INDUSTRIAL AND SYSTEMS ENGINEERING

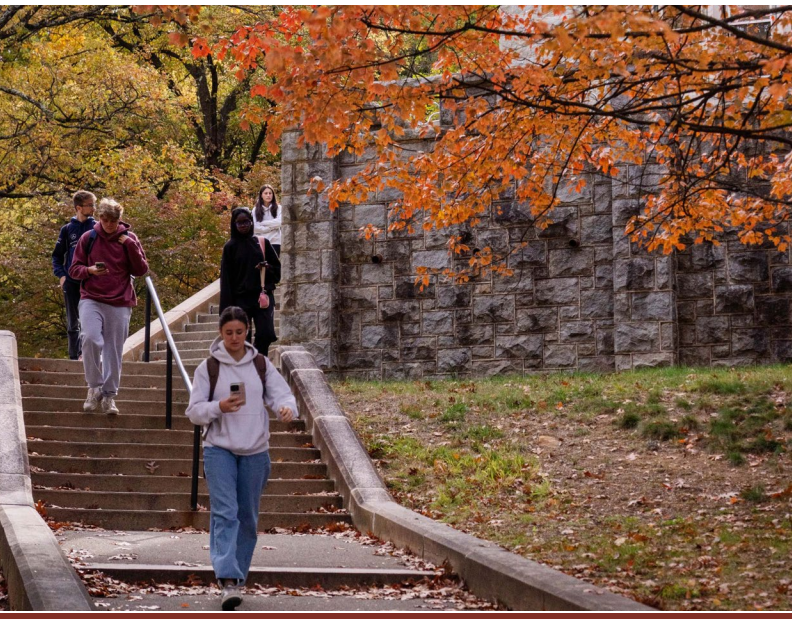
FALL NEWSLETTER 2026



Defense Department Grants Expand Mathematical Optimization Capabilities at Lehigh ISE

LEHIGH UNIVERSITY | P.C. Rossin College of Engineering and Applied Science





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ISE DEPARTMENT NEWSLETTER FALL 2026

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READER FEEDBACK:

Please send comments to the editor, Sheila Dorney at **skd220@lehigh.edu**



Welcome to the Fall 2026 edition

of the Lehigh Industrial and Systems Engineering (ISE) newsletter! As we look back on a remarkably vibrant and productive semester, I am filled with admiration at the achievements, innovation, and community spirit across our department. From major faculty honors and competitive federal grants to landmark academic events and student career placement, Lehigh ISE continues to strengthen its position as a national and international hub for optimization and systems engineering.

Our faculty continue to be recognized for their scholarly achievements and leadership in professional societies. Professor Ted Ralphs was honored with the prestigious 2026 INFORMS Computing Society (ICS) Distinguished Service Award, a biennial lifetime achievement honor recognizing his decades of foundational contributions to optimization software, computation, and community leadership. In addition, Professor Ralphs has been elected Chair-Elect of the Bilevel Optimization Society (BOS) and will serve a four-year leadership cycle.

Assistant Professor Meng Zhao was elected as a Director of the IISE Data Analytics and Information Systems (DAIS) Division for 2026–2028, where she will work to enhance research, member engagement, and collaboration at the intersection of AI and systems engineering.

External support for our research labs remains robust, driving breakthroughs in high-stakes domain areas. Professor Xiu Yang received a three-year, 300K National Science Foundation (NSF) award (100K to Lehigh) to develop noise-aware optimization algorithms for hybrid quantum computing. The collaborative project is led by Lehigh ISE alumnus Dr. Baoyu Zhou (PhD '22), now an Assistant Professor at Arizona State University. I was myself awarded a new three-year, $465K Air Force Office of Scientific Research (AFOSR) grant for research on stochastic vector and set-valued optimization, bringing my lab's single-PI Department of Defense research funding to over $1.5 million over the past four years.

This fall, our campus served as a central gathering place for academia and industry. Landmark LIOS Optimization Week supported by our department endowment under the Lehigh ISE Optimization Science (LIOS) umbrella, Lehigh hosted a historic week of events: the inaugural Future Optimization Graduate Student Workshop (GradOpt), the largest MOPTA conference in history (160+ attendees; 18th AIMMS-MOPTA competition won by the University of Bern), and the inaugural Optimization Junior Faculty Colloquium (ColOpt). Ed Rothberg, co-founder, Chairman, and Chief Scientist of Gurobi Optimization, opened MOPTA 2026 with the Spencer C. Schantz Distinguished Lecture.

The 2026 ISE Career Fair organized by MS student Eve Ngwenya, connected nearly 100 students with eight top employers—including EY, BD, Lutron, Air Products, Optamo, B. Braun, and new participants EIR Healthcare and OraSure Technologies.

Our summer concluded with celebrating our Summer 2026 Graduates. We extend our warmest congratulations to our Summer 2026 graduates as they launch into the next stage of their careers:

Thank you to our dedicated faculty, staff, students, alumni, and sponsors whose energy and support make these accomplishments possible.

