 2021 (virtual)
29. IEEE CIS Distinguished Lecture, IEEE Computational Intelligence Society, Kolkata Chapter, Visvabharati University, Santiniketan - West Bengal, January 2021 (virtual)
30. Escuela de Verano en Inteligencia Computacional (EVIC) 2020, Keynote Address, IEEE, December 2020 (virtual)
31. Pontificia Universidad Católica de Chile, Santiago Chile, November 2020 (virtual)
32. New Faculty Colloquium, INFORMS, November 2020 (virtual)
33. 2020 Australasian Conference on Artificial Intelligence Plenary Address, Canberra, November 2020 (virtual)

34. INFORMS/WORMS Webinar September 2020 <https://connect.informs.org/worms/events/past-webinars>
35. International Symposium for Production Research, Keynote Address, September 2020 (virtual)
36. 2020 IEEE Midwest Industry Conference, Keynote Address, August 2020 (virtual)
37. IEEC CIS WCI Webinar Panelist, August 2020
38. IISE Quality Control and Reliability Engineering & Manufacturing and Design Divisions Webinar, April 2020
39. University of La Sabana, Colombia, March 2020
40. University of Binghamton, February 2020
41. University of Connecticut, February 2020
42. University of Florida, January 2020
43. University of Buffalo (INFORMS Speaker), November 2019
44. INFORMS-ALIO International Meeting Keynote Address, Cancun, June 2019
45. University of South Florida, April 2019
46. Stevens Institute of Technology, April 2019
47. IEEE Computational Intelligence Webinar, April 2019
48. IEEE World Congress on Computational Intelligence Plenary Address, Rio, July 2018
49. The Wellington Lecture, Institute of Industrial and Systems Engineering, Orlando, May 2018
50. University of Los Andes (Bogota, Colombia), May 2018
51. IEEE COLCACI Conference Keynote, Medellin, Colombia, May 2018
52. Texas State University, March 2018
53. George Mason University, February 2018
54. Arizona State University, January 2018
55. Iowa State University, November 2017
56. University of Tennessee – Knoxville, September 2017
57. Adolfo Ibanez University (Vina del Mar and Santiago, Chile), June 2017
58. Catholic University (PUC), Santiago, Chile, June 2017
59. University of Engineering and Technology (UTEC) (Lima, Peru), June 2017
60. National University of Cuyo (Mendoza, Argentina), May 2017
61. University of Los Andes, Santiago, Chile, May 2017
62. U.S. Embassy Santiago, Chile, April 2017
63. Fulbright Chile Webinar, March 2017
64. Monterrey Tech University (Mexico), March 2017
65. Universidad Autónoma de Nuevo León (Monterrey, Mexico), March 2017
66. IISE National Webinar on Cost Estimation, February 2017
67. Universidad de los Andes (Bogota, Colombia), January 2017
68. NASA Office of Mission Assurance Webinar, October 2016
69. University of Louisville, September 2016
70. Cal Poly San Luis Obispo, April 2016
71. University of Arizona, January 2016
72. South Dakota School of Mines and Technology (Rapid City, South Dakota), June 2015
73. 2014 IEEE Symposium Series on Computational Intelligence Evolutionary Computation Plenary Speaker (Orlando, Florida), December 2014.
74. 2014 Current Challenges in Computing “CCubed” Conference Plenary Speaker (Napa, California), December 2014.
75. 5th International Conference on Computational Logistics (ICCL'14) Keynote Address (Valparaiso, Chile), September 2014
76. University of Oklahoma (sponsored by the INFORMS Speakers Program), September 2014
77. 2014 International Conference on Quality, Reliability, Risk, Maintenance, and Safety Engineering Keynote Address (Dalian, China), July 2014
78. Northeastern University (Shenyang, China), July 2014
79. Hong Kong University of Science and Technology (Hong Kong), July 2014
80. City University of Hong Kong (Hong Kong), July 2014
81. Southwest Jiaotong University (Chengdu, China), July 2014
82. Bejaia University (Bejaia, Algeria), April 2014

