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Our Mission Statement

Our mission, as a component of a land-grant institution, is

1. to provide the high quality educational experience in the industrial engineering discipline which will prepare our graduates to contribute successfully to society and to assume leadership roles in industrial, governmental, and academic professions;

2. to provide the state and nation with new knowledge, both basic and applied, in the field of industrial engineering;

3. to provide service to the industrial, governmental, and professional communities through dissemination of research findings, provision of continuing education programs, interaction with industry and professional colleagues, membership on advisory committees, consulting, and other outreach activities.
I am pleased to present the annual report for the Department of Industrial and Systems Engineering at Texas A&M University. It provides an overview of the many activities and accomplishments of our faculty, staff, and students over the past year.

These continue to be exciting times at Texas A&M and in the department. We have seen tremendous growth in terms of new faculty joining the department and also increasing numbers of undergraduate and graduate students. The faculty and students continue to make valuable research contributions across an expanding range of application areas from reverse logistics to energy security to health care delivery. However, the future looks even brighter as we continue to grow and expand the department to exploit new and emerging opportunities.

I hope you enjoy reviewing the department’s activities. We continue to move forward on many fronts and work to solidify our status as a highly ranked industrial and systems engineering program. We are excited about the future as we continue to build a culture of excellence.

Brett A. Peters
Department Head
Yu Ding

Yu Ding has been promoted to associate professor with tenure effective September 1. Ding received his Ph.D. in mechanical engineering from the University of Michigan in 2001. He joined the department as an assistant professor that same year. His research interests are in the optimal utilization of complex sensing systems for improving the quality of products, processes, and services. Ding is director of the Advanced Metrology Lab, created to support research and education in that area. He is also the inaugural holder of the Donna and Jim Furber ’64 Faculty Fellowship.

Gary Gaukler

Gary Gaukler, assistant professor, has the top-selling supply-chain management/industrial engineering dissertation, according to an annual ranking of academic theses and dissertations by ProQuest. Gaukler’s dissertation, “RFID in Supply Chain Management,” was also ranked the most popular dissertation across all engineering fields as well as the fifth-best selling dissertation overall. Gaukler wrote the dissertation while a graduate student in the Department of Management Science and Engineering at Stanford University. His advisor was professor Warren H. Hausman. Gaukler joined the Texas A&M faculty in 2005.

Kiavash Kianfar

Assistant professor Kiavash Kianfar joined the Industrial and Systems Engineering faculty in 2007. Kianfar’s Ph.D. is from North Carolina State University. His areas of research interest include the theory and application of mathematical programming. His recent research has been focused on valid inequalities for mixed integer programming problems. He has also done research on the application of mathematical programming, computer simulation, and stochastic models in production and healthcare systems. Kianfar teaches courses in optimization and mathematical programming.
Halit Üster

Assistant professor Halit Üster, chapter advisor for the student INFORMS chapter at Texas A&M, was presented with the Moving Spirit Award by INFORMS for his service to the chapter. The award was presented at the 2007 Annual Meeting in Seattle.

Martin Wortman

Professor Martin Wortman was named 2007 Dwight Look College of Engineering Faculty Fellow for contributions to the Engineering Program including classroom instruction, scholarly activities and professional service.
The 2007 outstanding former student award was presented to Stephen M. Johnson ’73, senior executive vice president for business development for Washington Group International. Johnson joined Washington Group International in 2001. Before that, he spent 29 years in the engineering and construction industry, including serving as senior vice president for global development, marketing, and strategy and as Executive Vice President of Fluor Corporation. He is a member of the boards of directors of NSAT Corporation, the National Association of Manufacturers and the Business Council for International Understanding.

Johnson earned his bachelor’s degree in industrial engineering from Texas A&M in 1973.

Johnson was honored at the Industrial and Systems Engineering Department’s annual awards banquet on April 26. The event, sponsored by Parsons Corporation, honors exceptional accomplishments by faculty, staff, students and former students.

Department head Brett Peters said of Johnson, “Through his distinguished career, he has brought honor not only to himself but also to this department and to the university.”

Previously recognized former students:

2002
- Ross E. George
- Joe Barton
- W. Michael Barnes

2004
- Franklin A. Mikell
- John A. Scott

2005
- Jack T. Allison
- G. Allen Flynt
- Joseph B. Michels

2006
- Howard C. Homeyer
- Charles F. Milstead
Major Gifts to the Department in 2007

The Caterpillar Foundation has made a gift to the Industrial and Systems Engineering Department Improvement Fund. This fund is for discretionary use by the department head.

Energy South, represented on the Industrial and Systems Engineering Advisory Council by Dean Liollio, has supported student activities with a gift to the student chapter of Institute of Industrial Engineers at Texas A&M.

Hal V. Halton ’51 of Houston has made a planned gift of a tax deferred annuity to the department to endow the Haltom Family Scholarship in Industrial and Systems Engineering. When funded, distributions will be used to provide scholarships to full-time students in good standing pursuing a degree in the department.