Warm regards,





LUIS NUNES VICENTE
Timothy J. Wilmott Endowed Chair Professor and Department Chair
Department of Industrial and Systems Engineering, Lehigh University



TED RALPHS

Lehigh ISE's Ted Ralphs receives 2026 INFORMS Computing Society Distinguished Service Award

We are pleased to announce that **Ted Ralphs** has received the 2026 INFORMS Computing Society Distinguished Service Award. Professor Ralphs is a faculty member at Lehigh ISE. The INFORMS Computing Society (ICS) is one of the most active societies within the Institute for Operations Research and the Management Sciences (INFORMS).

The ICS Distinguished Service Award recognizes individuals who have made lasting contributions to the computing society. Intended as a lifetime achievement award, it has been presented at most once every two years since 2009. Professor Ralphs received the award at the ICS Business Meeting during the 2026 INFORMS Annual Meeting in San Francisco, November 1–4, 2026.

It is easy to understand some of the many reasons this honor is so well deserved. Professor Ralphs has served in multiple leadership roles in ICS itself: on the ICS Board from 2010-2011, as Vice Chair from 2012-2013, as Chair from 2014-2015, and five times as a conference stream or cluster chair for ICS conferences. His dedicated and influential service as an area editor for the *INFORMS Journal on Computing* (IJOC) from 2018-2024 resulted in the creation of a vibrant and growing archive of artifacts associated with papers published in IJOC on Github. In addition, he was a co-founder and long-time member of the board of the COIN-OR Foundation, which long been a strategic partner of ICS.

Dr. Ralphs' research focuses primarily on large-scale computation and optimization. His work spans theory, computation, and applications, with the goal of bridging the gap between theory and practice. He is a Fellow of INFORMS and serves as an area editor for *Operations Research*, as well as a technical editor for *Mathematical Programming C*. He has developed and maintained variety of software packages, benchmark libraries, and open-source repositories, including influential platforms such as MIPLIB and COIN-OR, making deep and lasting contributions to the operations research and optimization communities.

The awardee says...

"I am deeply honored to be recognized with this award. From the earliest stages of my career, ICS has been my intellectual home and to have this recognition from my ICS colleagues is truly meaningful."



MENG ZHAO

Lehigh ISE faculty elected as a Director of the IISE Data Analytics and Information Systems Division

We are pleased to announce that Lehigh ISE Assistant Professor **Meng Zhao** has been elected as a Director of the Data Analytics and Information Systems Division (DAIS) of the Institute of Industrial and Systems Engineers (IISE) for 2026-2028.

IISE is an international professional society that fosters research, education, and professional engagement across the broad field of industrial and systems engineering. The **DAIS** Division serves as IISE's professional home for researchers and practitioners working at the intersection of data analytics, AI, information systems, and industrial & systems engineering, while fostering collaboration, innovation, and professional development.

As a DAIS director, Dr. Zhao will help oversee the division's programs and activities, including conference programming, member engagement, professional development events, and recognition of outstanding research and service. The position provides an opportunity to help shape how the data analytics and information systems community connects and collaborates within IISE.

Lehigh ISE congratulates Meng on her appointment as a Director of the IISE Data Analytics and Information Systems Division. In Meng's words, ***"I look forward to strengthening connections between researchers and practitioners in data analytics, AI, and information systems. During my term, I hope to expand member engagement through innovative programs and initiatives that support both emerging and established professionals".***



TED RALPHS

Lehigh ISE Faculty Member to Chair the Bilevel Optimization Society

Lehigh ISE Professor **Ted Ralphs** has been elected Chair-Elect of the Bilevel Optimization Society (BOS). He will serve a one-year term as Chair-Elect before assuming a two-year term as Chair, followed by one year as Past Chair. Bilevel optimization is a field of optimization that addresses hierarchical optimization problems in which a leader (upper level) decides the values of a set of decision variables and a follower (lower level) reacts by solving a problem that depends on the leader's choice. The leader's decision must account for the follower's reaction and this is what makes these problems challenging. Prof. Ralphs' work on branch-and-cut and decomposition algorithms, as well as advanced mixed-integer programming formulations for solving bilevel problems, has made him a world expert on the subject.

The **BOS** is a technical section of the Mathematical Optimization Society (**MOS**). The goal of the BOS is to create and maintain a community of researchers that recognize their work as related to bilevel optimization, while at the same time expanding its basis and promoting its outreach within and outside academia. One key vehicle for achieving this goal is the International Conference on Bilevel Optimization (ICBO) series. The **2026 ICBO** will occur in Pennsylvania in August, hosted jointly by the University of Pittsburgh and Carnegie Mellon University.

Dr. Ralphs' research focuses primarily on large-scale computation and optimization. His work spans theory, computation, and applications, with the goal of bridging the gap between theory and practice. He is a Fellow of INFORMS and serves as an area editor for ***Operations Research***, as well as a technical editor for ***Mathematical Programming C***. He has developed and maintained variety of software packages, benchmark libraries, and open-source repositories, including influential platforms such as MIPLIB and COIN-OR, making deep and lasting contributions to the operations research and optimization communities.