83. Ecole Nationale Supérieure des Mines de Saint-Etienne (Gardanne, France), April 2014
84. Swiss Federal Institute of Technology (ETH) (Zurich, Switzerland), April 2014
85. L'Aquila University (L'Aquila, Italy), April 2014
86. Wayne State University, March 2014
87. Universidad de los Andes (Bogota, Colombia), February 2014
88. Universidad EAFIT (Medellin, Colombia), February 2014
89. Pontificia Universidad Católica de Valparaíso (Chile), January 2014
90. Missouri University of Science and Technology, November 2013
91. University of Chile (Santiago, Chile), August 2013
92. USMOS Conference Plenary, Middle East Technical University (Turkey), June 2013
93. Kuwait University, April 2013
94. Uludag University (Turkey), April 2013 (sponsored by the U.S. Embassy in Turkey)
95. Baskent University (Turkey), March 2013
96. Suleyman Demirel University (Turkey), March 2013
97. Middle East Technical University (Turkey), March 2013
98. Anadolu University (Turkey), February 2013
99. Bilkent University (Turkey), February 2013
100. Penn State University, November 2012
101. University of Pittsburgh, September 2012
102. University of Miami, March 2012
103. University of Washington, March 2011
104. WORMS Keynote Session (INFORMS), November 2010
105. Rutgers University, October 2010
106. Lehigh University, September 2010
107. Northwestern University, May 2010
108. University of Tennessee, April 2010
109. IIE Doctoral Colloquium Speaker, May 2009
110. Iowa State University, April 2009
111. Clemson University, February 2008
112. NSF ADVANCE Conference, Arlington VA, June 2007
113. Mississippi State University, March 2007
114. Penn State – Berks, October 2006
115. University of Buffalo, September 2006
116. 2006 Material Handling Institute of America Spring Meeting, Charlotte, NC, April 2006
117. North Carolina State University, March 2006
118. IIE New Faculty Colloquium Speaker, Atlanta, May 2005
119. Keynote Speaker, Society of Women Engineers Girls' Night Out, Auburn, April 2004
120. INFORMS Doctoral Colloquium Speaker, Atlanta, October 2003
121. American Statistical Society, Alabama Chapter, Troy State University, Montgomery, January 2003
122. NSF 2003 Design, Service and Manufacturing Grantees Conference
123. Research Experiences for Teachers, ASEE, Portland, January 2003
124. Adaptive Computing in Design and Manufacture (ACDM) Keynote Speech, Plymouth, England, April 2000
125. Saint Louis University School of Business, November 1998
126. Daimler-Benz Research Institute (Frankfurt, Germany), September 1998
127. Gazi University (Ankara, Turkey), September 1998
128. Discover Ceramics '97, September 1997
129. Lenox Research Center, New Jersey, August 1997
130. Pennsylvania State University Industrial Engineering Department, April 1997
131. PPG Fiber Glass Research Center, Pittsburgh, December 1996
132. 51st Annual Ceramics Forum of the Pennsylvania Ceramics Association, State College, PA, October 1996
133. Institute for Mathematics and Its Applications Workshop on Evolutionary Algorithms, Minneapolis, October 1996
134. University of Buffalo Industrial Engineering Department, October 1995

135. Wichita State University Industrial Engineering Department, November 1995, November 1994

Conference Leadership:

