A Message from the Chair

Dear QSR Section members,

It is my pleasure to report that the QSR section had a productive year in 2021-2022. We managed to propose and implement various initiatives, activities, and events toward improving our service to the members and friends in the community.

This year, the QSR Section has sponsored 57 (originally 44) sessions at the INFORMS Annual Meeting 2022, including 55 regular-talk sessions and 2 flash-talk sessions. The regular-talk sessions include 9 joint sessions with other sections and societies, such as the Data Mining Section, College on Artificial Intelligence Section, Optimization Society, and Health Application Society (HAS). The sponsored sessions include 2 panel discussions (originally 6) on Starting Academic Career for New QSR Faculty Members 2022, and the Student Introduction and Interaction Session. The QSR sessions also feature 5 competitions including the QSR Best Refereed Paper competition, the QSR Best Student Paper competition, the QSR Best Case Study Paper competition, the QSR Best Student Poster competition, and the QSR Industry Data Challenge. There are also 4 journal-focused sessions (originally 3) among QSR-sponsored sessions, including Technometrics, IIE Transactions, Journal of Quality Technology (JQT), and Journal of Intelligent Manufacturing.

Finally, the QSR Section is sponsoring the QSR Business Meeting and Dinner event at the Crowne Plaza Indianapolis (123 W Louisiana St, Indianapolis, IN 46225) on the evening of Monday, October 17.

This year, the QSR Section has also organized the 2nd QSR Workshop, which will be held in person on October 15.

20 speakers will contribute to the Workshop and more than 50 attendees are expected. The Workshop consists of 8 sessions, including 4 invited sessions. The workshop will also host the Data Challenge competition. The keynote speaker will be Professor Kwok L. Tsui, from the Grado Department of Industrial and Systems Engineering, at Virginia Tech. The industry keynote speaker will be Jason Ryska from Ford Motor Company.

The Workshop will also host a joint panel on AI Fairness and Interpretability with DMDA Workshop. The QSR Workshop is co-chaired by Abdallah Chehade, University of Michigan-Dearborn, Ran Jin, Virginia Tech, and Kaibo Liu, UW-Madison, and the workshop executive committee includes Abdallah Chehade, Ran Jin,
Kaibo Liu, Eunshin Byon, Ramin Moghaddas, Jian Liu, and Kwok Tsui.

The QSR Section will host the Student Introduction and Interaction session. The session is one of QSR's very own and has been successfully organized in the last few years to help bring PhD students into the spotlight to showcase their research through a brief elevator speech and then benefit from the advice of prominent QSR faculties in a mini panel discussion on how to land academic positions, navigate academic life, research, and teaching.

The Student Introduction and Interaction Session is designed for QSR student members to build their professional network, show up their talents, and learn from invited guests. In this session, each student will be given two minutes to deliver an elevator speech about his/her research interests and accomplishments. Senior QSR members, junior faculty members, and industry guests are invited to interact with all attendees.

The Student Introduction and Interaction Section was chaired by Hao Yan, Arizona State University, and Xiaolei Fang, North Carolina State University. It will be held on Monday, Oct 17, 2022, 8:00 AM - 9:15 AM in M - Marriott 5 with session ID MA58. So far, we have 12 students as participants, mainly from Virginia Tech, Mississippi State University, Texas A&M University, Rutgers University, Oklahoma State University, and Georgia Tech. The session will start with a short introduction of each student, and then the panelists, Jeffrey P. Kharoufeh (Clemson University), Lulu Kang (The Illinois Institute of Technology), Ana Maria Estrada Gomez (Purdue University), and Junzi Zhang (Amazon), will discuss topics related to academia and industry. Finally, there will be an interaction session where all students, panelists, and other participants can chat and share ideas.

As in previous years, the QSR Section organizes and hosts various competitions.

The QSR Best Refereed Paper Competition was chaired by Yisha Xiang, University of Houston, Yili Hong, Virginia Tech, Kamran Paynabar, Georgia Tech. We received 28 submitted papers. The titles and authors of the four finalist papers (alphabetically ordered) are:

- Bo Shen and Zhenyu (James) Kong, A novel active anomaly discovery method and its applications in additive manufacturing.
- Seokhyun Chung and Raed Al Kontar, Federated Multi-output Gaussian Process.
- Xinchao Liu, Xiao Liu, Tulin Kaman, and Guang Lin, Physics-informed statistical learning and prediction for nonlinear dynamical systems.
- Xinmin Wang, Chao Wang, Xuan Song, Levi Kirby, and Jianguo Wu, Multi-source transfer learning through regularized multi-output Gaussian convolution process.

The finalists will present their work to a panel of judges at a special session during the 2022 INFORMS Annual Meeting in Indianapolis, IN. The session ID is MB57, and it will take place in-person in M - Marriott 4 from 11:00AM - 12:15 PM on Monday, October 17.

The QSR Best Student Paper Competition was chaired by Lulu Kang, Illinois Tech, Xiao Liu, University of Arkansas, Ran Jin, Virginia Tech. We received 31 submitted papers this year. The titles and authors of the four finalist papers (alphabetically ordered) are:

- Yingyan Zeng, Xiaoyu Chen, Ran Jin (Virginia Tech), Ensemble Active Learning by Contextual Bandits for AI Training in Manufacturing.
- Zihan Zhang, Shancong Mou, Kamran Paynabar, Jianjun Shi (Georgia Tech),
Tensor-based Temporal Control for Partially Observed High-dimensional Streaming Data.

- **Chengyu Zhou and Xiaolei Fang** (North Carolina State University), A Supervised Tensor Dimension Reduction-Based Prognostic Model for Applications with Incomplete Imaging Data.
- **Henry Shaowu Yuchi, V. Roshan Joseph, C. F. Jeff Wu** (Georgia Tech), Design and Analysis of Finite Element Simulations.

The final round of competition will be held in Session SB57 on Oct 16 Sunday from 11:00 am to 12:15 pm at M-Marriott 4.

This year, the **QSR Data Challenge Competition** was chaired by Arman Sabbaghi (Purdue University), Mohammad Babakmehr (Ford Motor Company), Parinaz Farajiparvar (Ford Motor Company), and Xiaoyu Chen (University of Louisville).

Fig. 2 – A sample scheme of the industrial problem provided by Ford Motor Company for the 2022 QSR Industrial Data Challenge competition

The QSR Data Challenge problem was kindly made possible by the Ford Motor Company. The industrial problem involved the early detection of quality issues in the manufacturing process to prevent potential in-vehicle failures in the future, reduce warranty cost, and improve customer satisfaction. During the End of Line (EoL) test process, an extensive set of data were collected and analyzed using sensor signals (time series) and images. The task of the QSR Data Challenge Competition was to develop an unsupervised machine learning model that can successfully detect anomalous patterns from multichannel time series data recorded during a manufactural EoL quality test from a specific vehicle component. Full details about the QSR industrial data challenge were posted at [https://qsr-data-challenge-2022.ml/](https://qsr-data-challenge-2022.ml/).

10 teams from 9 universities registered for the competition, and 6 submissions were finally received and evaluated. The members and titles of the three finalist teams are (in random order):

- **Yu An** (Peking University), Unsupervised Anomaly Detection and Root Cause Localization via GAT for Multi-variate Time Series
- **Qiuzhuang Sun** (National University of Singapore), Anomaly Detection and Root Cause Analysis for End-of-Line Vehicle Component Tests
- **Bo Shen** (New Jersey Institute of Technology), Jihoon Chung, Raghav Gnanasambandam, Yutong Zhang (Virginia Tech), Automatic Thresholding by Reconstruction Error in Unsupervised Anomaly Detection

The finalists will present their work to a panel of judges during the Second QSR Workshop, which will be held prior to the 2022 INFORMS Annual Meeting in Indianapolis, IN. The session will take place in-person from 2:30 - 3:45 PM on Saturday, October 15.
The **QSR Best Student Poster Competition** was chaired by Wenmeng Tian, Mississippi State University, and Ruizhi Zhang, University of Georgia. 23 students submitted their posters for review. They will also give a short presentation of their posters to a panel of judges at a special session during the 2022 INFORMS Annual Meeting. The session ID is MD58, and it will take place in-person in M - Marriott 5 from 2:00 - 3:15 PM on Monday, October 17.

