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 for the purpose of improving 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.

Mr. Kent Beran  
Boeing Company

Mr. Greg R. Clapp  
Fujitsu Network Communications

Mr. Greg Loppatto  
UPS

Mr. James Menke  
Flextronics

G. Allen Flynt  
Hamilton Sundstrand

Ms. Robin Moore  
Michaels Stores, Inc.

Mr. Ross George  
Five G Management, LLC

Mr. John A. Scott  
Applied Systems Technology and Transfer, Inc.

Mr. Michael Haack, P.E.,  
Halliburton AS

Mr. Douglas W. Sellers  
Accenture

Mr. Randy Hoff  
Energy Education

Mr. Lee Sneddon  
Intel Corporation

Ms. Victoria Hunter  
Lee Hecht Harrison

Ms. Robin Moore  
Michaels Stores, Inc.

Mr. Dean Liollio  
PAA Natural Gas Storage, LLC

Mr. Charlie Stegemoeller  
NASA

Mr. James Menke  
Flextronics

Front Cover

The Department of Industrial and Systems Engineering moved into the new Emerging Technologies Building in July 2011. The building also houses the Department of Biomedical Engineering, Coastal Deepwater Program laboratories, Visualization Program laboratories, and other interdisciplinary research initiatives.
I am pleased to greet you as the interim department head of the Department of Industrial and Systems Engineering at Texas A&M. Brett Peters, who served the department well as head for seven years, has stepped down; and the dean appointed me to the position of interim effective August 1, 2011. It seems natural to return to this great department which was my home from the time I joined the faculty at A&M as an assistant professor, until I left the department a full professor to serve as assistant dean of international programs for the Dwight Look College of Engineering.

Two thousand eleven was a busy year for the department as the faculty and staff prepared for and executed a move across the street into the new Emerging Technologies Building. All of this was accomplished while maintaining the usual high quality of teaching, research and service that we are known for and expect of ourselves. As you look through this report of the year’s activities, I hope it will provide you with a perspective on the exciting work being performed here. I welcome any questions or comments that might occur to you.

Regards,

Greetings from the Department Head

Departmental Data for 2011

U.S. News & World Report Rankings Among Public Institutions:
6th Undergraduate ; 6th Graduate

Enrollment Fall 2011
Undergraduate Students 650          Graduate Students 240

Faculty
Total Faculty  20    (Professors 7, Associate Professors 7, Assistant Professors 6, Non-tenured/Non-tenure Track  6)

Endowed Chair Holder 1, Endowed Professorship Holders 3, Development Professorship Holders 2

Centers and Laboratories
Advanced Metrology, Computational Operations Research; Energy Sustainable Operations; Institute for Manufacturing Systems (TEES); Logistics and Networked Systems Research; Human Factors and Cognitive Systems Engineering; Modeling, Simulation and Visualization; RFID and Supply Chain Systems; Systems Engineering; Virtual Manufacturing and Augmented Reality
Malavé Named Interim Head

Dr. César O. Malavé was appointed interim head of the Department of Industrial and Systems Engineering by Vice Chancellor and Dean of Engineering G. Kemble Bennett effective August 1, 2011. Dr. Malavé joined the faculty of Industrial and Systems Engineering in 1987 where he rose to the rank of full professor. More recently he has served the Look College of Engineering as Associate Dean for International Programs and Recruitment, and Associate Director of the Texas Engineering Experiment Station.

Malavé’s research and educational interests are in the areas of cost modeling for manufacturing and production systems, development of models for student success and for improving undergraduate engineering education. He holds B.S. and M.S. degrees from Georgia Tech and a Ph.D. from the University of South Florida.

ISEN Former Students Among Aggie 100

Juan Manuel Lamparero ’87 and Richard Reno ’70 were among the recipients of the 7th Annual Aggie 100 this fall. The Aggie 100 is sponsored by the Mays Business School and honors the fastest growing Aggie-owned or Aggie-led businesses in the world. Lamparero is director general of Industrial Solutions de Mexico and Reno is managing director of Omega Airline Software. They were welcomed to the department in October to visit with faculty and staff.
Students Benefit from Writing Center

Over a decade ago Texas A&M charted a path to becoming a nationally recognized institution ranked consistently in the top twenty academically. A&M’s leadership looked at universities already there and found that one of the key attributes shared by them was writing across the curriculum. Thus it was decided that each academic department at A&M should incorporate writing into at least two of its core courses. The idea was to expose students to the kind of writing they could expect to do in the working world, so the assignments needed to be relevant and purposeful. The ISEN department went one step further and hired someone with the background to teach the writing components of its courses.

Jose Vazquez, Class of ’75, fit the bill. Jose is a former Army officer with an advanced degree from the University of Iowa, teaching experience there and as an assistant professor at West Point, a tour in the Pentagon writing speeches for a four-star general, and many years of experience teaching writing and earning his living as a writer and communicator.

Under Vazquez’s leadership, as the faculty saw the value of incorporating the writing components into their courses, what started as a small role in two undergraduate courses has grown to a multi-course writing program at both the undergraduate and graduate levels. Vazquez now manages the workload by hiring university trained and certified writing assistants provided by the University Writing Center. These are graduate and undergraduate students who work under Jose’s supervision reviewing papers, assisting students one-on-one, sometimes creating course content, and, in some cases, delivering class presentations.