- IFORS 2023 Conference Program Chair (Santiago, Chile 2023)
- IEEE Global Reliability & Prognostics and Health Management Conference 2022, International Advisory Committee.
- International Startup Summit (Istanbul 2022), International Scientific Committee.
- International Conference on Industry 4.0 and Smart Systems, ICI4.OSS-2022, International Program Committee
- 2022 9th Intl. Conference on Soft Computing & Machine Intelligence (ISCMI 2022) Honorary Member of International Advisory Board
- 2022 IEEE World Congress on Computational Intelligence (WCCI 2022) Congress on Evolutionary Computation Technical Co-Chair
- 2022 6th International Conference on Intelligent Systems, Metaheuristics & Swarm Intelligence (ISMSI 2022) Honorary Co-Chair
- IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2021) Program Co-Chair
- IEEE CEC 2021 Technical Co-Chair
- IEEE World Congress on Computational Intelligence 2020 Publications Chair – Glasgow, Scotland
- 8th Joint International Conferences on Swarm, Evolutionary and Memetic Computing Conference (SEMCCO 2020) & Fuzzy And Neural Computing Conference (FANCCO 2020) – Wuhan China (International Advisory Committee)
- 9th Asia-Pacific International Symposium on Advanced Reliability and Maintenance Modeling 2020 Vancouver (International Advisory Committee)
- International Program Committee, International Conference on Industry 4.0 and Smart Systems, Canakkale Turkey, June 2020
- 10th IEEE Prognostics and System Health Management Conference 2019 – Qingdao China (International Advisory Committee)
- International Conference on Production Research 2019 – Chicago (Organizing Committee)
- 2017 Winter Simulation Conference – Las Vegas (Co-Registration Chair)
- International Conference of Production Research Americas 2018, Scientific Committee – Bogota, Colombia
- IEEE Congress on Evolutionary Computation (IEEE CEC2017) 2017 (Program Committee) – Bilbao, Spain
- 2016 Winter Simulation Conference – Arlington, VA (Registration Chair)
- IEEE World Congress on Computational Intelligence (WCCI) 2016 Technical Program Committee - Vancouver
- 2015 IEEE Symposium Series on Computational Intelligence: IEEE Symposium on Computational Intelligence in Production and Logistics Systems Technical Program Committee – Capetown, South Africa
- 2015 Genetic and Evolutionary Computation Conference Integrative Genetic and Evolutionary Computation Track Program Committee - Madrid
- 2015 Winter Simulation Conference – Huntington Beach, CA (Registration Chair)
- International Advisory Committee Member of QR2MSE 2015 – Beijing
- IEEE Symposium Series on Computational Intelligence 2014 Technical Program Committee – Orlando, Florida
- International Workshop on Verification and Evaluation of Computer and Communication Systems (VECoS) 2014 Technical Program Committee – Bejaia, Algeria
- IEEE World Congress on Computational Intelligence (WCCI) 2014 Technical Program Committee - Beijing
- The Genetic and Evolutionary Computation Conference (GECCO) 2014 Integrative Genetic and Evolutionary Computation Program Committee - Vancouver
- IEEE Congress on Evolutionary Computation (IEEE CEC2013) 2013 (Program Committee) – Cancun, Mexico
- The Genetic and Evolutionary Computation Conference (GECCO) 2013 Integrative Genetic and Evolutionary Computation Program Committee - Amsterdam
- International IIE Conference 2013 Program Committee - Istanbul
- International Conference on Evolutionary Computation Theory and Applications 2012 International Program Committee - Barcelona

- The Genetic and Evolutionary Computation Conference (GECCO) 2012 Integrative Genetic and Evolutionary Computation Program Committee - Philadelphia
- Conference on Systems Engineering Research 2012 (Technical Program Committee) – Saint Louis
- IEEE Congress on Evolutionary Computation (IEEE CEC2012) 2012 (Program Committee) – Brisbane, Australia
- International Conference on Evolutionary Computation Theory and Applications 2011 (Program Committee) – Paris, France
- IEEE Congress on Evolutionary Computation (IEEE CEC2011) 2011 General Co Chair – New Orleans
- International Conference on Evolutionary Computation 2010 (Program Committee) – Valencia, Spain
- IEEE Congress on Evolutionary Computation (IEEE CEC2009) 2009 (Program Committee) – Trondheim, Norway
- IEEE Congress on Evolutionary Computation (IEEE CEC2008) 2008 (Program Committee) – Hong Kong
- The Seventh Metaheuristics International Conference (MIC 2007) (International Program Committee). Montreal
- Ninth International Conference on Parallel Problem Solving from Nature (PPSN VIII) 2006 (Program Committee). Reykjavik Iceland
- IEEE Congress on Evolutionary Computation (IEEE CEC2006) 2006 (Program Committee). Vancouver
- IEEE Congress on Evolutionary Computation (IEEE CEC2005) 2005 (Program Committee). Edinburgh, Scotland
- Eighth International Conference on Parallel Problem Solving from Nature (PPSN VIII) 2004 (Program Committee). Birmingham, U.K.
- IEEE Congress on Evolutionary Computation (IEEE CEC2004) 2004 (Program Chair). Portland, OR
- Seventh International Conference on Parallel Problem Solving from Nature (PPSN VII) 2002 (Program Committee). Grenada, Spain
- IEEE Congress on Evolutionary Computation (IEEE CEC2002) 2002 (Program Committee). Hawaii
- Optimization in Industry III Conference 2001 (Organizing Committee). Tuscany, Italy
- International Symposium on Adaptive Systems: Evolutionary Computation and Probabilistic Graphical Models (ISAS 2001) (International Scientific Committee). Havana, Cuba
- IEEE Congress on Evolutionary Computation (IEEE CEC2001) 2001 (Technical Committee). Korea
- Sixth International Conference on Parallel Problem Solving from Nature (PPSN VI) 2000 (Program Committee). Paris, France
- IEEE Congress on Evolutionary Computation (IEEE CEC2000) 2000 (Technical Chair, The Americas). San Diego, CA
- Second Asia-Pacific Conference on Genetic Algorithms and Applications 2000 (Conference Committee). Kanazawa, Japan
- World Symposium on Group Technology and Cellular Manufacturing 2000 (Technical Committee). San Juan, Puerto Rico
- Genetic and Evolutionary Computation Conference (GECCO) 1999 (Program Committee). Orlando, FL
- IEEE Congress on Evolutionary Computation (IEEE CEC99) 1999 (Special Sessions Chair). Washington, D.C
- First European Workshop on Evolutionary Computation in Telecommunications 1999 (Program Committee). Goteborg, Sweden
- IEEE International Conference on Systems, Man, and Cybernetics (IEEE SMC) 1998 (Organizing Committee). San Diego, CA
- Fifth International Conference on Parallel Problem Solving from Nature (PPSN V) 1998 (Program Committee). Amsterdam, Netherlands
- Industrial Engineering Research Conference (IERC) 1998, 1999 (Program Committee). Various U.S. locations
- Adaptive Computing in Design and Manufacturing (ACDM '98, '02, '06) 1998, 2002. Plymouth, Exeter, Bristol, England
- Frontiers in Education Conference (FIE) 1997 (Finance Chair). Pittsburgh, PA
- International Conference on Engineering Design and Automation (EDA) 1997, 1998, 1999 (International Advisory Board). Various international locations
- Sian Ka'an International Conference - The First Joint Mexico - U.S. International Workshop on Neural Networks and Neurocontrol 1995. Cancun, Mexico