Lee Housewright ’43 has recently given an additional amount, with a matching grant from Hormel, to the original endowment of the Lee D. Housewright, Jr. ’43 Scholarship in Industrial and Systems Engineering.

Marathon Oil Company has given $5,000 scholarships to three undergraduate students in the Department of Industrial and Systems Engineering for the 2007 – 2008 academic year.

Jill and Charles Milstead of Houston have established the Jill and Charles F. Milstead ’60 Faculty Fellowship in Industrial and Systems Engineering to provide an annual award recognizing outstanding teaching, research, service and professional development activities of junior faculty members in the department.

Parsons Corporation, represented on the Industrial and Systems Engineering Advisory Council by John Scott, has underwritten the Parsons Seminar Series and the Industrial and Systems Engineering Honors and Awards Banquet for the fifth year in a row.

James L. Sneddon ’92, a member of the Industrial and Systems Engineering Advisory Council, is endowing the Sneddon-Smith Scholarship in Industrial and Systems Engineering. This fund will provide one or more scholarships to full-time students in good standing pursuing a degree in the department.
All information is not created equal. That’s a fact of Eric Bickel’s professional life. Bickel is an assistant professor in the Department of Industrial and Systems Engineering, and he’s an expert in decision science — using mathematics to help make complex decisions. Decision science uses the odds that something will happen, its probability, to help decide what to do in complicated situations. Few situations are more complicated than when oil producers decide where to drill new wells.

Drilling for oil is a high-risk, high-payoff proposition. Your chances of finding oil in any particular place may be low, but if you do, the payoff is high. If you’ve seen the classic movie Giant you understand how this works.

One way to improve your odds of finding oil is to use seismic imaging to get a “picture” of what the underground geography looks like. You get seismic images by setting off small explosive charges and mapping how the vibrations from the explosions move through the rock formations, or strata, under the ground. Certain strata are associated with the presence of oil.

“Geophysicists will often explore technical aspects of seismic imaging of reservoirs, attempting to predict whether or not it will be possible to detect the presence of oil,” says Richard Gibson, a specialist in seismology and associate professor in the Department of Geology and Geophysics. Or, if they’re dealing with a known oil reservoir, provide some estimates of the amount of gas or oil in the reservoir.

Bickel, Gibson and Duane McVay, an expert in reservoir management and professor in the Harold Vance Department of Petroleum Engineering, are evaluating the effectiveness of new technology developed by WesternGeco, a subsidiary of the international energy company Schlumberger that provides seismic services to oil producers. The new technology produces seismic images of the underground landscape that are more detailed and complete than those from conventional seismic technologies, says Stephen Pickering, marketing manager for WesternGeco’s reservoir seismic services.

“The question is, ‘How much value does this additional detail add to the information we can give the producers?’” Pickering says. “We think it adds quite a bit, but we’d like to be able to quantify it.”

**Enter decision science**

New information — such as the added detail in WesternGeco’s seismic technology — is valuable to oil producers’ decisions if it is relevant, material and economic, Bickel says.

Drilling for oil is a high-risk, high-payoff proposition. The right information can help reduce the risk.

For information to be relevant, you must be uncertain about something that’s important to your decision, and the new information must have the possibility of telling you something useful about the uncertainty. For instance, you may be uncertain about whether it’s a good idea to drill a well in a particular location.

For information to be material, it has to have the potential to affect your decision. “If you’re going to take some particular action no matter what, new information is worthless,” Bickel says. On the other hand, if you’re considering drilling in a particular place and whether you drill or not depends on information you can get about the site, that information is material.

Finally, for information to be economic, it must be a good investment. Even if new information tells you exactly what you need to know, if you can’t afford to pay for it, it’s not economic.

By applying the mathematics of decision science to the situations oil producers face, Bickel and his colleagues are helping oil producers make more informed decisions.
Wortman Hosts NSF Sponsored Workshop

Martin Wortman, professor in the Department of Industrial and Systems Engineering, organized and hosted a workshop, “Predictive Modeling in Engineering,” which was sponsored by the Engineering Directorate of the National Science Foundation. The twenty-four invited participants included engineers, mathematicians, statisticians, and economists from the NSF as well as industries and universities across the United States. They gathered May 22 and 23 at the Jon L. Hagler Center on the Texas A&M University campus to examine the characterization of uncertainty as it pertains to predictive modeling in engineering and to offer guidance to the National Science Foundation on future needs in research and education in predictive modeling.

Participants addressed the following questions: should there be a consensus on a fundamental theory of prediction, is research needed to better incorporate this theory into engineering, what tools are needed to enable the use of this theory in engineering, how might we introduce key concepts of uncertainty in predictive modeling into engineering practice and education, how do we develop incentives for change and, should the NSF organize an initiative or program around these concepts and changes?