The **QSR Best Case Study Paper Competition** is a new competition this year. The objective was to foster the collection of novel papers on real-life applications in the areas of quality, statistics, reliability, and data science that cater to next-generation problems in industry, consulting, and government. This competition is differentiated from existing ones in its focus on impactful and new case studies that (a) present innovative and well-reasoned strategies to solve challenging problems, (b) demonstrate the Scientific Method, and (c) can lead to further productive discussions and collaborations between academia and industry, consulting, and government. In addition, committee members and judges for this competition were drawn from industry, consulting, and government so as to put more emphasis on relevant applied considerations during the evaluation of the submissions.

The competition was chaired by Arman Sabbaghi (Purdue University), Ron Kenneet (KPA Group and Samuel Neaman Institute, Technion), Peter Parker (NASA Langley Research Center), Kamran Paynabar (Georgia Tech), Shan Ba (LinkedIn), and Raquel de Souza Borges Ferreira (Intel).

We received 6 paper submissions. The authors and titles of the three finalist papers are (in random order):

- **Tong Wu, Yudong Wang, Zhisheng Ye, Nan Chen** (National University of Singapore), **Zhijian Chen** (China Tower Corporation), Spatio-Temporal Analysis of Mass Telecommunication Base Station Failure Events
- **Mengfei Chen, Weihong (Grace) Guo** (Rutgers University), **Richard Furness, Rajesh Gupta, Saumuy Puchala** (Ford Motor Company), Hierarchical RNN-Based Framework for Throughput Prediction in Automotive Production Systems
- **Maede Maftouni, Bo Shen, Andrew Chung Chee Law, Zhenyu (James) Kong** (Virginia Tech), **Niloofar Ayoobi Yazdi, Fereshteh Ghiasvand** (Tehran University of Medical Sciences), **Fahimeh Hadavand** (Shahid Beheshti University of Medical Sciences), A Mask-Guided Attention Deep Learning Model for COVID-19 Diagnosis Based on an Integrated CT Scan Images Database.

The finalists will present their work to a panel of judges at a special session during the 2022 INFORMS Annual Meeting in Indianapolis, IN. The session ID is MC57, and it will take place in-person in M - Marriott 4 from 12:30 - 1:45 PM on Monday, October 17.

The winners of QSR competitions will be announced at the QSR Business Meeting in the evening of October the 17th.

On behalf of the QSR Council and the entire QSR Community, I would like to express my congratulations to the finalists of all the QSR competitions, and a warm thanks to the reviewers and judges for their time and efforts in evaluating the manuscripts and posters, and providing their comments and feedback.

As every year, great effort has been devoted by the QSR Subcommittees in the organization,
management and dissemination of many initiatives that make our Section one of the most active INFORMS sections.

The **QSR Conference Subcommittee** conducted conference planning and data analytics for QSR sessions and surveys. The committee is chaired by Jian Liu (University of Arizona) and it includes Xiaochen Xian (University of Florida), Chenang Liu (Oklahoma State University), and Hongyue Sun (University at Buffalo).

The **QSR Fundraising Subcommittee** is chaired by Hongyue Sun (University at Buffalo) with members Wenmeng Tian (Mississippi State University), and Xiaochen Xian (University of Florida). During the year, the Subcommittee had several brainstorming sessions to identify potential funding raising channels to support QSR activities, draft the plan, and run the call for funding. The main outcomes of this year are: (1) establishment of a QSR membership repository for fundraising purposes; (2) preparation and ran of the call for sponsorship by sending it to social media channels, and sending individual emails to departments as well as established QSR members; (3) creation of an initiative for establishing foundation named after distinguished members; (4) initiation of the QSR sponsorship acknowledgment policy; (5) preparation and delivery of acknowledgment items; and (6) contribution to the planning of the Business Meeting dinner event.

The **QSR Membership Growth Subcommittee** is chaired by Mostafa Reisi Gahrooei (University of Florida) and Raed Al Kontar (University of Michigan), with members Dan Li (Clemson University), Nathan Gaw (Air Force Institute of Technology), Chao Wang (University of Iowa) and Akash Deep (Oklahoma State University). The Subcommittee initiated the effort to organize QSR joint webinars with ISEA and ENBIS. Two joint seminars with ISEA are organized so far. Also, two liaisons identified to work with ISEA. Prof. Shi accepted our invitation and introduced QSR to ISEA community as a mechanism to create new connections and members.

The Subcommittee organized two webinars, one by Dr. Raed Al Kontar and one by Dr. Peter Parker. It also created a survey to evaluate the strengths of our community and to determine the areas that require emphasis and improvements. The survey was sent through INFORMS, social media, and an email list.

The **QSR Academic Subcommittee** was chaired by Abdallah Chehade (UM-Dearborn), with members Xiao Liu (University of Arkansas), Wenmeng Tian (Mississippi State University), and Mayuresh Savargaonkar (UM-Dearborn). They continued last year’s effort to serve and promote the academic activities of the QSR Community within and beyond INFORMS. This year, the two most important activities were the organization of the 2nd INFORMS QSR Workshop and the beginning of a series of panels for starting academic careers for new faculty members. A total of 20 speakers contributed to the Workshop, with more than 50 attendees. The Workshop hosted eight sessions, including four invited sessions, one academic keynote session, one industry keynote session, a data challenge competition, and a joint panel on AI fairness with Data Mining & Data Analytics (DMDA) workshop. Xiao Liu (University of Arkansas) moderated the academic career panel, and three distinguished panelists led the discussion Dr. Kaibo Liu (UW-Madison), Dr. Elsayed Elsayed (Rutgers University), and Dr. Kamran Paynabar (Georgia Tech University).

The **QSR Industry Relation Subcommittee** was chaired by Arman Sabbaghi (Purdue University), with members Shan Ba (LinkedIn),
Kamran Paynabar (Georgia Tech), Raquel Ferreira (Intel), Ana Maria Estrada Gomez (Purdue University), Lening Wang (GM), Luis Javier Segura Sanguco (University of Louisville). The mission of the Industry Relation Subcommittee is to stimulate industry-academia collaborations and increase the visibility and impact of the QSR Section in industry. From November 2021 – October 2022, the Subcommittee sought to host QSR competitions that would involve people from industry, government, and consulting, sponsor invited sessions and panels at the 2022 INFORMS Annual Meeting that would have speakers from industry, government, and consulting, and pursue activities to advance diversity, equity, and inclusion in the QSR section. Starting in 2022, the Subcommittee worked with Saman Alani-Azar, Karunesh Arora, Mohammad Babakmehr, Parinaz Farajiparvar, Andrew Henry, and Milad Zafar Nezhad from Ford Motor Company to organize the 2022 INFORMS QSR Data Challenge Competition. In addition, the Subcommittee received approval in 2022 from the QSR Advisory Board for their proposal to create a new Best Case Study Paper Competition. In addition to hosting these competitions, the Subcommittee organized three invited sessions, namely Case Studies from the International Statistical Engineering Association, ML/AI for Fairness, Transparency, and Interpretability, and Advances in Machine Learning and Statistics for the Automotive Industry

The second QSR Virtual Happy Hour was organized and held on May 25, 2022. This Happy Hour was a virtual event that consisted of an open discussion session on unconscious bias and involved a presentation of the INFORMS Diversity, Equity, and Inclusion (DEI) Committee’s initiatives with our QSR community. The event was conceived and promoted by Arman Sabbaghi, with an introduction on DEI’s activities from Chryssafis Vogiatzis (Vice-Chair of the INFORMS Diversity, Equity, and Inclusion Committee). Other activities were devoted to support other Subcommittees to strengthen the involvement of previous QSR members now working outside academia and to outreach student members as well. To this aim, a survey to collect contacts of former colleagues that are now in industry, government or consulting was created and shared within the community. The volunteers of the Public Communication Subcommittee
devoted great efforts in updating the contact information enclosed in QSR members’ lists, developing a procedure that will be implemented in following years to enhance the effectiveness of communications within and outside our community. Finally, a major effort was devoted to prepare the present QSR newsletter, which is aimed at providing the QSR Community with a detailed and up-to-date overview of the Section’s activities, initiatives, results, officers, boards and sponsors.