The ISEN writing program challenges students to write and think throughout the curriculum. It is turning out to be the largest program of its kind at Texas A&M, exceeding expectations and highly valued by our students. - from an article by Jose Vazquez

Bobo Outstanding Former Student

The Department of Industrial and Systems Engineering honored former student Lawrence Bobo ‘58 at the department’s annual awards banquet at the College Station Hilton on April 7.

Bobo is the owner of Powder Metallurgy, a parts manufacturing company he founded in 1973. After graduating from Texas A&M, Bobo went into the U.S. Army where he spent three years in the Quality Control Division of the Ordnance Procurement Office in California. After leaving the military, he went to work for a small parts manufacturing company which needed a quality control system. He put a program in place for them and was promoted to production manager. Eventually he and his wife, Billie, decided to move back to Texas where he started Powder Metallurgy.

While a student at A&M, Bobo was a member of the Corps of Cadets as well as an avid participant in intramural sports - including tennis, track, golf, and baseball. Bobo is offering matching funds to endow the Scott T. Poage ’57 Memorial Scholarship. Poage was Bobo’s mentor and favorite instructor during his student years.
Optimizing Wind Energy Maintenance

Texas leads the United States in wind energy production. Wind turbines, although they look simple, are extremely complicated and difficult to maintain. They are usually located in rural areas, so sending crews to repair them is time consuming and expensive. Associate Professors Yu Ding and Lewis Ntaimo, and Postdoctoral Research Assistant Eunshin Byon, are working on a project to reduce the cost of operation and maintenance of wind farms. The research, supported by the National Science Foundation in collaboration with General Electric, uses optimization and simulation models to consider external factors, such as weather, and uncertainty in sensor data to find the most cost effective way to do maintenance. Says Ding, “As industrial and systems engineers, we have significant expertise in optimization, simulation and information integration, and we are ready to contribute significantly to helping wind energy become more cost-effective so its competitiveness can be more sustainable in the market.” -from an article by Lesley Kriewald of Engineering Communications

Port Security

Helping to increase the chance of detecting smuggled nuclear materials at U. S. ports and borders

Stopping a terrorist from smuggling nuclear material into the country inside a shipping container – 12 million of which enter the country annually through ports – is the goal of a collaborative effort funded by the U. S. Department of Homeland Security’s Domestic Nuclear Detection Office. Gary Gaukler, an assistant professor in the Department of Industrial and Systems Engineering, leads a research team which focuses its expertise on how best to use radiation detectors at U. S. borders. - from an article by Leslie Kriewald of Engineering Communications
**Major Gifts to the Department**

**Advanced Technology Materials, Inc.** has given $2000 in support of the senior capstone design course.

**Dr. and Mrs. Thomas L. Black ’67** have donated $3000 to the Lawrence L. Bobo ’58/Scott T. Poage ’57 Memorial Endowed Scholarship.

**Mr. Lawrence L. Bobo ’58** has added $25,000 to the Lawrence L. Bobo ’58/Scott T. Poage ’57 Memorial Endowed Scholarship.

**Coca-Cola Refreshments** has given $2500 in support of the senior capstone design course.

**The Dow Chemical Foundation** has given $2500 in support of the senior capstone design course.

**Exxon Mobil Corporation** has donated $4000 to the Industrial and Systems Engineering Excellence Fund.

**Flextronics** has given $2500 in support of the senior capstone design course.

**Milden J. Fox, Jr. ’69**, emeritus professor, has given $1000 in unrestricted funds to the Industrial and Systems Engineering Improvement Fund to be used at the discretion of the department head.

**Gamestop Texas LTD** has given $2500 in support of the senior capstone design course.

**General Electric Power Systems** has given $5000 in support of the senior capstone design course.

**Dr. Randy D. Hoff ’97** has donated $5000 towards the Trecie A. ’96 and Dr. Randy D. Hoff ’97 Endowed Scholarship in the Department of Industrial and Systems Engineering.

**Knust SBO Precision Machining** has given $2500 in support of the senior capstone design course.

**Lennox Industries, Inc.** has given $2500 in support of the senior capstone design course.

**Mr. and Mrs. Constantine S. Liollio ’83** have donated $20,000 to fund the Liollio Family Faculty Fellows in Industrial and Systems Engineering.

**Mr. Rajanikant Maru ’06** has given $1000 to the Industrial and Systems Engineering Endowed Scholarship Fund.

**National Oilwell Varco** has given $7000 in support of the senior capstone design course.

**Parsons Corporation** has donated $20,000 to fund two career development professorships in project management at the associate professor level.

**Ms. Alicia G. Selby** has donated $1000 to the Industrial and Systems Engineering Excellence Fund in honor of Jeana Goodson.