A summary report of the deliberations was made available to the NSF.

who use seismic services face, Bickel, Gibson and McVay are determining how much value the additional detail adds. “We were able to leverage Texas A&M’s energy expertise to help WesternGeco better communicate the value of its product to potential customers. In addition,” Bickel says, “the methodologies we have developed will help exploration and production companies make better use of their capital and hopefully discover more reserves.”

Written by Lesley Kriewald and Gene Charleton of Engineering Communications
The Texas A&M student chapter of INFORMS (Institute for Operations Research and the Management Sciences) was the inaugural recipient of the Student Chapter Award Summa Cum Laude presented at the recent INFORMS 2007 Annual Meeting in Seattle. This is the highest distinction given to a student chapter; and it recognizes outstanding participation, performance and achievement. On hand to receive the award was Panitan Kewcharoenwong, graduate student in the Department of Industrial and Systems Engineering.

The chapter, which was organized in 2004, currently has 287 members from 20 different departments across the university. The goals of the group are to encourage interest in the field of operations research and management sciences, to provide communication and networking opportunities, to facilitate an informal exchange of information about educational programs and opportunities as well as OR/MS methods and techniques, and to present a forum of speakers on OR/MS.
Amarnath Banerjee
Associate Professor and Director of Undergraduate Program
Ph.D., University of Illinois at Chicago
banerjee@tamu.edu

Dr. Banerjee’s research interests are in virtual manufacturing, simulation, image processing, real-time video processing, augmented reality and human behavior modeling. He directs the Advanced Virtual Manufacturing and Augmented Reality Laboratory. He teaches courses in manufacturing and production systems design and control, facilities planning, virtual manufacturing and simulation.

Research

Edwards, J.C., K. Mechler and A. Banerjee, “Improving Texas Rural Community Healthcare through HIT Implementation,” 2007-2009, Texas Office of Rural Community Affairs (through Texas A&M Research Foundation), $1,600,000

Gonzalez, J., J.A. Wall and A. Banerjee, “Continuation of Research in Support of Army Digitalization and Transformation (Force XXI),” 2006-2008, NAVAIR – Orlando TSD, $749,999 (ISEN portion $66,000)

Publications


Presentations


G. Kemble Bennett
Professor, Vice Chancellor and Dean of Engineering
Ph.D., Texas Tech University
kem-bennett@tamu.edu

Dr. Bennett specializes in work related to homeland security. His interests also include engineering management, quality, logistics and reliability engineering. He has served on several government blue ribbon panels for the Department of Homeland Security, Department of Justice and the FBI. He currently serves as executive director of the National Emergency Response and Rescue Training Center.

Presentations

Bennett, G.K., Welcome Remarks, Nano Summit, Texas A&M University, College Station, Texas, August 2007

Bennett, G.K., Panel Member, “Texas A&M’s Commitment to STEM Initiatives,” Texas Engineering and Technical Consortium Executive Committee Meeting, Houston, Texas, October 2007

Professional Activities
Chair, Federal Emergency Management Agency (FEMA) National Advisory Council (Appointed by FEMA Administrator David Paulison)

Member, Texas Board of Professional Engineers (Appointed by Texas Governor Rick Perry)

Chair, Licensing Committee, Texas Board of Professional Engineers

Member, Legislative Issues Committee, Texas Board of Professional Engineers

Member, General Issues Committee, Texas Board of Professional Engineers

Education Advisory Liaison, Texas Board of Professional Engineers

Member, Professional Engineering Exam Committee, Texas Board of Professional Engineers

Member, Texas Deans of Engineering

University Member, Executive Committee, Texas Engineering & Technical Consortium

Member, Task Force on Eco and Animal Rights Terrorism, National Association of State Universities and Land Grant Colleges
J. Eric Bickel
Assistant Professor
Ph.D., Stanford University
jbickel@tamu.edu

Dr. Bickel's research interests include decision analysis, modeling probabilistic dependence, value of information, and applications of decision analysis to enhanced oil recovery. Dr. Bickel teaches engineering economy, decision analysis and senior design. Before joining Texas A&M University, Dr. Bickel was a senior engagement manager for Strategic Decisions Group (SDG) in Houston, where he applied decision analysis to corporate strategy for Fortune 500 companies.

Research
Bickel, J.E. (PI), R. Gibson and D. McVay, “Quantifying the Value of Seismic Information: Phase II,” 2006-2008, WesternGeco/Schlumberger, $125,000

Publications


San Antonio, Tex., September 2007


Professional Activities
Council Member, INFORMS Decision Analysis Society

Member, Publication Award Committee, INFORMS Decision Analysis Society

Member, Membership Committee, INFORMS Decision Analysis Society

Member, Nominating Committee, INFORMS Decision Analysis Society

Member, Society of Petroleum Engineers

Member, Management Track Committee, Annual Conference and Technical Exposition, Society of Petroleum Engineers

Associate Editor, INFORMS Decision Analysis

Reviewer, INFORMS Decision Analysis

Reviewer, INFORMS Operations Research

Reviewer, IEEE Transactions on Automation Science

Reviewer, Computers and Industrial Engineering

Reviewer, Society of Petroleum Engineers Reservoir Evaluation and Engineering

Sergiy Butenko
Assistant Professor
Ph.D., University of Florida
butenko@tamu.edu

Dr. Butenko’s research concentrates mainly on global and discrete optimization and their applications. In particular, he is interested in theoretical and computational aspects of continuous global optimization approaches for solving discrete optimization problems on graphs. Applications of interest include network-based data mining, computational biology, social networks and remote sensing.