As you can imagine, the QSR council members and volunteers put their tremendous efforts, such that every QSR member received more benefits and QSR Section could keep growing stronger in the long term. This is well reflected in the most recent community report showing an increase in the number of QSR memberships to 320. I would like to earnestly thank the QSR council, advisory board, and volunteers for their tireless efforts toward our goals and sustained growth. I would also like to acknowledge our sponsors from Mississippi State University, Purdue University, Virginia Tech, University of Arkansas, Binghamton University, University of Florida, University at Buffalo, SUNY, and the University of Michigan-Dearborn among others. I would also like to thank the members, and friends, who have supported us in the past year by participating in various activities and providing us with valuable feedback. Without your support and encouragement, our success would not have been possible.

Yours sincerely,

Adel Alaeddini

Chair of the QSR Section, INFORMS

2021 Conference Review

INFORMS Annual Meeting, October 24-27, 2021, Anaheim, California.

The 2021 INFORMS Annual Meeting was held both in virtual and in-presence mode, as a consequence of difficulties imposed by the COVID-19 pandemic but opening to a gradual return to presential meetings.

Like every year, the QSR Section created many activities. This was made possible thanks to the QSR Advisory Board, QSR Council members, and many volunteers who contributed to the success of the event. The QSR Section was again among the most active sections in the
INFORMS, with 44 sponsored sessions. These sessions included:

- 6 joint sessions with other sections and societies, such as the Data Mining Section and the Health Application Society.
- 6-panel discussions on various topics including SBIR/STTR grants, Start-Ups, Internet of Federated Things, Automotive Industry, Data Science Journals Editors Perspective, and Student Introduction and Interaction Session.
- 4 competitions including the QSR best-refereed paper competition, the QSR best student paper competition, the QSR best poster competition, and the QSR data challenge.
- 3 journals focused sessions (originally 4) among QSR-sponsored sessions, including Technometrics, IISE Transactions, and Journal of Quality Technology (JQT).
- 3 international sessions, including one co-sponsored by ENBIS.

In 2021, the QSR Section also organized the 1st QSR Workshop. 21 speakers contributed to the Workshop and more than 85 people attended, in-person and virtually. The Workshop involved 10 sessions, including 4 invited sessions. The keynote speaker was Professor C.F. Jeff Wu, the Coca-Cola Chair in Engineering Statistics and Professor in the H. Milton Stewart School of Industrial and Systems Engineering at Georgia Tech. The QSR Workshop was co-chaired by Abdallah Chehade, Ran Jin, and Kaibo Liu and the workshop executive committee included Abdallah Chehade, Ran Jin, Kaibo Liu, Eunshin Byon, Ramin Moghaddas, Kamran Paynabar, and Kwok Tsui.

In 2021, QSR also organized the 1st networking Reception Event. The QSR Reception Subcommittee included Qiang Huang, Hao Yan, Mostafa Reisi Gahrooei, Bing Si, and Adel Alaeddini.

The four award competitions received several high-quality submissions (25 submissions for the QSR Best Student Paper Competition, 27 submissions for the QSR Best Refereed Paper Competition, and 12 participations for the QSR Best Student Poster Competition).

The winner and the finalists of the 2021 QSR Best Paper Competition are:

Ruda Zhang, Simon Mak, and David Dunson (WINNERS), Duke University, GPS: Gaussian Process Subspace Regression for Model Reduction.

Miao Bai, Dongmin Li, and Xiaochen Xian, Data-driven Pathwise Sampling Approaches for Online Anomaly Detection.

Cheolhei Lee, Kaiwen Wang, Jianguo Wu, Wenjun Cai and Xiaowei Yue, Partitioned Active Learning for Heterogeneous Systems.

Xubo Yue, Maher Nouiehed, and Raed Al Kontar, An Approach for Group and Individual Fairness in Federated Learning.

The winner and the finalists of the 2021 QSR Best Student Paper Competition are:

Xueqi Zhao (WINNER), Pennsylvania State University, A Registration-free Approach for Statistical Process Control of 3D Scanned Objects via FEM.
Amirhossein Fallahdizcheh, Data-level Transfer Learning for Degradation Modeling and Prognosis,

Yinan Wang, NP-ODE: Neural Process Aided Ordinary Differential Equations for Uncertainty Quantification of Finite Element Analysis,

Hui Wu, Adaptive Graph-Based Support Vector Data Description for Weakly-Supervised Anomaly Detection,

The winner and honorable mention of the 2021 QSR Best Student Poster Competition are:

Xinchao Liu (WINNER), University of Arkansas, Physics-Informed Statistical Model for Nonlinear Structural Dynamics of Aircraft-UAV Collisions

Guanzhou Wei (HONORABLE MENTION), University of Arkansas, Physics-Informed Statistical Modeling for Wildfire Aerosols Propagation

The winner and the finalists of the 2021 QSR Industry Data Challenges are:

Yuanyuan Gao, Ruiyu Xu, Zheren Song, Song Huang (WINNERS), Peking University, Department of Industrial Engineering and Management

Dongmin Li, Xin Zan, University of Florida, Department of Industrial and Systems Engineering

Min Qian, Yanan Wang, Wenqiang Zheng, Huan Wang, Tsinghua University, Department of Industrial Engineering

Preview of the new QSR analytical website

A new initiative launched this year involved the design and development of a new web-portal for the QSR community. It was conceived to promote excellent research activities, to spotlight talented researchers in QSR, to foster research connections and collaborations within the community, to share data and code, to raise awareness about research topics and achievements, and to collect feedbacks and suggestions from our members. This website was designed with the functionality to collect, analyze, and visualize the ongoing activities of the QSR society. The research trends, profiles, collaborations, and specialisms of QSR members can be well demonstrated to the public and shared within the community thanks to the analytical tools that will be made available in this new web-portal. It is not meant to replace the existing QSR website hosted by INFORMS, but to provide the QSR Section with a new powerful and complementary tool. The website is still under development and a preliminary version is planned to be released online by the end of 2022. The initiative has been conceived and promoted by Ran Jin (Virginia Tech) while Xiaoyu Chen (University of Louisville) is in charge of its development. A few examples of analytical tools and infographics to be made available on the web-portal are shown in Fig. 5 and Fig. 6.

Stay tuned for more updates on this and for the official online release.
Fig. 5 – Example of infographics under development for the new QSR analytical web-portal

Fig. 6 – Example of infographics under development for the new QSR analytical web-portal
Changes in the QSR Advisory Board

The QSR Advisory Board, currently consisting of 18 senior leaders in the field of Quality, Statistics and Reliability, has strongly contributed to the development of the QSR section and has been providing support to its continuous improvement.

Professor Elsayed Elsayed at Rutgers University is currently serving as the chair of the board for 2020-2023. The board oversees the operation of QSR, provides advice on various activities, and supports the QSR officers to run the QSR section effectively and efficiently.

According to the QSR By-Law, as many as one-third of the advisory board can be newly appointed each year. This coming year, three board members will retire at the end of the 2022 INFORMS annual conference and three new members will join the board after the conference, as follows.

Three retiring Advisory Board members: Peihua Qiu (University of Florida), Susan Albin (Rutgers, The State University of New Jersey), and Irad Ben-Gal (Tel Aviv University).

Three new board members: Qiang Huang (University of Southern California), Peter Parker (NASA Langley Research Center), Brian Denton (University of Michigan).

We thank the retiring board members for their sincere advice and support for the QSR community and look forward to working with new board members in the following years.