**Mr. Steven L. Sisney ’83** has given $1000 to the Alpha Pi Mu 50th Anniversary Scholarship Fund.

**Tenaris USA** has given $2500 in support of the senior capstone design course.
Wilhelm Receives SME Medal

Wilbert Wilhelm, Mike and Sugar Barnes Professor, was selected by the Society of Manufacturing Engineers to receive the 2011 Frederick W. Taylor Gold Medal for Research. Wilhelm specializes in integer programming, scheduling, and supply chain design. His current research involves devising strong cutting plane methods and applications involving healthcare facility configuration; scheduling surgeries; rescheduling; locating direction finders; supply chain design for assembly systems, international enterprises, and second-generation biofuel; and designing sensor surveillance and reaction systems for homeland security. He teaches courses in integer programming, linear programming, scheduling, and operations management. Wilhelm, who earned his Ph.D. in industrial engineering and operations research from Virginia Polytechnic Institute, joined the faculty at Texas A&M in 1988. He is a Fellow of the Institute of Industrial Engineers and a recipient of the IIE David F. Baker Distinguished Research Award.

Best Paper Awards Garnered at IIE Conference

Professor Sila Cetinkaya and her former student Xingchu Liu were awarded a Best Paper Prize in scheduling and logistics from IIE Transactions, which was be presented at the IIE Research Conference in May. The title of the paper is “Supply Contracts in Supplier versus Buyer Driven Channels: The Impact of Leadership, Contract Flexibility, and Information Asymmetry.”

Associate Professor Yu Ding and Lecturer Eunshin Byon were awarded the Best Track Paper award in modeling and simulation for their paper entitled “Integrating Simulation and Optimization for Wind Farm Operations under Stochastic Conditions.”

Thomas Ferris New Hire

The Industrial and Systems Engineering Department welcomed Thomas Ferris in January. Ferris received his Ph.D. from the University of Michigan, Ann Arbor. His research interests are in human factors and cognitive ergonomics, and can be described as the study of cognition in human-machine engineered systems. His primary focus involves human information processing and design to support attention and interruption management. In particular, he investigates novel interface design techniques, employing alternative display modalities such as the sense of touch. Other research interests include human error, decision making under time pressure, and human-automation interaction. He has interest and experience in applying his research to the domains of medicine (anesthesiology), military operations (command and control, UV control and operations), aviation (cockpit automation, air traffic control), and ground transportation.
**Faculty Accomplishments**

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**Amarnath Banerjee**  
Associate Professor and Director of Undergraduate Program  
Ph.D., University of Illinois  
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**


**Refereed Journal Articles**


**Proceedings and Other Publications**


**Presentations**


**Professional Activities**

Chair, Tuning Oversight Council for Engineering, Texas Higher Education Coordinating Board

Associate Editor, *Journal of Manufacturing Systems*

Associate Editor, *International Journal of Services Operations and Informatics*

Associate Editor, *IIE Transactions on Healthcare Systems Engineering*

Reviewer, *International Journal of Production Research*

Reviewer, *Applied Ergonomics*

Reviewer, *IEEE Transactions on Systems, Man and Cybernetics*

Reviewer, *Engineering Applications of Artificial Intelligence*

Reviewer, Industrial Engineering Research Conference

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**G. Kemble Bennett**  
Emeritus 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.

**Professional Activities**

Chair, Texas Board of Professional Engineers

Education Advisory Liaison to Texas Engineering Deans, Texas Board of Professional Engineers

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

Member, Executive Working Group for the Office of State &...
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


Butenko, S., “Phase Transition Problems in Complex Networks: Clique Relaxations,” 2009 - 2011, Air Force Research Laboratory, $75,000


Refereed Journal Articles


Proceedings and Other Publications


First International Conference on Network Analysis, Gainesville, Fla., Dec. 2011


Sergiy Butenko
Associate 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.

Faculty Accomplishments

Local Government Coordination and Preparedness, U.S.
Department of Homeland Security
Executive Director, National Emergency Response and Rescue Training Center
Executive Director, System Assessment and Validation for Emergency Responders Program
Trustee, Southwest Research Institute
Member, Texas A&M University at Qatar Joint Advisory Board


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**


Tekin, E. (PI) and S. Çetinkaya (Co-PI), “Supply Chain Revenue Management: Mitigating Profit-at-risk in Manufacturing and Distribution Networks,” 2006-2010, National Science Foundation, $250,000

**Refereed Journal Articles**


Çetinkaya, S., Pritchard Distinguished Speaker, Department of Industrial and Systems Engineering, Mississippi State University, Starkville, Miss., Oct. 2011

Çetinkaya, S., INFORMS Lecture Series, Management Systems Engineering Department, University of South Florida, Tampa, Fla., Oct. 2011

Çetinkaya, S., Erasmus Research Institute of Management Seminar, Erasmus University, Rotterdam, The Netherlands, Jun. 2011


Wei, B. and S. Çetinkaya, “Shipment Consolidation when Demand is Brownian Motion with Drift,” INFORMS Annual Meeting, Charlotte, N. C., Nov. 2011


**Presentations**

Sila Çetinkaya
Professor
Ph.D., McMaster University
sila@tamu.edu

Professional Activities
Session Organizer and Chair, INFORMS Annual Meeting
Reviewer, National Science Foundation proposal panel


Editorial Board Member, *Journal of Combinatorial Optimization*

Editorial Board Member, *Journal of Global Optimization*

Editorial Board Member, *Optimization Letters*

Editorial Board Member, Computational Management Science

Editorial Board Member, *International Journal of Computational Science and Engineering*