Research


Damjanovic, I., A. Wimsatt and S. Butenko, “Impact of Reconstruction Strategies on System’s Performance Measures: Maximizing Safety and Mobility while Minimizing Life-Cycle Costs,” 2007-2008, University Transportation Center for Mobility, Texas Transportation Institute, $60,000

Publications

Optimization Letters
Member, Editorial Board, Journal of Global Optimization
Wash., November 2007
Sila Çetinkaya
Associate Professor
Dr. Çetinkaya specializes in supply chain management. Her current research examines inventory, production and transportation issues in the context of supply chain integration and coordination. She teaches courses in production planning and control, inventory theory and supply chain coordination.

Research

Presentations

Professional Activities
Member, Editorial Board, Journal of Global Optimization
Member, Editorial Board, Optimization Letters

Publications

Çetinkaya, S., “The Impact of Supply Quality and Supplier Development on Contract Design,” Johnson School of Management, Cornell University, April 2007

Presentation
Çetinkaya, S., “The Impact of Supply Quality and Supplier Development on Contract Design,” Johnson School of Management, Cornell University, April 2007

Professional Activities
President, Forum for Women in OR/MS, INFORMS

Department Editor, IIE Transactions on Scheduling and Logistics

Division Editor, Operations and Decision Sciences, Canadian Journal of Administrative Sciences

Associate Editor, Naval Research Logistics

Member, Editorial Board, International Journal of Inventory Research

Session Organizer and Chair, INFORMS Annual Meeting

Reviewer, Computers and Operations Research

Reviewer, European Journal of Operational Research

Reviewer, International Journal of Production Economics

Yu Ding
Associate Professor
Ph.D., University of Michigan
yuding@iemail.tamu.edu

Dr. Ding’s research interests are in quality and reliability engineering, with emphasis on data-mining methods for analysis and design and optimal utilization of distributed sensor systems. His recent projects are funded by the National Science Foundation, the state of Texas and industry. He teaches courses in quality control, change and anomaly detection, prediction methods and design of experiments.

Research
Ding, Y., “CAREER: Collaborative Information Processing of Distributed Sensor Networks for Manufacturing Quality Improvements,” 2004-2009, National Science Foundation, $400,000


Ding, Y., “Collaborative Research: Fault Tolerance Analysis and Design of Clustered Sensor Networks,” 2007-2010, National Science Foundation, $161,336. This project is in collaboration with Dr. Yong Chen at University of Iowa


Lawrence, B. and Y. Ding, “Inventory, Backlog, and Supply Chain Analysis,” 2007-2008, Smith Services, $144,500


Wilhelm, W. E. and Y. Ding, REU Supplementary Grant, 2005-2008, National Science Foundation, $12,000

Wilhelm, W. E. and Y. Ding, REU Supplementary Grant, 2007-2008, National Science Foundation, $12,000

Publications


Presentations


Ding, Y., “Optimal Engineering Design Guided by Data-mining Methods,” University of Wisconsin at Madison, Department of Industrial and Systems Engineering, March 2007


Ding, Y., “Analysis and Design for Distributed Sensor Systems,” University of South Florida, Department of Industrial and Management Systems, April 2007


Guy L. Curry
Professor and Director of Graduate Program
Ph.D., University of Arkansas
g-curry@tamu.edu

Dr. Curry specializes in the application of operations research techniques to the design and analysis of manufacturing systems. He teaches courses in optimization and production systems.
of Southern Pine Beetle in Southern Pine Stands West of the Mississippi,” 2006-2008, USDA Forest Service, $298,766


Professional Activities

Reviewer, Journal of Professional Issues in Engineering Education and Practice

Reviewer, Computers & Industrial Engineering

Associate Editor, IEEE Transactions on Automation Science & Engineering

Richard M. Feldman
Professor
Ph.D., Northwestern University richf@tamu.edu

Dr. Feldman specializes in applied probability, simulation and operations research. He is currently part of two interdisciplinary research teams, one from the Departments of Entomology and Geography and one in the Texas Transportation Institute. Dr. Feldman is primarily responsible for developing simulation tools for these teams. He teaches simulation, operations research, stochastic processes and queuing theory.