Member updates

Honors and Awards Received

Nathan Gaw (Air Force Institute of Technology) was the recipient of the 2021 CogPilot Datathon Challenge (hosted by U.S. Air Force) award - nationwide challenge to predict flight difficulty and pilot error using multimodal sensor data (e.g., heart rate and eye-tracking). Of the 10 awards, his team won 5:

- Flight Difficulty Prediction (Best Model)
- Pilot Error Regression (Runner-Up)
- Most Innovative Approach
- Most Interpretable Model
- Best Pitch

Michael Biehler (Georgia Tech) was the recipient of the following fellowships:

- Gilbreth Memorial Fellowship, Institute of Industrial and Systems Engineers (IISE);
- IHE-LeaD Fellowship (Interdisciplinary and Health & Environment Leadership Development), Burroughs Wellcome Fund;
- BOLD (Blended and Online Learning Design) Graduate Fellowship, Office of the Provost, Georgia Institute of Technology.

Zhenyu (James) Kong (Virginia Tech) was elected Fellow of American Society of Mechanical Engineering (ASME), 2022.

Hao Yan (Arizona State University) received the “IISE Data Analytics and Information Systems (DAIS) Division Teaching Award”, 2022.

Qiang Huang (University of Southern California) was the recipient of the IISE Fellow Award and of the ASME Fellow Award.

Ahmed Aziz Ezzat (Rutgers ISE) was the recipient of the IISE Data Analytics Teaching
Award, 2022. The award recognizes individual faculty for sustained performance of excellence in teaching data analytics-related courses.

Shancong Mou (Georgia Tech) was the recipient of the ISA Education Foundation Scholarship Award from the International Society of Automation (ISA), 2022.

Shancong Mou (Georgia Tech) was awarded IISE Future Faculty Fellow (3F), 2022-2023.

Grants Received

Nathan Gaw (Air Force Institute of Technology) (PI) received a SBIR (AFWERX) Grant of $324,275 for the project titled “Integration of Artificial Intelligence (AI) and Machine Learning (ML) Services to Support Test Evaluation”. Period of Award: 1 May 2022 - 30 April 2023.

Chao Wang (University of Iowa) (PI) received a grant of $612,611 from the US Army Corps of Engineers under Department of Defense (DoD) for the project titled “Semi-autonomous 3D Sensing and 3D Concrete Printing for Inspection and Repairing of Vertical Structures”. Period: 06/2022-06/2024.

Arman Sabbaghi (Purdue University) (co-PI) is a Co-PI Statistician for NIH Grant No. R01HS028026-01A1 ($321,821): Wearable Sensors for Modeling and Assessing Non-Technical Skills in Surgery. 9/2022 - 8/2026. Lead PI: Denny Yu, Purdue University, West Lafayette, IN.

Adel Alaeddini (University of Texas at San Antonio) (PI) received a CPS Energy grant of $400,000 for the project titled “Toward Optimal Transportation Electrification: Collaborative Smart Grid Urban Planning using AI-Driven City-Scale Digital Twin”. Period: 3/1/22-3/31/24.

Adel Alaeddini (University of Texas at San Antonio) (co-PI) received a grant of $72,000 from the Air Force Research Laboratory for the project titled “Machine Learning Supported Cyber Operations”. Period: 12/01/21-5/31/22.

Abdallah Chehade (University of Michigan-Dearborn) (PI) received a grant of $210,000 from Ford Motor Company for the project titled “Optimizing and correcting the stamping process parameters using smart manufacturing technologies”. Period: 04/01/22-03/31/24.

Abdallah Chehade (University of Michigan-Dearborn) (PI) received a grant of $110,000 from Honda R&D Americas for the project titled “AI/ML for Heat & Temperature Sensor Modeling”. Period: 12/01/21-5/31/22.

Hao Yan (Arizona State University) (Co-I) received two grants from National Institutions of Health with the proposals entitled “Novel threat detection methodology to detect HIV outbreaks in Washington” and “AIDen: An AI-empowered detection and diagnosis system for jaw lesions using CBCT”, National Institutions of Health, 2022.

Hao Yan (Arizona State University) (Co-I) received one grant from Department of Transportation with proposal title “Knowledge-guided Automation for Integrity Management of Aging Pipelines (KAI-MAP) for Hydrogen Transport”, $844,726 (30%), 2021.

**Bing Si** (State University of New York at Binghamton) (PI) received $242,770 from National Institutes of Health (NIH) for the proposal entitled “R21HL161765: Towards Precise Phenotype Discovery of Obstructive Sleep Apnea with a Data-Inclusive Multi-Study Analysis”.

**Bing Si** (State University of New York at Binghamton) (PI) received $165,418 from National Institutes of Health (NIH) for the proposal entitled “R03HD108477: Sleep and Cardiometabolic Health in United States Hispanic/Latino Late Adolescents/Young Adults”.

**Bing Si** (State University of New York at Binghamton) (Co-PI) received $1,265,002 from Agency for Healthcare Research and Quality (AHRQ) for the proposal entitled “R01HS027154: Multi-level Influences of Violence Screening in College Health Centers”.

**Chiwoo Park** (PI, FSU) and Robert Gramacy (PI, Virginia Tech) received a grant for the project titled “CDS&E/Collaborative Research: Local Gaussian Process Approaches for Predicting Jump Behaviors of Engineering Systems” Sponsor: National Science Foundation 2152655/2152679, Computational and Data-Enabled Science and Engineering. Total Award: $474,602. Project Period: 7/2022- 6/2025.

**Chiwoo Park** (PI) and Anuj Srivastava (Co-PI) received a grant for the project titled “Operations Engineering New Data Science for Human Operational Analysis in Smart Manufacturing”. Sponsor: National Science Foundation 2132311, Operations Engineering/Advanced Manufacturing. Total Award: $375,425 Project Period: 8/2022-7/2025.

**Ph.D. Degrees Earned and Promotions**


**Syed Hasib Akhter Faruqui** (Fall 2021), “Learning and Summarization of Complex and Large Datasets with Graphical Models: An Application in Multiple Chronic Condition Analysis”, PhD Dissertation, University of Texas at San Antonio, Advisor: Adel Alaeddini.


Youngjun Choe was promoted to Associate Professor in the Department of Industrial & Systems Engineering at the University of Washington in 2022.

Mingyang Li, 2022, was promoted to Associate Professor, Industrial and Management Systems Engineering, University of South Florida.

Weihong (Grace) Guo, was promoted to Associate Professor in 2022, Department of Industrial and Systems Engineering, Rutgers University–New Brunswick.

Other news

Call for Papers. The manufacturing faculty at Rutgers University–New Brunswick is the proud host of the 2023 International Advanced Manufacturing Conference (NAMRC/MSEC/LEM&P 2023). This is a joint conference of the 51st Society of Manufacturing Engineers (SME)’s North American Manufacturing Research Conference (NAMRC51), the American Society of Mechanical Engineers (ASME)’s International Manufacturing Science and Engineering Conference (MSEC 2023), and the Japan Society of Mechanical Engineers (JSME)’s International Conference on Leading Edge Manufacturing/Materials & Processing (LEM&P 2023). The conference will be held at Rutgers–New Brunswick, New Jersey, June 12-16, 2023. The conference theme is AI Manufacturing. Links for paper submission can be found at the conference website https://msec-namrc2023.rutgers.edu/.

Announcements

Job Openings

Multiple Faculty Openings at the Purdue University, School of Industrial Engineering
Assistant or Associate Professor. The School of Industrial Engineering at Purdue University invites applications for multiple tenure-track faculty positions at the rank of Assistant or Associate Professor. Purdue University seeks to attract exceptional candidates with interests and expertise in the following two broad areas:

1. operations research methodology intersecting with reinforcement learning, machine learning, statistical and/or computational aspects of data science, and parallel/distributed computing;
2. theory and applications of interdependent complex systems, including critical infrastructures, cyber-physical systems, innovation ecosystems, service operations systems and network science.