- International Conference on Genetic Algorithms (ICGA) 1995 (Local Arrangements Chair), 1997 (Program Committee). Pittsburgh, PA
- Artificial Neural Networks in Engineering (ANNIE) 1994, 1995, 1996 (Applications Papers Award Chair), 1997 (Conference Co-Chair and Applications Papers Award Chair). St Louis, MO

National Science Foundation Panels and Site Visits:

- Mid-Career (2021)
- ADVANCE Site Visit (2006)
- ERC Preproposals (2002)
- Production Systems (2002)
- IGERT Preproposals (2000)
- CAREER (1999)
- Model Institutions for Excellence (MIE) Site Visit (1999)
- Optimized Portable Application Libraries, Division of Mathematical Sciences, Panel and Site Visit (1998)
- Combined Research – Curriculum Development Program, Division of Engineering Education and Centers (1998)
- Production Systems (1994, 1995)
- OR/PS Research Deployment (1993)
- OR/PS Small Business Innovation Research (1993)
- Operations Research (1992)

European Science Foundation College of Expert Reviewers member (2021 – present)

Reviewer for other governmental agencies including U.S. National Security Agency, Research Foundation Flanders, Research Grant Council of Hong Kong, Engineering and Physical Sciences Research Council of Great Britain, Natural Sciences and Engineering Research Council of Canada, Australia Research Council, CONICYT – Chile, Arab Science and Technology Foundation, Qatar National Research Fund, Romanian Agency for Higher Education, Research, Development and Innovation Funding, State of New Jersey Commission on Science and Technology, Ben Franklin Technology Center of Western Pennsylvania, Florida Board of Education, Binghamton University (S.U.N.Y. New York), State of Louisiana

Many roles of service internally to Auburn University and University of Pittsburgh. These include university wide (e.g., budget advisory, promotion and tenure policies) and college wide committees (e.g., promotion and tenure, curriculum) and activism in Auburn’s Women in Science and Engineering Institute (WISE). Led and participated in multiple searches for faculty, staff and administrators.

COURSES INSTRUCTED

Graduate Courses:

- Data Mining for Operations (developed) (Auburn University)
- Scholarly Reading, Writing, and Presentation (developed) (Pontifical Catholic University of Valparaíso)
- Metaheuristics (developed) (Pontifical Catholic University of Valparaíso)
- Fuzzy Logic and Fuzzy Systems (developed) (Pontifical Catholic University of Valparaíso)
- Fuzzy Logic and Fuzzy Systems (developed) (Auburn University)
- Two course sequence on Systems Engineering for Secure Computing-Intensive Environments (co-developed and co-taught with Computer Science and Software Engineering) (Auburn University)
- Adaptive Optimization (developed) (Auburn University and University of Pittsburgh)
- Neural Networks and Fuzzy Systems (developed) (Auburn University)
- Decision Models (developed) (Auburn University and University of Pittsburgh)
- Advanced Engineering Economy (developed) (Auburn University and University of Pittsburgh)
- Operation Systems Design and Management (Auburn University, Techno-MBA Executive course, co-developed and co-taught with Jeff Smith)