Research


Natarajan Gautam
Associate Professor
Ph.D., University of North Carolina at Chapel Hill gautam@tamu.edu

Dr. Gautam’s areas of interest include optimal design, control and performance evaluation of stochastic systems, with special emphasis on service engineering, using techniques in queueing theory, applied probability and optimization. His specific research topics include telecommunication network design and traffic engineering for providing quality of service, computer-communication network controls including web servers and mobile ad-hoc networks, transportation systems modeling for traffic operations and performance analysis, and information technology including survivability of multi-agent systems and peer-to-peer networks.

Research


Presentations


Professional Activities

Chair, Professional Recognition Committee, INFORMS

Faculty Advisor, Alpha Pi Mu Industrial Engineering Honor Society, Texas A&M

Session Chair, IIE Annual Research Conference

Reviewer/Panelist, National Science Foundation

Reviewer, Operations Research

Reviewer, Production and Operations Management

Reviewer, IIE Transactions

Gary M. Gaukler
Assistant Professor
Ph.D., Stanford University gaukler@tamu.edu

Dr. Gaukler’s research interests center around the impact of automatic identification and sensor technologies such as RFID on supply chain operations. He also works on designing robust sensor networks to prevent terrorists from smuggling nuclear materials into the United States. This research is funded jointly by NSF and the Department of Homeland Security. Dr. Gaukler directs the RFID and Supply Chain Systems Lab and teaches courses in operations management and logistics.

Research


Publications


Natarajan Gautam
Associate Professor
Ph.D., University of North Carolina at Chapel Hill gautam@tamu.edu

Dr. Gautam’s areas of interest include optimal design, control and performance evaluation of stochastic systems, with special emphasis on service engineering, using techniques in queueing theory, applied probability and optimization. His specific research topics include telecommunication network design and traffic engineering for providing quality of service, computer-communication network controls including web servers and mobile ad-hoc networks, transportation systems modeling for traffic operations and performance analysis, and information technology including survivability of multi-agent systems and peer-to-peer networks.

Publications


Lee, S., S. Kumara and N. Gautam, “Efficient Scheduling Algorithm
Andrew Johnson
Assistant Professor
Ph.D., Georgia Institute of Technology
ajohnson@tamu.edu

Dr. Johnson’s research interests are in productivity measurement, warehouse operations and design, web applications to support decision making, modeling and analysis of revenue management applied to logistics, reference model development for industrial systems, and enterprise transformation.

Professional Activities
Session Organizer, European Workshop on Efficiency and Productivity Analysis X

Presentations


Professional Activities
Reviewer, International Academy, Research and Industry Association Conference

Research


Presentations


Publications
**Gautam, Publications, cont’d**


**Presentations**


**Professional Activities**

Member, Technical Program Committee, SENET 2007 (International Conference on Sensor Networks), Cap Esterel, France

Tenured Faculty Mentor, MentorNet, The E-Mentoring Network for Diversity in Engineering and Science Member, Dissertation Award Committee, INFORMS

Telecommunication Conference External Reviewer, Center for Multimodal Solutions for Congestion Mitigation, U.S.

Department of Transportation Session Chair, INFORMS Annual Meeting

Session Chair, IIE Annual Research Conference

Director and Board Member, IIE Computer and Information Systems Division

Regional Director, Central North America Region, Omega Rho (Operations Research International Honors Society)

Member-of-Council, INFORMS Telecommunication Section

Associate Editor, INFORMS Journal on Computing

Associate Editor, Journal of Industrial and Systems Engineering

Reviewer, Computers and Industrial Engineering

Reviewer, European Journal of Operational Research

Reviewer, IIE Transactions

Reviewer, Mathematical Models of Operations Research

Reviewer, Networks and Spatial Economics

Reviewer, Operations Research

Reviewer, Queueing Systems

Reviewer, Telecommunication Systems

Reviewer, IEEE Conference on Decision and Control

**Reviewers**

INFORMS Annual Meeting, Seattle, Wash., November 2007

INFORMS Systems Division

INFORMS Session Chair, INFORMS Annual Meeting

INFORMS Senior Session Chair, INFORMS Annual Meeting

...
Kiavash Kianfar
Assistant Professor
Ph.D., North Carolina State University
kianfar@tamu.edu

Dr. Kianfar’s primary research interest is the theory and application of mathematical programming. His recent research has been focused on valid inequalities for mixed integer programming problems. He has also done research on the application of mathematical programming, computer simulation, and stochastic models in production and healthcare systems. He teaches courses in optimization and mathematical programming.

Presentations

Kianfar, K., “Generalized Mixed Integer Rounding Valid Inequalities,” Industrial Engineering Department, Sharif University of Technology, Tehran, Iran, June 2007


Kianfar, K., “Generalized Mixed Integer Rounding Valid Inequalities,” Department of Industrial and Systems Engineering, Texas A&M University, College Station, Texas, February 2007

Georgia-Ann Klutke
Professor
Ph.D., Virginia Polytechnic Institute and State University
klutke@tamu.edu

Dr. Klutke’s research interests are in the areas of applied probability and stochastic processes, with particular emphasis on problems that arise in production and service systems. Her work has examined queueing behavior, inspection and maintenance scheduling, product flow control, degradation processes, information structure in decision models and layout of retail facilities. She teaches courses in operations research, queueing theory, stochastic processes, engineering systems design, production operations, reliability and maintenance science.