Successful candidates must hold a Ph.D. degree in industrial engineering, operations research, other engineering discipline, computer science, statistics, or a related discipline and demonstrate potential to build an independent research program, as well as potential to educate and mentor students. The successful candidates will conduct original research, advise graduate students, teach undergraduate and graduate level courses, and perform service at the School, College, and University levels.

Requisition ID: 21783

To Apply: Please visit https://careers.purdue.edu/

Review of applications will begin immediately and will continue until position is filled. A background check will be required for employment in this position.

Purdue University is an EOE/AA employer. All individuals, including minorities, women, individuals with disabilities, and veterans are encouraged to apply.

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Assistant Professor Position in Industrial Engineering at Texas State University

The Industrial Engineering program in the Ingram School of Engineering, https://www.engineering.txst.edu/, at Texas State University invites applications for an associate or full professor, in partnership with the Regenstrief Center for Healthcare Engineering (RCHE) at Purdue. Purdue University seeks to attract exceptional candidates with interests and expertise in complex health systems modeling. Successful candidates must hold a Ph.D. degree in industrial engineering, systems engineering, or a related discipline and demonstrate evidence and potential to build an independent research program, as well as evidence and potential to educate and mentor students. The successful candidate will conduct original research, advise graduate students, teach undergraduate and graduate level courses, and perform service at the School, College, and University levels.

Requisition ID: 21784

Review of applications will begin immediately and will continue until position is filled. A background check will be required for employment in this position.
Required qualifications: (1) Hold a Ph.D. in industrial engineering or a closely related discipline. Degree at time of application or official notification of expected completion of the doctoral degree by July 31, 2023. (2) Research competence evidenced by publications in peer-reviewed journals and refereed conference proceedings. (3) Record of teaching experience. (4) Demonstrated excellence in written and oral communication.

The areas of preferred expertise are machine learning, data science, simulation, reliability/quality, or operations research with applications, such as healthcare, transportation, smart manufacturing, supply chain, and energy, among others.

Application Deadline: For full consideration, applications must be submitted by October 20, 2022. Women and minority candidates are strongly encouraged to apply.

For complete details about the position required and preferred qualifications, required documentation, and to apply, visit https://jobs.hr.txstate.edu/postings/39189. Only applications submitted through the Texas State University website will be accepted and considered.

About Texas State University: The university is home to more than 38,000 students and 2,000 faculty members in the growing Austin-San Antonio corridor. A member of the Doctoral Universities: Higher Research Activity Carnegie classification, the university creates new knowledge, fosters cultural and economic development, and prepares its growing population of diverse students for the endless possibilities that await them as citizens of Texas, the nation, and the world.

Bolstered by research with relevance and innovation in creative and scholarly work in a full range of academic disciplines and a spirit of inclusiveness, Texas State seeks outstanding candidates for a variety of faculty positions. Texas State University is an Equal Employment Opportunity/Affirmative Action Employer, committed to inclusive thought and action in support of our diverse community. Individuals from historically underrepresented groups and all those who share our commitment to inclusivity and passion for the strength of our diversity are strongly encouraged to apply.

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Associate Professor Position at the Department of Industrial and Systems Engineering, Herbert Wertheim College of Engineering, University of Florida

The Herbert Wertheim College of Engineering at the University of Florida (UF) invites applications for a full-time tenured faculty position at the rank of Associate Professor in the Department of Industrial and Systems Engineering (ISE). The position focuses on ISE applications of artificial intelligence (AI) methods to complex systems in one of the following areas: production, logistics and supply chain systems; manufacturing, advanced manufacturing or additive/subtractive manufacturing systems; human systems engineering; and health systems engineering.

Potential research opportunities for this position include collaborations with the existing AI research groups in HWCOE as well as other colleges throughout the university as commensurate with the candidate’s research expertise and interests.

In addition to having a doctorate degree in ISE or a closely related discipline, the applicant must possess a strong academic record for research and teaching excellence as well as a strong service record. Candidates will be expected to have a high-level of awareness of future trends in funding and research opportunities in the AI application domains related to their expertise and have a clear agenda for substantially advancing the current department funded research enterprise. Candidates will also be expected to develop a high-quality publication record at UF, supervise Ph.D. and M.S. students,
and teach both undergraduate and graduate courses in ISE. Additionally, candidates with a passion for mentoring and leading early-career faculty to success, and a desire to assume institutional leadership roles are preferred. Outstanding candidates will be considered for any available endowed appointments (faculty fellowships / professorships / chairs) at the time of offer.

UF ISE offers B.S., M.E., M.S. and Ph.D. degrees. We currently have 416 undergraduate students and 222 graduate students. The Department hosts research in various application areas including energy systems, healthcare systems, human-in-the-loop systems, supply chain systems and transportation systems. We also currently host methodological research in data analytics, human systems engineering, optimization, simulation, and stochastic analysis. There are also outstanding opportunities for interdisciplinary work across the UF campus. More information about the department can be found at http://www.ise.ufl.edu

UF is currently ranked as one of the top-5 best public universities, 5th according to the 2021 U.S. News & World Report of Best Colleges.

UF is home to Hipergator, which ranks 3rd among university supercomputers in the nation. In addition, the Herbert Wertheim College of Engineering is currently implementing a major expansion of faculty and state-of-the-art research and education facilities with a focus on AI. The Malachowsky Hall for Data Science & Information Technology, a 260,000 sq feet facility that will serve as the hub for Artificial Intelligence, will open in Spring 2023. ISE is one of departments that will have space in this state-of-the-art facility. The College will reach 300 faculty members this year with the ISE Department currently comprised of 24 permanent members. For more information about our College initiatives, please visit http://eng.ufl.edu. The University and College count among its greatest strengths a value of broad diversity among faculty, students and staff and a robust, inclusive and welcoming climate for learning and research.

UF is committed to equal educational and employment opportunity and access and seeks individuals of all races, ethnicities, genders and other attributes who, among their many exceptional qualifications, have a record of including a broad diversity of individuals in research and learning activities.

The search committee will begin reviewing applications immediately, with the first full committee screening occurring on September 1, 2022, and will continue to receive applications until the position is filled. All applications must be submitted through Interfolio at: https://facultyjobs.hr.ufl.edu/. (Please see Job Requisition #522157). Complete applications must include the following files in PDF format: (1) cover letter (summary and introduction related to hiring emphasis areas); (2) a personal statement (including identification of any synergies with UF ISE as well as UF investigators, centers & institutes); (3) a diversity statement (including experience in working with diverse and underrepresented groups in engineering); (4) a curriculum vitae (including a 1-page CV highlights); (5) a research program vision statement (with a focus on how any plans will support the department and college), (6) a teaching statement (including a personal philosophy and interests); (7) up to three representative journal articles (co-)authored by the applicant; and (8) the names, addresses, phone numbers, and email addresses of no less than three and up to five references. The final candidate will be required to provide an official transcript to the hiring department upon hire. The anticipated start for the position is Spring 2023 with some flexibility for a later start based on individual needs.

If an accommodation due to a disability is needed to apply for this position, please call 352-
392-2477 or the Florida Relay System at 800-955-8771 (TDD). Hiring is contingent upon eligibility to work in the US. Background searches are conducted in accordance with Florida's Sunshine Law. The University of Florida is committed to nondiscrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information, and veteran status in all aspects of employment including recruitment, hiring, promotions, transfers, discipline, terminations, wage and salary administration, benefits, and training.

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Multiple Assistant Professor positions in Industry 4.0 Operations at Eindhoven University of Technology

Are you interested in digital twins, blockchain and AI technologies? Are you an excellent researcher in Operations Management? Do you have expertise in high-tech manufacturing or maintenance operations? Do you have the passion to teach a broad range of courses that prepare students for a successful career? Do you like to work with high-tech companies to see your research applied?

We are looking for two or three new Assistant Professors for the Operations, Planning, Accounting and Control (OPAC) group. Applications at Associate Professor level will also be taken into consideration.