**Research**


Tekin, E. (PI) and S. Çetinkaya (Co-PI), “Supply Chain Revenue Management: Mitigating Profit-at-risk in Manufacturing and Distribution Networks,” 2006-2010, National Science Foundation, $250,000

**Refereed Journal Articles**


**Presentations**

Çetinkaya, S., Pritchard Distinguished Speaker, Department of Industrial and Systems Engineering, Mississippi State University, Starkville, Miss., Oct. 2011

Çetinkaya, S., INFORMS Lecture Series, Management Systems Engineering Department, University of South Florida, Tampa, Fla., Oct. 2011

Çetinkaya, S., Erasmus Research Institute of Management Seminar, Erasmus University, Rotterdam, The Netherlands, Jun. 2011


Wei, B. and S. Çetinkaya, “Shipment Consolidation when Demand is Brownian Motion with Drift,” INFORMS Annual Meeting, Charlotte, N. C., Nov. 2011


**Professional Activities**
Department Editor, *IIE Transactions on Scheduling and Logistics*

Associate Editor, Naval Research Logistics

Member, Editorial Board, *International Journal of Inventory Research*

Judge, Paper Competition, Junior Faculty Interest Group, INFORMS

Judge, Doing Good with Good OR Paper Competition, INFORMS

Reviewer, Hong Kong Research Grants Council

Member, Advisory Board, Advances in Supply Chain and Manufacturing Management, Indian Institute of Technology, Kharagpur, India
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.

Proceedings and Other Publications

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

Dr. Ding’s research interests are in the area of quality and reliability engineering, with emphases 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. (PI), “Collaborative Research: Multi-accuracy Bayesian Models for Improving Property Prediction of Nanotube Buckypaper Composites,” 2010-2013, National Science Foundation, $178,233 (In collaboration with Chuck Zhang, Arda Vanli and Ben Wang at Florida State University)


Refereed Journal Articles


Proceedings and Other Publications

Presentations
Ding, Y., “Analysis and Design of Distributed Sensing: Research Issues and Opportunities,” School of Industrial and Systems Engineering, Georgia Institute of Technology, Atlanta, Ga., Jan. 2011

Ding, Y., “Automated Morphology Analysis of Nanoparticles,” Quality Science Center, Chinese Academy of Science, Beijing, China, Jul. 2011

Ding, Y., “Analysis and Design of Distributed Sensing: Research Issues and Opportunities,” Department of Informatics, Technical University of Denmark,
Lyngby, Denmark, Aug. 2011

Ding, Y, “Wind Turbine Reliability and Maintenance,” Wind Energy Division, Risø DTU National Laboratory for Sustainable Energy, Roskilde, Denmark, Aug. 2011


Professional Activities
Department Editor, IIE Transactions on Quality and Reliability

Richard M. Feldman
Professor and Director of Undergraduate Program
Ph.D., Northwestern University
richf@tamu.edu

Dr. Feldman specializes in applied probability, simulation and operations research. He teaches simulation, operations research, stochastic processes, and queueing theory, and has co-authored text books in these areas.

Research
Phillips, D. T. (PI) and R. Feldman (Co-PI), “HS-STEM (to support Master’s students in industrial and systems engineering

with a homeland security specialization),” 2009, Department of Homeland Security, $390,000

Proceedings and Other Publications


Dr. Ferris’ research interests are in human factors and cognitive ergonomics, and can be described as the study of cognition in human-machine engineered systems. His primary focus involves human information processing and design to support attention and interruption management. In particular, he investigates novel interface design techniques, employing alternative display modalities such as the sense of touch. Other research interests include human error, decision making under time pressure, and human-automation interaction. He has interest and experience in applying his research to the domains of medicine, military operations, aviation, and ground transportation.

Refereed Journal Articles


Presentations


Professional Activities
Session Chair, Health Care Technical Group, Human Factors and Ergonomics Society Annual Meeting

Panelist, Student Development Workshop, Human Factors and Ergonomics Society Annual Meeting

Thomas Ferris
Assistant Professor
Ph.D., University of Michigan
tferris@tamu.edu

Dr. Ferris, T., “Multitasking and Interruption Management,” Texas A&M University Department of Biomedical Engineering, College Station, Tex., Jun. 2011


Proceedings and Other Publications


Research
Phillips, D. T. (PI) and R. Feldman (Co-PI), “HS-STEM (to support Master’s students in industrial and systems engineering

with a homeland security specialization),” 2009, Department of Homeland Security, $390,000

Proceedings and Other Publications


Richard M. Feldman
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Research
Phillips, D. T. (PI) and R. Feldman (Co-PI), “HS-STEM (to support Master’s students in industrial and systems engineering

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Proceedings and Other Publications


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Refereed Journal Articles


Presentations


Professional Activities
Session Chair, Health Care Technical Group, Human Factors and Ergonomics Society Annual Meeting

Panelist, Student Development Workshop, Human Factors and Ergonomics Society Annual Meeting
Faculty Accomplishments

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. Currently, he is also working 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


Salin, V., G. Gaukler and M. Ketzenberg, “Value of Time and Temperature History RFID Technology to Leverage Return on Traceability Investments,” 2011, U.S. Department of Agriculture, Agriculture and Food Research Initiative, $115,000 (ISEN portion $34,510)

Refereed Journal Articles


Gaukler, M., “Item-level RFID in a Retail Supply Chain with Stockout-based Substitution,”


Proceedings and Other Publications


Professional Activities
Dr. Gautam’s areas of interest include developing methods for analyzing stochastic systems; control, performance evaluation and optimization; queues and networks. His specific research domains include energy conservation and efficiency; dynamics and interactions of biological systems; computer and information infrastructure.