- Graduate Seminar (Auburn University)
- Engineering Applications of Fuzzy Logic (co-developed and co-taught with Electrical Engineering) (University of Pittsburgh)
- Neural Networks and Industrial Applications (developed) (University of Pittsburgh)
- Graduate Journal Seminar (University of Pittsburgh)

Undergraduate Courses:

- Fuzzy Logic and Fuzzy Systems (developed) (Auburn University)
- Statistical Quality Control (Auburn University, Bilkent University)
- Introduction to Industrial Engineering (Auburn University)
- Engineering Economy (Auburn University and University of Pittsburgh)
- Senior IE Projects (Auburn University and University of Pittsburgh)
- Introduction to Probability and Statistics (Engineering Service Course) (University of Pittsburgh)
- Advanced Probability and Statistics (University of Pittsburgh)

GRADUATE STUDENTS AND VISITING SCHOLARS

PH.D.

1. "Recourse for Vehicle Routing Problems with Drone Resupply," MEHMET KURT, Ph.D. Dissertation, co-advised with Daniel Silva, 2024. (Auburn University)
2. "Forward Pick Warehousing Design," ELIANA PENA TIBADUIZA, Ph.D. Dissertation, co-advised with Mario Velez Gallego, 2024. (Auburn University)
3. "The Flying Sidekick Delivery with Pick Ups," NAWIN YANPIRAT, Ph.D. Dissertation, co-advised with Daniel Silva, 2023. (Auburn University)
4. "Layout of Grocery Store Promotions," ILKNUR TURKMEN, Ph.D. Dissertation, 2023. (Auburn University)
5. "Vehicle Routing Problems with Drone Resupply," JUAN CARLOS PIÑA PARDO, Ph.D. Dissertation, co-advised with Daniel Silva and Ricardo Gatica, 2022, currently post-doctoral associate at Massachusetts Institute of Technology (MIT) Center for Transportation and Logistics. (Pontifical Catholic University of Valparaíso)
6. "Improving Empty Container Port Operations," ERHAN KARAKAYA, Ph.D. Dissertation, 2020, currently Visiting Assistant Professor – School of Industrial Engineering, Purdue University. (Auburn University)
7. "Using Symbolic Data Analysis to Detect Fraud, Waste and Abuse in Healthcare Claims Data," RICK REYNOLDS, Ph.D. Dissertation, 2020, currently Director of Advanced Analytics, Health Plan Product, Service and Administration Applied Intelligence Solutions, Kaiser Permanente – National Claims Administration. (Auburn University)
8. "Patient-Centric Facility Design for Rehabilitation Hospitals," ALEJANDRO TERAN-SOMOHANO, Ph.D. Dissertation, 2019, currently Operations Research Analyst at UPS Supply Chain Solutions, Alpharetta, Georgia. (Auburn University)
9. "Using Pre-Deployment Planning for Maintaining Network Connectivity in MANET Models," JARRETT CHAPMAN, Ph.D. Dissertation, co-advised with Dr. Jeffrey S. Smith, 2019, currently Owner and Founder, Yud Hey Systems Modeling and Analytics LLC. NSF Bridge to the Doctorate Fellowship Awardee. (Auburn University)
10. "A Computational System to Solve the Warehouse Aisle Design Problem," SABAHATTIN GOKHAN OZDEN, Ph.D. Dissertation, co-advised with Dr. Kevin Gue (University of Louisville), 2017, currently Assistant Professor – Information Sciences and Technology, Penn State – Abington. (Auburn University)
11. "Manufacturing Cost Prediction in the Presence of Categorical and Numeric Design Attributes," EREN SAKINC, Ph.D. Dissertation, 2016, currently Senior Director, Head of Field Force Deployment Strategy and Chief of Staff, Commerical Operations, Bayer Pharmaceuticals.