You will initiate, perform, and supervise high-quality research in operations management in the exciting domain of Industry 4.0. Depending on your background and expertise, your research will focus on one or more of the following topics:

1. Operational planning and control of manufacturing systems, based on real-time data and AI technology;
2. Application of novel (digital) manufacturing technologies, such as digital twins, cloud manufacturing, blockchain, and additive manufacturing;
3. Design and control of resilient and sustainable manufacturing supply chains, consisting of OEMs and (first tier and higher) suppliers.

You are expected to develop a multi-disciplinary research portfolio that has strong emphasis on applicability and impact in high-tech industry.

The OPAC group helps stakeholders across sectors to make smart, informed decisions, thereby contributing to more efficiency, enhanced sustainability, better use of resources and improved Total Cost of Ownership. The research of the group deals with the control of operational processes, which can be related to manufacturing systems, distribution, transportation, warehousing, retail, and service processes such as equipment maintenance.

Today, we are seeing many sectors being transformed by enormous leaps in digital, automation and robotic technologies. In an increasingly fast, demanding and competitive world with shrinking resources, smart control of operational processes brings increased output at improved quality, using the same or even fewer resources, and leads to less waste, as such contributing to a more sustainable world.

Eindhoven University of Technology (TU/e)'s Industrial Engineering and Innovations Sciences Department has a worldwide reputation for performing highly impactful research in Operations Management.

Job requirements

We offer a stimulating and ambitious educational and research environment and are looking for candidates with the following qualifications:

- You hold a PhD in the field of operations management, operations research, econometrics, or a comparable domain.
• Ability to conduct high quality academic research, demonstrated for instance by a relevant PhD thesis and/or publication(s).
• Ability to teach, shown by experience or assistance in teaching and positive evaluations of these teaching efforts.
• Creative and dedicated to (multidisciplinary) collaboration.
• Good communication and leadership skills.
• Excellent proficiency (written and oral) in English.


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Postdoctoral Position in ISyE at Georgia Tech

Applications are invited for a postdoctoral position in ISyE at Georgia Tech, with emphasis on statistical modeling, machine learning and optimization. The successful candidate will work on developing novel models for analysis of high-dimensional data, anomaly detection, and diagnosis. Publications in peer-reviewed journals and presentations at scientific meetings are expected. This position is supported by a funded project from Ford Motor Company.

Candidates must hold a PhD, or equivalent, in Industrial Engineering, Statistics, Operations Research or relevant areas. Desired skills include expertise in spatio-temporal modeling; signal processing; sequential and adaptive sampling methods; and optimization, and proficiency in statistical computing (with R, Matlab, or Python). Applications from women and members of minority groups are encouraged. The position will commence as soon as possible. It is a one year position with possible renewal subject to satisfactory progress on the research. The salary is based on applicant's qualification. To apply, email CV and contact information (email and phone) of three references to Kamran Paynabar at kamran.paynabar@isye.gatech.edu.

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Tenure-track Faculty Positions in the UNIST Department of Industrial Engineering

Ulsan National Institute of Science and Technology (UNIST) was founded in 2009 as the fourth National Institute of Science and Technology in South Korea. Since its opening, UNIST has become a top-ranked research institute in South Korea and one of the world's leading universities in science and technology, despite being younger than its peers.

The Department of Industrial Engineering at UNIST was established in 2016 to counter a lack of related skills in the metropolitan city of Ulsan, the hub of Korean industry, where more than one million people live. Since 2018, the department has focused on the field of Data Science and developed strong undergraduate, MSc, and Ph.D. programs focusing on data-driven decision making.

The department is seeking applicants for multiple full-time, tenure-track or tenured faculty positions expected to begin in 2023 (any time). Appointments can be made at the Assistant Professor, Associate Professor, and Professor ranks, commensurate with the individual's records. Candidates should have a Ph.D. (or near completion of the degree for assistant professor-level applicants) in closely related disciplines (e.g., Industrial Engineering, Statistics, Computer Science) and demonstrate strong competence in research and teaching.

The department is currently searching for faculty candidates with the Graduate School of Artificial Intelligence at UNIST. Successful candidates are expected to lead excellent research in the areas of Data Science with two positions in the Department of Industrial Engineering and the Graduate School of Artificial Intelligence. As such, the department welcomes candidates who
pursue publications in top journals and/or top conferences related to Data Science.

**Area:** Methodological/theoretical areas of interest include but are not limited to statistics, stochastic optimization, machine learning, and data mining. Application domains of interest include but are not limited to healthcare, manufacturing, and logistics.

**Note:** UNIST is well-known as the best place for research and academic growth. In particular, the Department of Industrial Engineering at UNIST, where young and enthusiastic faculty members collaborate actively with experienced senior members, prides itself on its culture, capabilities, resources, and high-quality student body. The department searches for researchers who pursue original research for academic excellence and real impact, teachers who care for students, and talented and robust people eager for continuous growth and achievement. Our hiring philosophy is that instead of simply counting the number of publications, we seek applicants with academic intelligence, integrity, grit, and potential for excellent research and educational contributions.

The university offers a competitive compensation package. Faculty members at UNIST receive the highest starting salaries among all universities in Korea. Faculty members also receive generous start-up research grants and comprehensive benefits, including modern on-campus housing and moving expenses. In addition, a daycare center for children under the age 7 is available on campus. The teaching load is six credits per year (two major courses usually).

Interested candidates should apply electronically via [http://invite.unist.ac.kr](http://invite.unist.ac.kr). Candidates should provide (i) a current C.V., (ii) a list of references, (iii) one-page summary statements describing research and teaching plans, and (iv) copies of five prominent research results at most. In addition, please visit the websites at [https://ic.unist.ac.kr/](https://ic.unist.ac.kr/) and [https://aigs.unist.ac.kr](https://aigs.unist.ac.kr) for information about the Department of Industrial Engineering and the Graduate School of Artificial Intelligence, respectively.

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**Permanent, Tenure-Track Position at the Department of Industrial & Manufacturing Engineering, Florida A&M University - Florida State University College of Engineering**

**About the Department and College.** The Department of Industrial & Manufacturing Engineering (IME) at the Florida A&M University (FAMU)-Florida State University (FSU) College of Engineering invites applications from highly qualified individuals for a tenure-track faculty position in Data Science and Machine Learning. We are seeking faculty candidates for an assistant professor position; however, exceptional candidates will be considered for higher ranks. The anticipated appointment time is Fall 2023.

The IME Department currently has 19 faculty, 34 Ph.D. students, 162 undergraduate students, and annual research expenditures exceeding $3.3M. The two universities and outstanding research facilities in the affiliated research buildings/centers provide opportunities for collaboration with faculty in Computer Science, Scientific Computing, Statistics, High-Performance Materials Institute (HPMI), Florida Center for Advanced Aero-Propulsion (FCAAP), the Center for Advanced Power Systems (CAPS), National High Magnetic Field Laboratory (NHMFL), and FSU College of Medicine.

The FAMU-FSU College of Engineering is the unique combination of two outstanding universities with overlapping but distinct missions – the Nation's top Historically Black College/University (HBCU) and a Top 20 Public, Tier-1 Research University. As such we provide an outstanding research and entrepreneurship-based education to one of the most diverse student populations in the US.
Faculty are employed by one of our partner Universities with privileges at both institutions.

Preferred and Required Qualifications. Candidates must possess an earned Ph.D. in industrial engineering, computer science, statistics, electrical engineering, or a closely related discipline, and demonstrate documented potential for outstanding research. Areas of particular interest include Physics-Informed Machine Learning, Data Science, and Artificial Intelligence, supporting Advanced Manufacturing and Scientific Discovery. Candidates with strong backgrounds in data science with applications to other areas are also considered.

Responsibilities. Successful candidates are expected to develop research programs that are internationally recognized with significant and sustained funding, incorporate interdisciplinary collaboration with researchers across campus, and demonstrate a strong commitment to diversity and excellence in education. Teaching undergraduate and graduate courses, supervising undergraduate, graduate, and post-doctoral researchers, and participating in college and professional service are expected. In addition, the successful candidate will demonstrate an understanding of the barriers preventing full participation of members from historically underrepresented and marginalized student communities in higher education.