Research

Gautam, N. (PI) and L. Ntaimo (Co-PI), “Reducing Energy Consumption in Data Centers,” 2009-2011, National Science Foundation, $240,000

Refereed Journal Articles


Proceedings and Other Publications


Professional Activities

Session Chair, INFORMS Applied Probability Conference

Past President, IIE Computer and Information Systems Division

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

Associate Editor, INFORMS Journal on Computing

Associate Editor, Omega

Area Editor, IIE Transactions on Communications

Reviewer, IEEE Transactions on Automation Science and Engineering

Reviewer, Telecommunication Systems

Reviewer, IEEE Transactions on Computers

Reviewer, IEEE Transactions on Automatic Control

Reviewer, IEEE Transactions on Systems, Man and Cybernetics

Reviewer, Queueing Systems

Stockholm, Sweden, Jul. 2011


Natarajan Gautam

Associate Professor

Ph.D., University of North Carolina at Chapel Hill

gautam@tamu.edu
Sports Economics, Vol. 12, No. 6, 579 - 598, 2011


Proceedings and Other Publications


Presentations


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.

Research


Refereed Journal Articles


Proceedings and Other Publications

Presentations


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, queuing theory, stochastic processes, engineering systems design, production operations, reliability and maintenance science.

Research


Moreira, R. G. (PI), M. E. Castell-Perez (Co-PI), G.-A. Klutke (Co-PI) and J. Ancisco (Co-PI), “Specialty Crop Block Program,” 2010 - 2011, Texas Department of Agriculture, $78,450 (ISEN portion $5000)

Refereed Journal Articles


Proceedings and Other Publications


Professional Activities

Series Editor for Production Systems, Springer Series in Mechanical Engineering

Reviewer, Korean Ministry of Science, Engineering and Technology’s World Class University Program

Reviewer, National Science and Engineering Research Council of Canada’s Discovery Grant Program

Reviewer, Naval Research Logistics

Reviewer, Journal of Structural Engineering

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 to the Department of Engineering Technology and Industrial Distribution.)

Research

Lawrence, B. and V. J. Leon (Co-PI’s), “Mexico-Texas Trade Corridor Consortium,” 2010 - 2012, various sponsors, $70,000

Professional Activities

Series Editor for Production Systems, Springer Series in Mechanical Engineering

Reviewer, Korean Ministry of Science, Engineering and Technology’s World Class University Program

Reviewer, National Science and Engineering Research Council of Canada’s Discovery Grant Program

Reviewer, Naval Research Logistics

Reviewer, Journal of Structural Engineering

Cesar O. Malave

Professor and Interim Department Head Ph.D., University of South Florida malave@tamu.edu

Dr. Malavé’s research interests are in the area of manufacturing systems analysis and planning. He teaches graduate courses and conducts research in the area of manufacturing systems modeling and control.

Erick Moreno-Centeno

Assistant Professor Ph.D., University of California, Berkeley emc@iemail.edu

Dr. Moreno-Centeno’s research interests include network and combinatorial optimization, integer programming, and computational optimization. His

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 to the Department of Engineering Technology and Industrial Distribution.)

Research

Lawrence, B. and V. J. Leon (Co-PI’s), “Mexico-Texas Trade Corridor Consortium,” 2010 - 2012, various sponsors, $70,000

Professional Activities

Series Editor for Production Systems, Springer Series in Mechanical Engineering

Reviewer, Korean Ministry of Science, Engineering and Technology’s World Class University Program

Reviewer, National Science and Engineering Research Council of Canada’s Discovery Grant Program

Reviewer, Naval Research Logistics

Reviewer, Journal of Structural Engineering

Cesar O. Malave

Professor and Interim Department Head Ph.D., University of South Florida malave@tamu.edu

Dr. Malavé’s research interests are in the area of manufacturing systems analysis and planning. He teaches graduate courses and conducts research in the area of manufacturing systems modeling and control.

Erick Moreno-Centeno

Assistant Professor Ph.D., University of California, Berkeley emc@iemail.edu

Dr. Moreno-Centeno’s research interests include network and combinatorial optimization, integer programming, and computational optimization. His
Research


Moreno-Centeno, E., “Axiomatic Aggregation of Incomplete Evaluations,” Theory/Experimental Seminar, Department of Economics, Texas A&M University, College Station, Tex., Sep. 2011


Refereed Journal Articles


Presentations


Moreno-Centeno, E., “Axiomatic Aggregation of Incomplete Evaluations,” Theory/Experimental Seminar, Department of Economics, Texas A&M University, College Station, Tex., Sep. 2011


Professional Activities

Delegate, Mexican Operations Research Society, International Federation of Operational Research Societies