12. "Optimization of Block Layout for Grocery Stores," ELIF OZGORMUS, Ph.D. Dissertation, 2015, results of dissertation granted Turkish patent joint with Migros Inc., currently Senior Teaching Fellow – Supply Chain Engineering – Coventry University, U.K. (Auburn University)
13. "Design of Resilient Heterogeneous Wireless Networks," OZGUR KABADURMUS, 2013, currently Lecturer – Department of Industrial Engineering, Clemson University. (Auburn University)
14. "Optimization of Military MANET," YOUNGCHOL ERIC CHO, Ph.D. Dissertation, co-advised with Dr. Jeffrey S. Smith, 2009, career officer - South Korean Navy. (Auburn University)
15. "Facility Design for Retail Enterprises," HALUK YAPIOCOGLU, Ph.D. Dissertation, 2008, currently Associate Professor, Eskisehir Technical University, Eskisehir, Turkey. (Auburn University)
16. "Optimal Deployment Strategy of Mobile Agents to Maintain Connectivity and Performance in Mobile Ad Hoc Networks," ORHAN DENGIZ, Ph.D. Dissertation, 2007, currently Founder and President, DVM Technologies, Ankara, Turkey. (Auburn University)
17. "Facility Layout and Relayout Under Uncertainty," SADAN KULTUREL, Ph.D. Dissertation, 2002, currently Professor of Management Information Systems, Penn State – Berks. (Auburn University)
18. "Ant Colony Methods for Combinatorial Optimization," YUN-CHIA LIANG, Ph.D. Dissertation, 2001, currently Professor – Department of Industrial Engineering and Management, Yuan Ze University, Taoyuan, Taiwan. (Auburn University)
19. "A Multiobjective Genetic Algorithm Approach to Telecommunication Network Design Problems Considering Reliability and Performance," ABDULLAH KONAK, Ph.D. Dissertation, 2000, currently Professor of Information Sciences and Technology, Penn State – Berks. (University of Pittsburgh)
20. "Metamodeling for Sensitivity Analysis of Capital Projects," RAVIPIM CHAVEESUK, Ph.D. Dissertation, 2000, currently Associate Dean for Planning and Head – Agri-Food Supply Chain Management Research Unit, Kasetsart University, Bangkok, Thailand. Royal Thai Scholar. (University of Pittsburgh)
21. "Improved Prediction and Validation Using Resampled Neural Networks: Committee Networks and Hybrid Validation," SARAH S.Y. LAM, Ph.D. Dissertation, 1999, currently Professor - Department of Systems Science and Industrial Engineering, Binghamton University (S.U.N.Y.). (University of Pittsburgh)
22. "Stochastic Simulation Optimization Using Genetic Algorithms," CHEN-YU FEI, Ph.D. Dissertation, 1997, career officer - Taiwanese Army. (University of Pittsburgh)
23. "Curve Fitting and Function Selection with a Hierarchical Genetic Algorithm," MEHMET GULSEN, Ph.D. Dissertation, 1997, currently Assistant Professor – Department of Industrial Engineering, Baskent University, Ankara, Turkey. Previously with United Airlines and Disney Corporation. (University of Pittsburgh)
24. "Optimization of Reliability Design Problems Considering the Uncertainty in Component Reliability and Time-to-Failure," DAVID W. COIT, Ph.D. Dissertation, 1996, currently Professor - Department of Industrial Engineering, Rutgers University. **NSF CAREER awardee.** (University of Pittsburgh)
25. "Nonparametric Error Evaluation Methods for Evaluating and Validating Artificial Neural Networks," JANET M. TWOMEY, Ph.D. Dissertation, 1995, currently Associate Dean of Research and Professor - Department of Industrial and Manufacturing Engineering, Wichita State University. **NSF CAREER awardee and former NSF Program Director.** (University of Pittsburgh)

M.S.

1. "Comparing the Influence of Probability Density Functions on the Estimation of Product Cost by Using Monte Carlo Simulation," EREN SAKINC, M.I.S.E. Project, May 2010. (Auburn University)
2. "Artificial Intelligence Applications to Grain Boundary Detection in Fuzzy Images," ORHAN DENGIZ, M.I.S.E. Project, December 2002. (Auburn University)