Potential applicants seeking more information are encouraged to visit our websites at https://www.eng.famu.fsu.edu/ime.

Applicants should submit the following documents, combined into one single PDF file, to the contact email listed below, imefacultysearch@eng.famu.fsu.edu

- A cover letter
- A full curriculum vitae
- A 2-page research statement
- A 1-page teaching statement
- A 1-page diversity, equity, and inclusion statement
- Two sample publications
- The names and contact information of four potential references
- An Equal Employment Opportunity Survey for Faculty Applicants

Applications will be reviewed beginning on September 15, 2022. Acceptance and review of the application will continue until the position is filled. Any questions about the position should be directed to Dr. Hui Wang, Search Committee Chair, at huiwang10@eng.famu.fsu.edu.

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Assistant Professor Position in Business Analytics & Information Systems, Department of Supply Chain & Information Systems (SC&IS), Smeal College of Business

The SC&IS Department of the Smeal College of Business at The Pennsylvania State University (University Park, PA) invites applications for a tenure-track position in Supply Chain & Information Systems at the assistant professor level for a Fall 2023 start date. Salary is competitive.

We seek outstanding candidates with expertise in business analytics and information systems that would complement the faculty with high-quality research and teaching in student-centered and collaborative learning environments. Candidates must have a doctorate degree by the appointment/start date in supply chain management or related field. A strong commitment to research and teaching excellence is expected. Faculty members are expected to maintain an active research program, perform undergraduate and graduate teaching, supervise graduate students, and engage in service activities.

The SC&IS Department comprises a vibrant, research-active faculty with research and teaching interests that traverse the end-to-end supply chain and includes information systems.
and data analytics. The department offers degree programs in supply chain management, management information systems, and business analytics.

The Smeal College of Business offers a collegial working environment and excellent campus facilities. It has the Center for Supply Chain Research® (www.smeal.psu.edu/cscr) which advances cutting-edge research and outreach in supply chain management and data analytics. The SC&IS Department (www.smeal.psu.edu/scis) also has strong connections with the business community through various research centers that provide opportunities to interface with faculty across various disciplines within Smeal and across Penn State. For more information, please visit www.smeal.psu.edu/research-centers.

Review of applications will begin approximately October 1, 2022 and will continue until the position is filled. For further information, please contact Dawn Corman at drc18@psu.edu.

Applicants should upload a letter of intent, a statement of research and teaching, and a CV. Contact information for three references also should be provided.

Interested candidates are to apply directly online at:
https://psu.wd1.myworkdayjobs.com/PSU_Academic/job/Penn-State-University-Park/Assistant-Professor_REQ_0000035969-1

CAMPUS SECURITY CRIME STATISTICS: The Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act and Pennsylvania Act of 1988 require that crime statistics for Pennsylvania colleges and universities be made available to applicants upon request. Penn State's combined Annual Security and Annual Fire Safety Report includes statistics for the previous three years concerning reported crimes that occurred on campus, in certain off-campus buildings owned or controlled by the University, and on public property within or immediately adjacent to and accessible from the campus. The report also includes institutional policies concerning campus security, such as those concerning alcohol and drug use, crime prevention, the reporting of crimes, sexual assault, and other matters. You may obtain this information for the Penn State campus to which you are applying by accessing the website at www.police.psu.edu/annual-security-reports/.

A printed copy of the report may be obtained by writing to University Police & Public Safety, The Pennsylvania State University, 161 University Support Building I, University Park, PA 16802 or by calling 814-863-1273.

EEO Is The Law. Penn State is an equal opportunity, affirmative action employer, and is committed to providing employment opportunities to all qualified applicants without regard to race, color, religion, age, sex, sexual orientation, gender identity, national origin, disability or protected veteran status. If you are unable to use our online application process due to an impairment or disability, please contact the Talent Acquisition Division at vacancy@psu.edu or 814-865-1387.

Employment with the University will require successful completion of background check(s) in accordance with University policies.

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PhD and PostDoc positions available at Politecnico di Milano (Italy), Department of Mechanical Engineering

The Department of Mechanical Engineering (DMEC), Politecnico di Milano (Italy), has PhD and Postdoc positions in the field of big data mining, machine learning and statistical methods for additive manufacturing (AM) process monitoring, modelling and control.

DMEC (https://mecc.polimi.it) is one of the largest mechanical engineering departments in Europe and it has obtained the recognition of Department of Excellence for the five-year period 2018-2022 by the Ministry of University and Research. According to the QS World
Ranking of the best universities in the world, in 2022 Politecnico di Milano ranks 15th for the Mechanical, Aeronautical & Manufacturing Engineering disciplines. DMEC provides its teachers, researchers and students with state-of-the-art laboratories and facilities for carrying out cutting-edge research.

Funded Postdoc and PhD positions are available in the research team headed by Prof. Colosimo (www.ic.polimi.it). Successful applicants will have opportunities to work in a multidisciplinary environment, with free access to one of largest AM lab in Europe, equipped with most advanced metal AM and 3D bioprinting systems. All research activities are strongly industrially-oriented, involving collaborations with top academic and industrial players in the smart manufacturing and AM fields.

We welcome exceptional candidates with a background in data analytics, mechanical/industrial engineering, process control/simulation or related disciplines to apply by sending their CVs to biancamaria.colosimo@polimi.it.

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University of Michigan, President’s Postdoctoral Fellowship Program

About the Program. In 2011, the University of Michigan joined in a collaborative partnership with the University of California to offer postdoctoral fellowship opportunities at the University of Michigan. In this program, the University of Michigan offers postdoctoral research fellowships coupled with faculty mentoring, professional development, and academic networking opportunities.

The University of Michigan views these postdoctoral fellowships as providing an exceptional opportunity to recruit potential new faculty to the University by offering the possibility of either a postdoc alone or a combined postdoc and tenure track faculty appointment to follow.

The University seeks applicants whose research, teaching, and service will contribute to diversity and equal opportunity in higher education. The program is particularly interested in scholars with the potential to bring to their research and undergraduate teaching the critical perspective that comes from their non-traditional educational background or understanding of the experiences of groups historically underrepresented in higher education.

Previous recipients of the fellowship are listed on the PPFP fellows webpage, https://presidentspostdoc.umich.edu/fellows.php.

Eligibility. Eligibility for the fellowship may vary by year. For the 2022-23 cycle, the University welcomes applications from potential fellows who aim to work with faculty mentors in the following eight schools and colleges:

- School of Dentistry
- College of Engineering
- School for the Environment and Sustainability
- School of Kinesiology
- School of Music, Theatre and Dance
- School of Nursing
- School of Public Health
- Gerald R. Ford School of Public Policy

Applicants who are not U.S. citizens or permanent residents when the application is due must present documents demonstrating that they are legally authorized to work in the United States without restrictions or limitations. Applicants should expect to complete their doctorate on or before July 1 of the year following their application.

Candidates are evaluated by faculty reviewers in their own and related fields. Faculty reviewers will evaluate candidates according to their academic accomplishments, the strength of their research proposal, and their potential for faculty careers that will contribute to diversity and equal opportunity through their teaching, research, and service.
Terms of Appointment

The annual award provides a salary of $60,000, depending on the field and level of experience, and $10,000 for research and professional development. Fellows are eligible for a second year of support in the program. The award also includes enrollment in health plan for fellow and dependent(s), group life insurance, three weeks of sick leave, and one month (non-accrual) of vacation. Fellows are expected to establish residence and participate in academic life at the campus of their postdoctoral appointment, focus full-time on their scholarship, meet regularly with their faculty mentor, and attend the program’s professional development events. There is no expectation of teaching during the fellowship.

Expectations for Mentors and Host Departments.

President’s Postdoctoral Fellowship mentors are tenured/tenure-track faculty who take an active role in helping the fellow to plan and achieve their research and career goals. Host departments are expected to include the fellow in departmental events, provide space and administrative support, and offer opportunities for career development, including consideration for a faculty position at the University of Michigan.