Reviewer, Networks

Reviewer, International Journal of Management Science

Reviewer, Annals of Operations Research


Ntaimo, L. (PI), X. Hu (Co-PI), Y. Hong (Co-PI), J. Nutaro (Co-PI) and M. Xue (Co-PI), “Collaborative Research: Integrated Weather and Wildfire Simulation and Optimization for Wildfire Management,” 2009 - 2013, National Science Foundation, $1,000,000 (ISEN portion $220,825)

Refereed Journal Articles


Faculty Accomplishments

Presentations


Professional Activities

Research Advisor for Operations Research, Arizona Center for Integrated Manufacturing and Simulation

Member, Technical Committee, Spring Simulation Multiconference, DEVS Symposium

Reviewer, Air Force Office of Scientific Research

Professional Activities

Member, Council of Industrial Engineering Academic Department Heads

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 TAMU. 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 IIE Fellow and a member of SME.

Research


TEES Grant 98803–#32125; Homeland Security Initiative, $64,933.93

TEES Research Grant 19007-#32294; Homeland Security Research Initiative, $13,196.63

Refereed Journal Articles


Proceedings and Other Publications


Presentation

Phillips, D. T., S. Sink, J. T. Black and J. Shook, “The Lean Engineer:


Professional Activities

Program Coordinator, Texas A&M University System Homeland Security Engineering Research

Member, Technical Advisory Board, Department of Homeland Security Center of Excellence Program in Petrochemical Ground Transportation Security, Prairie View A&M University

Chief Technical Scientist and Technical Advisor, Department of Homeland Security Border Security Research Program, Department of Industrial and Systems Engineering at Texas A&M University, Department of Engineering Technology at University of Texas San Antonio, and Texas Transportation Institute

Member, Advisory Board, Institute of Industrial Engineers LEAN Division

Member, Engineering Advisory Board, Lamar University

Donald R. Smith
Associate Professor and Director of Distance Learning Program
Ph.D., University of Arkansas
dr-smith@tamu.edu

Dr. Smith’s research interests are in large systems database design, highway segment data collection and analysis, systems simulation and cost modeling for advanced manufacturing systems. He teaches engineering economic analysis, computer programming, engineering management, industrial labor relations, facilities layout and design, and production planning and control. Dr. Smith is a member of the Advisory Council of the International Center for Sustainable Development for the Republic of Panama.

Presentation


Halit Uster
Associate Professor
Ph.D., McMaster University
uster@tamu.edu

Dr. Üster’s research interests are in network design, 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


Refereed Journal Articles


Üster, H. and H. Agrahari, “A Benders Decomposition Approach for a
Faculty Accomplishments


**Presentations**


**Professional Activities**

Member, Review Panel, National Science Foundation

Reviewer, *Applied Mathematics and Computation*

Reviewer, *Computers and Industrial Engineering*

Reviewer, *Discrete Applied Mathematics*

Reviewer, *European Journal of Operational Research*

Reviewer, *International Journal of Production Research*

Reviewer, *Journal of the Operational Research Society*

Reviewer, *Manufacturing and Services Operations Management*

Reviewer, *Omega*

Reviewer, *Production and Operations Management*

Reviewer, *Sensors*

Reviewer, *Transportation Research: Part E*

Reviewer, IEEE GLOBECOM 2011 (Ad-hoc and Sensor Networking Symposium)

**Wilbert E. Wilhelm**

Mike & Sugar Barnes Professor
Ph.D., Virginia Polytechnic Institute and State University
wilhelm@tamu.edu

Dr. Wilhelm specializes in the methodology and application of optimization, especially integer programming. His ongoing discipline-oriented research focuses on integer programming methods and his applied work deals with the design of supply chains, the location of homeland security and healthcare facilities, and the scheduling of operations in the healthcare field. He teaches courses in integer programming, linear programming, scheduling, and production and operations analysis. Professor Wilhelm is an IIE Fellow and a recipient of the IIE David F. Baker Distinguished Research Award and of the SME Gold Medal Award.

**Research**


Wilhelm, W. E., “The Stochastic Healthcare-Facility Configuration Problem,” 2011 - 2013, National Science Foundation, $160,000 (+ $22,000 supplementary grant)

**Refereed Journal Articles**


**Presentations**


Refereed Journal Articles


Presentations


Yates, J., “Applications in Spatially-based Optimization Techniques,” INFORMS Student Chapter Seminar Series, Texas A&M University, College Station, Tex., Oct. 2011


Professional Activities

Member Organizing Committee, Invited Sessions Co-chair, INFORMS 2011 Annual Meeting

Member Organizing Committee, Invited Sessions Co-chair, INFORMS 2013 Annual Meeting


Track Co-chair, Homeland Security Track, Industrial Engineering Annual Research Conference
Faculty Recognized for Excellence

Texas A&M Engineering recognized these industrial and systems engineering faculty members with awards for teaching, research and service at a banquet in May.

Dr. Cetinkaya was named a William O. and Montine P. Head Faculty Fellow by the Look College of Engineering.

Guy Curry received the Charles Crawford Distinguished Service Award for his many years of dedicated service to the college and the department.

Yu Ding was named a Texas Engineering Experiment Station Faculty Fellow for his excellence in research.

Halit Uster received the Caterpillar Teaching Award from the Look College of Engineering for his excellence in teaching.