3. "Predictive Modeling for Time Estimation in the Custom Garment Industry," ARTHUR GRIFFIN, M.I.S.E. Project with Russell Corporation, May 2001. GEM Scholar. (Auburn University)
4. "Neural Network Approach to All-Terminal Network Reliability Estimation," CHAT SRIVAREE-RATANA, M.S.I.E. Thesis, August 1998. (University of Pittsburgh) (*deceased*)
5. "A Genetic Algorithm for Solving a Generalized Network Design Problem," DARREN L. DEETER, M.S.I.E. Thesis, August 1996. (University of Pittsburgh)
6. "A Hierarchical Neural Network Approach to Modeling the Wave Solder Process," BONNIE TURNER JACKSON, M.S.I.E. Thesis, December 1995. National Science Foundation Minority Fellowship. (University of Pittsburgh)
7. "Improving Neural Network Simulation Metamodels Using Iterative Training," SANIYE B. OZSERIM, M.S.I.E. Thesis, September 1995. (University of Pittsburgh)
8. "Reduction in Cycle Time for Acceptance Testing of Shipboard Propulsion Plant Valves," LEE A. GREGORY, M.S. Manufacturing Systems Engineering Thesis, April 1995. (University of Pittsburgh)
9. "Process Planning and Process Standard Time Prediction Using an Integrated Expert System and Neural Networks Approach," MARK WILHELM, M.S.I.E. Thesis, April 1994. (University of Pittsburgh)

VISITING SCHOLARS

1. MEHMET FATIH TASGETIREN, Professor of Industrial Engineering, Yasar University, Izmir Turkey. December 2021 – December 2022. Studied evolutionary optimization.
2. JUAN CARLOS PINA PARDO, Ph.D. student, Pontifical Catholic University of Valparaíso, Valparaiso, Chile. October 2021 – February 2022. Studied optimization of drone/truck delivery.
3. LINGYUN ZHOU, Lecturer, College of Computer Science, South-Central University for Nationalities, Wuhan, China. November 2019 – November 2020. Studied optimization of drone transshipment stations using particle swarm.
4. JULIO JIMENEZ, student, Pontifical Catholic University of Valparaíso, Valparaiso, Chile. January – February 2019. Studied discrete-event simulation of empty container depots.
5. JUAN CARLOS PINA PARDO, Ph.D. student, Pontifical Catholic University of Valparaíso, Valparaiso, Chile. January – March 2019. Studied cone programming and optimization of drone/truck delivery.
6. DARIO CANUT DE BON, Ph.D. student, Pontifical Catholic University of Valparaíso, Valparaiso, Chile. August – December 2018. Studied routing and scheduling of navy resources to patrol fishing activity off the coast of Chile.
7. MARIO VELEZ-GALLEGGO, Professor of Production Engineering, Universidad EAFIT, Medellin, Colombia. January - December 2018. Studied environmentally benign supply chain practices.
8. KEVIN STRUWE, M.Sc. student, Rostock University, Rostock Germany. July 2016 (funded by the German government). Studied modeling of sounds for enhance cochlear implants.
9. NATHAN CAUM E SILVA, PAULO FELLIPE CRUZ, HENRIQUE DONAH CERRI and JOÃO CARLOS SARAN. May – July 2016 (funded by the Brazilian government). Studied quality assurance for aerospace applications. All Brazilian undergraduate students studying for one year in the U.S.
10. CARMEN SAYURI MALDONADO PINTO, M.Sc. student, Universidad Autónoma de Nuevo León, Monterrey, Mexico. April – June 2016 (funded by CONICYT of Mexico). Studied bi-level optimization for green logistics.
11. MEHMET FATIH TASGETIREN, Professor of Industrial Engineering, Yasar University, Izmir Turkey. February – July 2016 (funded by Yasar University). Studied evolutionary optimization.
12. BABEK ERDEBILLI, Assistant Professor of Industrial Engineering, Atilim University, Ankara Turkey. December 2015 – August 2016 (funded by the TUBITAK, Scientific and Technical Research Council of Turkey). Studied decision making in retail environments.
13. JINHUA LI, Associate Professor of Economics and Management, South China Normal University, Guangzhou, China. October 2015 – September 2016 (funded by the Chinese Scholarship Council). Studied optimal layout for attraction based entities.