Research

Presentations

V. Jorge Leon
Allen-Bradley Professor in Factory Automation
Joint Appointment with Engineering Technology
Ph.D., Lehigh University
jleon@tamu.edu

Dr. Leon’s research interests are in manufacturing system optimization, finite-capacity resource planning and scheduling, applications of combinatorial optimization and heuristic search. Recent work involves the study of collaborative distributed production systems and global manufacturing. (Dr. Leon’s primary appointment is in the Department of Engineering Technology and Industrial Distribution.)

Research

Publications

Dr. Klutke’s research interests are in the areas of applied probability and stochastic processes, with particular emphasis on problems that arise in production and service systems. Her work has examined queueing behavior, inspection and maintenance scheduling, product flow control, degradation processes, information structure in decision models and layout of retail facilities. She teaches courses in operations research, queueing theory, stochastic processes, engineering systems design, production operations, reliability and maintenance science.

Professional Activities
Consulting Editor, Springer Series in Mechanical Engineering
Member, Screening Panel, National Science Foundation

Engineering Research Centers
Member, Review Panel, National Science Foundation Engineering Design Program

Reviewer, National Science Foundation International Programs

Reviewer, IEEE Transactions on Reliability

Reviewer, IEEE Transactions on Engineering Management

Reviewer, Operations Research Letters

Reviewer, Journal of Applied Probability

Leon, V.J. and B. Lawrence, “Texas A&M University Global Research Center: Monterrey-Mexico,” 2007-2008, Texas A&M University and Dwight Look College of Engineering, $336,000

Presentations

Program Evaluator, TAC-ABET, Society of Manufacturing Engineers

Editor, Journal of Manufacturing Systems
Applications include wildfire management, healthcare, facility location, and supply chain planning. He teaches courses in stochastic programming, systems thinking and analysis, facilities planning and material handling, and operations research.

Research
Ntaimo, L., “CSR-CSI: System Integration of Dynamical Data Driven Wildfire Spread and Firefighting Modeling, Simulation, and Optimization,” 2007-2009, National Science Foundation, $80,000


Publications


Professional Activities

Session Chair, INFORMS Annual Meeting, Seattle, Wash., November 2007


Publications


Professional Activities
Member, Council of Industrial Engineering Academic Department Heads

Co-organizer, Doctoral Colloquium, IIE Annual Research Conference
Don T. Phillips
Chevron Professor
Ph.D., University of Arkansas
drdon@tamu.edu

Dr. Phillips teaching and research interests include lean manufacturing systems analysis, operations research, lean thinking, systems simulation, product cost flow analysis, and the analysis and control of remanufacturing/sustainment systems. In addition to his teaching and pedagogical interests, Dr. Phillips is currently the Director of the Homeland Security Research Initiatives for all engineering programs at Texas A&M. In this capacity, he develops interdisciplinary research teams to address both educational and research program initiatives in the Department of Homeland Security and other federal funding programs. He is currently active in several homeland security initiatives. Dr. Phillips is an IEEE Fellow and a member of SME.

Research

Eylem Tekin
Assistant Professor
Ph.D., Northwestern University
eylem@tamu.edu

Dr. Tekin’s research interests are in optimal design and control of stochastic systems, revenue management and supply chain management. Her current research focuses on the design and analysis of systems with flexible production/service capacity and cross-trained servers to create agile operations. The application areas of her research include manufacturing systems, call centers, health care services, airlines and hospitality industry. She teaches courses on production systems operation, stochastic models of manufacturing systems and stochastic dynamic programming.

Research


Halit Üster
Assistant Professor
Ph.D., McMaster University
uster@tamu.edu

Dr. Üster’s research interests are in supply chain logistics and applied optimization. His current research concentrates on network design problems with applications in logistics and communications. He teaches courses in operations planning, logistics, network optimization and heuristics. Dr. Üster directs the Logistics and Networked Systems Research Lab.

Research


**Publications**


**Presentations**


**Professional Activities**

Member, Subdivisions Council, INFORMS

General Chair, INFORMS Regional Conference

Chair, UPS-SOLA Bi-Annual Dissertation Award Committee

Cluster Co-Chair, Telecommunications Section, INFORMS Annual Meeting


Reviewer, *Journal of Heuristics*

Reviewer, *Computers and Operations Research*

Reviewer, *Applications and Applied Mathematics*

Associate Editor, *IIE Transactions*

**Wilbert E. Wilhelm**

Mike & Sugar Barnes Professor

Ph.D., Virginia Polytechnic Institute and State University

wilhelm@tamu.edu

Dr. Wilhelm specializes in integer programming, scheduling, and the design and operation of assembly systems. Currently, he is conducting two research projects. One project involves devising new integer programming algorithms to prescribe the types of sensors, the number of each type and the location of each sensor in a surveillance system to assure robust homeland security in U.S. ports and waterways. The second project deals with the design of international assembly systems and their supply chains under NAFTA. He teaches courses in integer programming, scheduling, linear programming and operations research. Dr. Wilhelm is an IIE Fellow and a recipient of the IIE David E. Baker Distinguished Research Award.