Applications

• On-line applications due by November 1, 2022  
  https://presidentspostdoc.umich.edu/ppfp-application.php
• Letters of support from up to two University of Michigan faculty mentors and up to two references due by November 8, 2022
• Letter of support from University of Michigan department chair/director/dean due by December 1, 2022
• See the PPFP website for more information
• Proactive Steps Interested Departments Can Take,  
  https://presidentspostdoc.umich.edu/
• Cultivate exciting postdoc applicants

• Ensure potential faculty mentors get to know potential applicants
• Consider bringing potential applicants to campus for an informal visit before the application deadline
• Plan how the department will assess a fellow’s suitability for a tenure track offer

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Faculty positions in ISyE at the University of Wisconsin-Madison

The University of Wisconsin-Madison Department of Industrial and Systems Engineering is seeking candidates for two faculty positions in (1) manufacturing and production systems, and (2) human factors and ergonomics.

Manufacturing and production systems: Research areas of interest include but are not limited to smart manufacturing including supply chain engineering, logistics and operations; system-level modeling and analysis, planning and scheduling, system automation, and process control; data-driven modeling, analysis, and improvement of system operations and decision making; digital twins; and the security of cyber-physical industrial systems.

Human factors and ergonomics: Research areas of particular interest are human interaction with systems or technologies, with an emphasis on neuroergonomics, human-robot interaction, sustainability and resilience, wearable technologies, artificial intelligence and machine learning, healthcare delivery, medical equipment and instrumentation, equity and reducing disparities, safety, or occupational injury prevention.

Applicants should have an outstanding academic record, exceptional potential for creative research, and a commitment to both undergraduate and graduate education in industrial and systems engineering. Applicants are expected to create and maintain a strong program of research, provide classroom and individual training for undergraduate and
graduate degree-seeking students, support the department's efforts to enhance diversity, equity, and inclusion, and contribute to the intellectual and academic life of the department. University and professional service will be expected as appropriate. Appointment to these positions requires a PhD degree.

Learn more and apply here: https://jobs.hr.wisc.edu/en-us/job/515154/professor

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**Tenure-track/tenured Assistant/Associate Professor position at Industrial and Systems Engineering (Auburn University)**

The Auburn University Industrial and Systems Engineering Department seeks to fill one tenure-track/tenured faculty position at the Assistant and/or Associate Professor level (https://www.auemployment.com/postings/32039). Successful candidates should be able to teach classes at the graduate and undergraduate levels in the areas of advanced manufacturing and manufacturing systems. Specific areas of research interest include Industry 4.0, Smart Manufacturing, Industrial Internet of Things, manufacturing system design and development, including machine-to-machine networking and data collection, sensors, data analytics, and systems analysis for manufacturing.

The successful candidate will work primarily with the team in the Interdisciplinary Center for Advanced Manufacturing Systems (ICAMS). ICAMS is a research, training, outreach, and educational center partnered with the Department of Defense, the City of Auburn, the Alabama Community College System, and the industry with funding over the past three years at greater than $14 M. The ICAMS facility contains a wide variety of current-generation and legacy manufacturing equipment in a 20,000-square-foot space to provide a hands-on learning laboratory for ICAMS industry partners and students. ICAMS demonstrates Industry 4.0 capabilities for new and legacy equipment, manufacturing methods, and operational systems.

ICAMS includes a significant education program to support the research initiative in partnership with the DoD. We are currently designing a new undergraduate manufacturing minor for engineering and a new graduate and undergraduate certificate programs in Advanced Manufacturing. These programs plus expansion in the Master of Engineering Management program create significant teaching needs for the department in advanced manufacturing (Manufacturing Processes, Robotics, Analytics, Systems, and Virtual Reality/Artificial Intelligence in manufacturing).

The successful candidate will be expected to establish a strong extramurally funded research program, develop and teach undergraduate and graduate courses in advanced manufacturing, contribute to mentoring students, participate in outreach, and provide service to the department, college, and university. The successful candidate is expected to bring experience, innovation, enthusiasm, technology, and leadership to the Department of Industrial and Systems Engineering. Salary will be commensurate with experience and qualifications.

**Minimum Qualifications:** Eligible candidates must hold an earned doctorate in Industrial Engineering or a closely related engineering discipline at the time of employment. Candidates selected for this position must be able to meet eligibility requirements to work in the United States at the time of employment and continue working legally for the proposed term of employment.

**Required Documents:**
1. Cover Letter
2. Statement of Leadership Vision
3. Transcripts
4. Curriculum Vitae
5. Statement of Teaching Philosophy
6. Diversity Statement
Special Instructions to Applicants: Recommendation letters should be provided only upon request from the search committee. Review of applications will begin September 12, 2022, and continue until a candidate has been identified.

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Faculty Position in Industrial & Systems Engineering at Rutgers University

The Department of Industrial and Systems Engineering (ISE) at Rutgers University is pleased to announce its search for one outstanding tenure-track faculty (Assistant/Associate Professor) with a start date of Fall 2023. Candidates are sought whose work contributes to advancements at the cross section of artificial intelligence and machine learning (AI/ML) with operations research and engineering for applications in manufacturing, sustainable energy, and industries supporting healthcare. Candidates with expertise in artificial intelligence, data science and analytics, stochastic systems, optimization or engineering sciences are especially encouraged to apply. Candidates must have interests and strong research contributions in at least one of the following areas: automation and AI-enabled decision and control sciences, robotics and autonomous systems, human-machine systems, advanced simulations and/or reliability and resilience.

Please see the announcement for more details on the eligibility and application process at: https://drive.google.com/file/d/1TyCW_rzycKtorm6Mh5Y5mkMMWFhJJB-mY/view.

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Other job openings:

Multiple tenured and tenure-track positions in the Daniel J. Epstein Department of Industrial and Systems Engineering in the USC Viterbi School of Engineering. Contact: qiang.huang@usc.edu.

Faculty Positions in Industrial & Operations Engineering at the University of Michigan. Contact: Al.Kontar@umich.edu.

The Michigan Institute for Data Science (MIDAS) at the University of Michigan has openings for 10 new post-docs starting in early January, 2023.

This is a recently funded program with a very tight deadline, as the first cohort will start on January 1. MIDAS will begin accepting applications immediately, and the deadline is November 7.

Details about the new program can be found here: https://midas.umich.edu/ai-in-science/

Each post-doc will have an AI mentor and a science mentor. The team will work collaboratively to solve impactful problems in physical sciences, mathematical sciences, earth and environmental sciences, basic biological sciences, and engineering.

If interested, please apply right away. You can also get in touch with Al.Kontar@umich.edu if you need to find an AI and science mentor.

The School of Manufacturing Systems and Networks (MSN) of the Ira A. Fulton Schools of Engineering at Arizona State University, has faculty-position openings.

Here is the link for the openings: https://apply.interfolio.com/113609.

Call for papers

ASME Journal of Computing and Information Science in Engineering - Special Issue on Cybersecurity in Manufacturing

This Special Issue is focused on novel methodologies, techniques, applications, and investigations for securing modern manufacturing enterprises. Some of the topics in
this Special Issue are as follows, but they do not represent an exhaustive list. Please feel free to contact the Guest Editors to ensure that your submission is appropriate for this Special Issue.

**Topic Areas:**

- Attack detection and process/product assurance for manufacturing
- Data security, privacy, and intellectual property (IP) protection for manufacturing
- Digital twin security for manufacturing
- Legal and policy aspects of manufacturing security
- Manufacturing IoT and IIoT cybersecurity and privacy
- Process/product/system design for cybersecurity
- Resilience and recovery of manufacturing from cyber attacks
- Secure communication protocols and blockchain for manufacturing
- Security architectures and security by design for manufacturing
- Supply chain security of materials and energy
- Threat modeling, vulnerability analysis, and risk management for manufacturing
- Trustworthy products and data for industrial control systems (ICS)

**Publication Target Dates:**

- Paper submission deadline March 31, 2023
- Review completed September 30, 2023
- Special Issue publication date February 2024

**Guest Editors**

Dr. Dan Li, Clemson University, USA,
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