14. THOMAS HARDTKE, undergraduate student, Rostock University, Rostock Germany. September – November 2015 (funded by the German government). Studied simulation modeling for scheduling of large scale IT projects.
15. MARIO VELEZ-GALLEGO, Professor of Production Engineering, Universidad EAFIT, Medellin, Colombia. August - December 2015 (funded by the **Fulbright Commission**). Studied environmentally benign supply chain practices.
16. WILSON BRETAS BORGES, MIGUEL PINTO FILHO, BRUNA BRUM GARCIA, BRUNO GORDO SOARES and NINA BERNARDES TROLLY. May – July 2015 (funded by the Brazilian government). Studied quality assurance for aerospace applications. All Brazilian undergraduate students studying for one year in the U.S.
17. FATMA PAKDIL, Professor of Industrial Engineering, Baskent University, Ankara, Turkey. August 2014-August 2015. Studied quality assurance for aerospace applications.
18. JIANGSHENG “VICTOR” LIU, Associate Professor of Mechanical and Electrical Engineering, Nanchang University, Nanchang, China. November 2013 – March 2016 (funded by the Chinese Scholarship Council). Studied optimal loading for vehicle transport.
19. XUHONG “RICHARD” YANG, Doctoral Student, School of Mechanical Engineering, Southwest Jiaotong University, Chengdu, China. September 2013 – August 2015 (funded by the Chinese Scholarship Council). Studied meta-heuristics.
20. RAFIK MEDJOUJ, Doctoral Student, Department of Electrical Engineering, Bejaia University, Bejaia, Algeria. October – December 2012 (funded by Bejaia University). Studied meta-heuristics for reliable design of gas and petroleum pipelines.
21. SOROOR HUSSAIN AL-KHAFAJI, Assistant Professor of Industrial Engineering, Department of Mechanical Engineering, University of Bagdad, Bagdad, Iraq. September 2012 – August 2013 (funded by Iraqi Scholar Rescue Program). Studied design of retail facilities.
22. XINGQUAN ZUO, Associate Professor of Computer School, Beijing University of Posts and Telecommunications, Beijing, China. January 2012 – January 2013 (funded by the Chinese Scholarship Council). Studied optimal plant layout for semi-conductor facilities.
23. JAE-HWAN KIM, Professor and Chair of Department of Data Information, Korea Maritime University, Busan, Korea. July 2011 – August 2012 (funded by Korea Maritime University). Studied design of reliable systems.
24. MITHAT ZEYDAN, Associate Professor and Chair of Industrial Engineering, Erciyes University, Kayseri, Turkey. June 2011 – August 2011 (funded by Erciyes University). Studied multi-variate process optimization for textile dyeing.
25. NEVRA AKBILIK, Assistant Professor of Industrial Engineering, Sakarya University, Sakarya, Turkey. March 2011 – August 2012 (funded by Sakarya University) . Studied facility layout with AGV material handling systems.
26. HAIYAN WANG, , Doctoral Student and Assistant Professor of School of Management, Fuzhou University, Fuzhou, China. September 2010 – September 2011 (funded by the Chinese Scholarship Council). Studied facility location for recycling centers.
27. MOHAIR ISSA AHMED AL-DAOUD, (*deceased*). Professor and Head of Industrial Engineering Section, College of Engineering, University of Bagdad, Bagdad, Iraq. August 2010 – August 2011 (funded by the Iraqi Scholar Rescue Project of the Institute of International Education). Studied facility location for health clinics in Bagdad. **Scholar Rescue Program Scholar**.
28. ZEIQIANG ZHANG, Associate Professor of Mechanical Engineering, Southwest Jiaotong University, Chengdu, China. August 2010 – August 2011 (funded by the Chinese Scholarship Council). Studied facility design for double row lines.
29. MIN ZHANG, Doctoral Student, School of Mechanical Engineering, Southwest Jiaotong University, Chengdu, China. August 2010 – August 2011 (funded by the Chinese Scholarship Council). Studied process optimization for hot mix asphalt.
30. CUIHUA ZHANG, Associate Professor of Business Administration, Northeastern University, Shenyang, China. August 2010 – November 2010 (funded by the Chinese Scholarship Council). Studied facility location for recycling centers.
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39. CHANG SUN YUM, Assistant Professor of Business Administration, Pukyong National University, Busan, South Korea. Academic year of 2002 – 03 (funded by Pukyong National University). Studied neural networks and genetic algorithms applied to problems in designing reliable communications networks and estimating network reliability and performability.
40. MEHMET FATIH TASGETIREN, Associate Professor of Industrial Engineering, Yasar University, Izmir, Turkey. March 1999 – August 2000 (funded by Sakarya University, Turkey). Studied computational intelligence approaches to scheduling and routing.
41. BERNA DENGIZ, Dean of Engineering, Baskent University, Ankara, Turkey. Summers of 1994 (funded by Gazi University), 1996 (funded by the TUBITAK, Scientific and Technical Research Council of Turkey), 1999 (funded by NSF) and 2001 (funded by NSF). Academic year of 2002 – 03 (funded by NSF). Studied genetic algorithms and neural networks applied to problems in designing reliable communications networks.