**Research**

Wilhelm, W.E., “Enhancing NAFTA Logistics: Synthesizing Opportunities for Companies and Their Supply Chains,” 2006-2007, National Science Foundation, $49,997. (In collaboration with James H. Bookbinder, Department of Management Sciences, University of Waterloo, and Fernando Mata Carrasco, Escuela de Graduados en Administración y Dirección de Empresas, Instituto Tecnológico y de Estudios Superiores de Monterrey, Monterrey, Mexico.)

Wilhelm, W.E., REU Supplementary Grant, 2006-2007, National Science Foundation, $6,000


Wilhelm, W.E. and Y. Ding, REU Supplementary Grant, 2005-2008, National Science Foundation, $12,000

Wilhelm, W.E. and Y. Ding, REU Supplementary Grant, 2007-2008, National Science Foundation, $12,000

**Publications**


**Presentations**


Martin A. Wortman
Professor
Ph.D., Ph.D., Virginia Polytechnic Institute and State University
wortman@tamu.edu

Dr. Wortman’s research and teaching interests are applied probability and stochastic processes. Currently, he is exploring computational methods for predictive modeling applied to technology evaluation and assessment. He teaches courses in stochastic processes and system operations.

Research


Presentations


Professional Activities
Cluster Organizer, Technology Evaluation & Assessment, INFORMS Annual Meeting

Invited Speaker, Division of Capability Maturity Model Integration, National Science Foundation

Member, Advisory Committee, World Technology Division of International Technology Research Institute Study on Simulation-Based Engineering and Science

Our Advisory Council

The mission of the Industrial and Systems Engineering Advisory Council is to provide a continuing liaison between the department and the practicing profession to improve the quality of the industrial and systems engineering program at Texas A&M University.

Function 1: to assist in resource development to support the needs and programs of the department.

Function 2: to serve in an advisory capacity to the department head by making recommendations about the goals and programs of the department.

Kent Beran, director
Production Operations and Manufacturing Improvements
Boeing Company

Gary Cerny
Triple C Ranch

Greg R. Clapp, vice president
Production and Operations Planning
Fujitsu Network Communications

Ross B. George, chairman
Five G Management, LLC

Karen Gleasman, director
DAO Process Engineering
Dell, Inc.

Michael Haack, P.E., Alaska district manager
Halliburton Energy Services

Victoria L. Hunter, senior director
Manufacturing Operations
Applied Materials

Stephen M. Johnson, senior executive vice president
Washington Group International

James Knickel, director of operations
Raytheon Systems

Dean Liollio, president and CEO
Energy South, Inc.

James Menke, director of materials
Solectron Texas

Brad J. Miles, manager of operations
Freescale Semiconductor

John A. Scott, president and COO
Parsons Corporation

Douglas W. Sellers, partner
Accenture

Lee Sneddon, manager of construction
Latin America Region
Intel Corporation

Rob Trimble, III, president and COO
TXU Electric Delivery
Graduate Student Awards

**Burcu Keskin**
Burcu Keskin has won the International Transportation Management Association James Costello Memorial Scholarship Award for academic excellence and scholarly achievements in supply chain design and the Transportation Clubs International Award for outstanding achievements in the field of transportation. Her committee chairs are Halit Üster and Sila Çetinkaya.

**Haifeng Xia**
Haifeng Xia received the Best Student Paper Award from the Quality, Statistics, and Reliability Section of INFORMS. Her paper is entitled, “Bayesian Hierarchical Model for Integrating Multi-resolution Metrology Data.” Xia’s committee chair is Yu Ding.

**Yuan Ren**
Yuan Ren received an Honorable Mention in the poster competition of the Doctoral Student Colloquium during the 2007 IIE Annual Research Conference. His poster was entitled “Data-mining Guided Methods for Optimal Engineering Designs.” Ren’s doctoral committee chair is Yu Ding.