Former Students Active at IIE Conference

Dean Liollio ’83, member of the Industrial and Systems Engineering Department Advisory Council, was named a Captain of Industry at the Institute of Industrial Engineers Annual Research Conference. This award is to honor individuals who have assumed positions of leadership in business, industry, or government and who continue to demonstrate leadership in a national or international context and identify the industrial engineering profession as a key reason for their success. Liollio is President of PAA Natural Gas Storage, LLC.

Another former student, John Scott ’73, was a keynote speaker for the conference. Scott is founder and president of Applied Systems and Technology Transfer, which is focused on commercialization of emerging technologies in the energy, manufacturing, and defense markets. He was formerly president and COO of Parsons Corp., one of the world’s largest engineering and construction companies. Scott has been a leader in promoting collaboration between industry and academia. He serves on the advisory councils of both the Department of Industrial and Systems Engineering and the Dwight Look College of Engineering at Texas A&M.
Graduate Degrees Awarded

Alexander, Ivan, M. Eng.  
(advisor, Justin Yates)

Alghamdi, Abdulwahab H., M. Eng.  
(advisor, Guy Curry)

An, Heung Jo, Ph. D., “Optimization and Simulation for Designing the Supply Chain”  
(advisor, Wil Wilhelm)

Ancines Calle, Paola A., M. Eng.  
(advisor, Guy Curry)

Arjunan, Naveenan, M. S.  
(advisor, Gary Gaukler)

Aulenbacher, Carlos, M. Eng.  
(advisor, Don Smith)

Awe, Olajumoke Aramide, M. S.  
(advisor, Lewis Ntaimo)

Balasubramaniam, Chitra, M. Eng.  
(advisor, Guy Curry)

Beier, Eric, Ph. D., “Subgradient-based Decomposition Methods for Stochastic Mixed-integer Programs with Special Structures”  
(advisor, Lewis Ntaimo)

Bhatt, Paras, M. S.  
(advisor, Gary Gaukler)

Brown, William Eric, M. Eng.  
(advisor, Richard Feldman)

Cardona Gomez, Pamela Berenice, M. Eng.  
(advisor, Don Smith)

Chastain, Ashley Michelle, M. Eng.  
(advisor, Guy Curry)

Chen, Ming, M. Eng.  
(advisor, Guy Curry)

Chen, Nannan, M. S.  
(advisor, Justin Yates)

Chidambaram, Harihara Krishnan, M. S.  
(advisor, Gary Gaukler)

Divaker, Deepak Vivian, M. Eng.  
(advisor, Guy Curry)

Doan, Huy Quoc, M. Eng.  
(advisor, Sergiy Butenko)

DuBois, Amanda, M. Eng.  
(advisor, Guy Curry)

Dunavant, Connie, M. Eng.  
(advisor, Don Smith)

Dutta, Pinak, M. Eng.  
(advisor, Guy Curry)

Ganesh, Mukund, M. S.  
(advisor, Justin Yates)

Ganti, Uma M., M. Eng.  
(advisor, Guy Curry)

Guaracao Munoz, Paola M., M. Eng.  
(advisor, Guy Curry)

Guo, Mingli, M. S.  
(advisor, Georgia-Ann Klutke)

Hall, Keith, M. S., “Addressing the Consensus Problem in Real-time Using Lightweight Middleware on Distributed Devices”  
(advisor, Abhijit Deshmukh)

Harris, Madelyne, M. Eng.  
(advisor, Guy Curry)

Hill, Christopher Charles, M. Eng.  
(advisor, Justin Yates)

Jagannathan, Shilpa, M. Eng.  
(advisor, Natarajan Gautam)

Jayanty, Sri Satya Kahaka, M. Eng.  
(advisor, Guy Curry)

Jayapathy, Gouthaman, M. Eng.  
(advisor, Andrew Johnson)

Jing, Yan, M. Eng.  
(advisor, Georgia-Ann Klutke)

Johns, Jason W., M. Eng.  
(advisor, Guy Curry)

Josyula, Ramakanth Sai, M. Eng.  
(advisor, Guy Curry)

Kambarrajan, Mahesh, M. Eng.  
(advisor, Guy Curry)

Kapil, Mudit, M. Eng.  
(advisor, Guy Curry)

Kayati, Manasa, M. Eng.  
(advisor, Guy Curry)

Kettavarampalayam, Vanmukil, M. Eng.  
(advisor, Guy Curry)

Kim, Euihyun, M. S.  
(advisor, Gary Gaukler)

Kim, Taegyun, M. Eng.  
(advisor, Guy Curry)

Kim, Young Ho, M. Eng.  
(advisor, Guy Curry)

Ko, Young Myoung, Ph. D., “Transient Analysis of Large-scale Stochastic Service Systems”  
(advisor, Natarajan Gautam)

Kothandaraman, Balaji, M. Eng.  
(advisor, Guy Curry)
Graduate Degrees Awarded

(advisor, Justin Yates)

Krishnamurthy, Prabu, M. S.  Quintanilla Salinas, Nino Luciano, M. Eng. (advisor, Don Smith)
(advisor, Sergiy Butenko)

Kulkarni, Lokesh Gururaj, M. Eng.  Reddi, Praveen Kumar, M. Eng.
(advisor, Guy Curry)  (advisor, Guy Curry)

Kumar, Gaurav, M. Eng.  Ren, Ting, M. Eng.
(advisor, Sergiy Butenko)  (advisor, Guy Curry)

(advisor, Guy Curry)  (advisor, Justin Yates)

Lakshmanan, Kavitha, M. Eng.  Saha, Arojit, M. Eng.
(advisor, Justin Yates)  (advisor, Guy Curry)

Lee, Chaehwa, Ph. D., “On Integrating Theories of International Economics in the Strategic Planning of Global Supply Chains and Dynamic Supply Chain Reconfiguration with Capacity Expansion and Contraction” (advisor, Wil Wilhelm)

Li, Pengxi, M. Eng.  Sethuraman, Samyukta, M. Eng.
(advisor, Guy Curry)  (advisor, Guy Curry)

Li, Qiang, M. S.  Seyedolshohadaie, Seyed Reza, Ph. D., “Modeling Risks in Infrastructure Asset Management” (advisor, Sergiy Butenko)
(advisor, Georgia-Ann Klutke)  (advisor, Guy Curry)

Lim, Jongku, M. S.  Shafaat, Ali, M. Eng.
(advisor, Lewis Ntaimo)  (advisor, Guy Curry)

Liu, Xin, M. Eng.  Shah, Neeraj Vidyutkumar, M. Eng.
(advisor, Guy Curry)  (advisor, Guy Curry)

(advisor, Guy Curry)  (advisor, Wil Wilhelm)

Madhavan, Srikkanth, M. Eng.  Somy, Midhun, M. Eng.
(advisor, Gary Gaukler)  (advisor, Andrew Johnson)

Mangat, Tanu Baljeet, M. Eng.  Sridharan, Sriram, M. S.
(advisor, Justin Yates)  (advisor, Gary Gaukler)

Millwala, Hasnain Khozem, M. S.  Sriperumbudur, Charunyanath, M. Eng.
(advisors, Guy Curry and Gary Gaukler)  (advisor, Natarajan Gautam)

Papashkeev, Shilpa, M. Eng.  Tangri, Manuj, M. Eng.
(advisor, Guy Curry)  (advisor, Sergiy Butenko)

Pope, Brandon Reed, Ph. D., “Engineering Incentives in Distributed Systems with Healthcare Applications” (advisors, Abhijit Deshmukh and Andrew Johnson)

Quintanilla Salinas, Nino Luciano, M. Eng. (advisor, Don Smith)

Reddi, Praveen Kumar, M. Eng.
(advisor, Guy Curry)

Ren, Ting, M. Eng.
(advisor, Guy Curry)

Rodgers, Jessica A., M. Eng.
(advisor, Justin Yates)

Saha, Arojit, M. Eng.
(advisor, Guy Curry)

Sethuraman, Samyukta, M. Eng.
(advisor, Guy Curry)

Seyedolshohadaie, Seyed Reza, Ph. D., “Modeling Risks in Infrastructure Asset Management” (advisor, Sergiy Butenko)

Shafaat, Ali, M. Eng.
(advisor, Guy Curry)

Shah, Neeraj Vidyutkumar, M. Eng.
(advisor, Guy Curry)

Smith, Embre Jay, M. Eng.
(advisor, Wil Wilhelm)

Somy, Midhun, M. Eng.
(advisor, Andrew Johnson)

Sridharan, Sriram, M. S.
(advisor, Gary Gaukler)

Sriperumbudur, Charunyanath, M. Eng.
(advisor, Natarajan Gautam)

Tangri, Manuj, M. Eng.
(advisor, Sergiy Butenko)

Thapa, Himanshu, M. Eng.
(advisor, Guy Curry)
Thiagarajan, Abishek, M. Eng.  
(advisor, Guy Curry)

Tschirhart, Michael, M. Eng.  
(advisor, Don Phillips)

Varadarajan, Aditya, M. S.  
(advisor, Sergiy Butenko)

Viswanathan, Laxminarayanan, M. Eng.  
(advisor, Guy Curry)

Wang, Kuan-Wen, M. Eng.  
(advisor, Georgia-Ann Klutke)

Wang, Yan, M. Eng.  
(advsiors, Guy Curry and Yu Ding)

Woo, Soonjung, M. S.  
(advisor, Justin Yates)

Yellaia Naidu Selvar, Devaanandh, M. Eng.  
(advisor, Guy Curry)

Yerasi, Pranavi, M. S., “Productivity Improvement of a Manual Assembly Line”  
(advisors, Jorge Leon and Guy Curry)

Yezerska, Oleksandra, M. S.  
(advisor, Sergiy Butenko)

You, No Young, M. S.  
(advisor, Georgia-Ann Klutke)

Zelik, Jonpaul Michael, M. Eng.  
(advisor, Guy Curry)

Zhang, Chi, M. Eng.  
(advisor, Sergiy Butenko)

Zhang, Lijing, Ph. D., “Stochastic Dynamic Demand Inventory Models with Explicit Transportation Costs and Decisions”  
(advisor, Sila Çetinkaya)

Zhao, Jingshu, M. Eng.  
(advisor, Guy Curry)