**Soondo Hong**
Soondo Hong has, for the second year in a row, been awarded the very competitive Education Foundation Scholarship from the Material Handling Institute of America. Hong is developing a distributed control procedure for designing order picking systems. His committee chair is Brett Peters.
Graduate Degrees Awarded

Agrahari, Homarjun, Ph.D., “Models and Solution Approaches for Intermodal and Less-than-Truckload Network Design with Load Consolidations” (advisor, Halit Üster)

Akhteruzzaman, Mohammad, M.Eng. (advisor, Natarajan Gautam)

Al-Azri, Nasser Ahmed, M.Eng. (advisor, Guy Curry)

Aldape, Aaron Ector, M.Eng. (advisor, J. Eric Bickel)

Anino Cardenas, Norman Rolando, M.Eng. (advisor, Andrew Johnson)

Antonio Zuniga, Aldo, M.Eng. (advisor, Yu Ding)

Aral, Bahadir, Ph.D., “Scheduling Screening Inspections for Replaceable and Non-replaceable Systems” (advisor, Georgia-Ann Klutke)

Balasundaram, Balabhaskar, Ph.D., “Graph Theoretic Generalizations of Clique: Optimization and Extensions” (advisor, Sergiy Butenko)

Baldauf, Adam Brian, M.Eng. (advisor, Don Smith)

Becker, Brady Alan, M.S. (advisor, Martin Wortman)

Beier, Eric, M.Eng. (advisor, Lewis Ntaimo)

Benyamin, Nataya Erika, M.Eng. (advisor, Lewis Ntaimo)

Botsali, Ahmet Reha, Ph.D., “Retail Facility Layout Design” (advisors, Brett Peters and Georgia-Ann Klutke)

Cha, Jinho, M.S. (advisor, Gary Gaukler)

Cho, Jung Jin, Ph.D., “On the Robustness of Clustered Sensor Networks” (advisor, Yu Ding)

Choi, Chak Man, M.S. (advisor, Guy Curry)

Dees, Robert Andrew, M.S. (advisor, J. Eric Bickel)

Fawibe, Ifedayo Olukemi, M.Eng. (advisor, Guy Curry)

Gallego, Julian Andres, M.S. (advisor, Gary Gaukler)

Hernandez, Eyleen, M.Eng. (advisor, Guy Curry)

Hidalgo, Julio Cesar, M.S. (advisor, Don Smith)

Hudson, Adam, M.Eng. (advisor, Don Smith)

Hudson, Emilie Camille, M.Eng. (advisor, Don Smith)

Kalsi, Karambir Singh, M.Eng. (advisor, Guy Curry)

Kesselring, Randall Edward, M.S. (advisor, Natarajan Gautam)

Kim, Gak Gyu, M.S. (advisor, Gary Gaukler)

Kim, Seon-Jin, M.S. (advisor, Natarajan Gautam)

Liang, Dong, Ph.D., “The Production-Assembly-Distribution System Design Problem: Modeling and Solution Approaches” (advisor, Wilbert Wilhelm)

Lim, Euyjin, M.Eng. (advisor, Richard Feldman)


Maheshwari, Raghav, M.Eng. (advisor, Guy Curry)

Mariscal Torres, Alberto, M.S. (advisor, Richard Feldman)

Mekaroonreung, Maethee, M.Eng. (advisor, J. Eric Bickel)

Meruga, Aaron Pradeep, M.Eng. (advisor, Gary Gaukler)

Moore, Damali Tabia, M.Eng. (advisor, Guy Curry)

Nativi Nicolau, Juan Jose, M.S. (advisor, Don Smith)

Nevin, Daniel Rogers, M.Eng. (advisor, Guy Curry)

Palanisamy, Dhanasekar, M.Eng. (advisor, Guy Curry)

Parvin, Hoda, M.S. (advisor Natarajan Gautam)

Pidaparty, Krishna Murty, M.Eng. (advisor, Georgia-Ann Klutke)

Ramasamy, Manikandan, M.Eng. (advisor, Guy Curry)

Rashid, Mohammad, M.Eng. (advisor, Guy Curry)

Slivka, Jr., David John, M.Eng. (advisor, Gary Gaukler)

Subedar, Zubin Farokh, M.S. (advisor, Gary Gaukler)

Tang, Hao, M.Eng. (advisor, Andrew Johnson)

Taylor, Aldarian Raynell, M.Eng. (advisor, Guy Curry)

Townley, Edward Joseph, M.Eng. (advisor, Don Smith)

Usher, Jonathan, M.Eng. (advisor, Don Smith)

Venkatachalam, Venkatachalam V., M.Eng. (advisor, Guy Curry)

Vidyasankar, Adhitya Mouli, M.Eng. (advisor, Guy Curry)

Voorhies, Dereck Charles, M.Eng. (advisor, Don Smith)

Warren, Jeffrey Scott, Ph.D., “Independent Set Problems and Odd-Hole-Preserving Graph Reductions” (advisor, Illya Hicks)

Warrier, Deepak, Ph.D., “A Branch Price and Cut Approach to Solving the Maximum Weighted Independent Set Problem” (advisor, Wilbert Wilhelm)

Yedlapally, Somnath, M.Eng. (advisor, Gary Gaukler)

Yun, Woo Seop, M.S. (advisor, J. Eric Bickel)

Zhu, Yuxuan, M.Eng. (advisor, Guy Curry)