In his own words, leading the ICBO will be ***"a fantastic opportunity to contribute to the early development of an organization whose mission I strongly believe in and that I was involved in founding. It is indeed an honor to be chosen for this role by my colleagues around the world."***



FRANK E. CURTIS

Frank E. Curtis awarded two federal grants to advance optimization research

Frank E. Curtis, Professor of Industrial and Systems Engineering (ISE) at Lehigh University, has been awarded two federal research grants from the National Science Foundation (NSF) and the Air Force Office of Scientific Research (AFOSR). These awards, totaling more than $675,000, will further support his pioneering work in mathematical optimization, algorithm design, and their applications to pressing challenges in science and engineering.

The NSF grant (220K), funded through the Division of Mathematical Sciences, will advance computational mathematics by developing new gradient-sampling-based algorithms for solving large-scale, non-smooth, and nonconvex optimization problems. A central goal is to create methods that can handle noisy or stochastic information effectively—conditions often encountered in image processing, statistical learning, and robust control—while maintaining rigorous convergence guarantees. Complementing this work, the AFOSR grant ($455K) through its Mathematical Optimization Program will focus on optimization under uncertainty and informed machine learning. This project will design algorithms with strong theoretical guarantees, particularly emphasizing Lagrange multiplier estimation techniques when solving constrained optimization problems. Together, these projects aim to push the boundaries of optimization theory while producing practical tools with wide reaching impact.

Dr. Curtis joined Lehigh in 2009 after completing his Ph.D. in Industrial Engineering and Management Sciences at Northwestern University and a postdoctoral appointment at NYU's Courant Institute. His research centers on the design, analysis, and implementation of numerical methods for solving large-scale nonlinear optimization problems. He has received significant recognition for his contributions, including a DOE Early Career Award, the 2021 SIAM/MOS Lagrange Prize in Continuous Optimization, and the 2018 INFORMS Computing Society Prize. His work has been funded by NSF, DOE, ONR, and ARPA-E, and he has led teams recognized in competitions such as the ARPA-E Grid Optimization Challenge. He is also deeply engaged in the professional community, serving as Area Editor for Mathematics of Operations Research and Mathematical Programming Computation and as an Associate Editor for leading journals including Mathematical Programming and SIAM Journal on Optimization.

These new grants will allow Frank, his graduate students, and his collaborators to expand the scope of optimization research at Lehigh, producing new algorithms that are not only mathematically rigorous but also tailored for modern applications in data science, energy systems, and machine learning. By combining theoretical breakthroughs with practical software implementations, the projects will strengthen Lehigh ISE's leadership in optimization and support Curtis's broader mission of advancing computational tools that can shape technology, industry, and society.

Frank says...

"I'm extremely grateful to the National Science Foundation and Air Force Office of Scientific Research for supporting these projects. Beyond the scientific contributions that they will enable, what is most meaningful to me is that these projects will support incredibly talented doctoral students who inspire me every day."



LUIS NUNES VICENTE

***"We will develop and rigorously analyze new stochastic algorithms for optimization problems involving uncertainty, competing objectives, and set-valued outcomes,"* said Nunes Vicente.**

"The aim is to build the foundations to make learning systems more robust, interpretable, and trustworthy."

Lehigh ISE faculty and chair Luis Nunes Vicente receives new $0.5M AFOSR grant

Luis Nunes Vicente, Timothy J. Wilmott '80 Endowed Chair Professor at Lehigh University, has received a three-year, $464,995 grant from the Air Force Office of Scientific Research (AFOSR) for the project ***"Stochastic Vector and Set-Valued Methods for Optimization and Learning."*** The award began September 1, 2026. It follows a $503K AFOSR grant for ***"Multi-Level Multi-Objective Stochastic Methods for Learning and Optimization"*** (2023–2025) and a $542K Office of Naval Research grant for ***"New Sampling and Descent Paradigms for Stochastic Black-Box Optimization"*** (2024–2026). Collectively, the three grants form a coherent body of research advancing the foundations and algorithms of stochastic optimization for learning, from multilevel and multi-objective problems to black-box and set-valued models. These single-PI awards amount to more than $1.5 million in Department of Defense research funding over the past four years.

The project will develop new mathematical formulations, algorithms, and theoretical foundations for stochastic multi-objective and set-valued optimization. Such problems arise when decisions must account for several conflicting objectives or when uncertain outcomes are naturally represented by sets rather than single numerical values. The research will also seek solutions that provide an optimally stable balance among competing objectives—an important capability for interpretability and reliable decision-making. The resulting methods are expected to support robust and interpretable artificial intelligence and machine learning systems, with applications to high-stakes areas such as autonomous systems and defense.

Luis Nunes Vicente's research spans continuous optimization, machine learning, and sports analytics, with internationally recognized contributions to derivative-free and stochastic optimization. He has served as chair of Lehigh ISE since August 2018. A SIAM Fellow since 2024, he served as chair of the SIAM Activity Group on Optimization from 2023 to 2025 and as president of the Association of Chairs of Operations Research Departments at INFORMS from 2024 to 2025. He received his PhD from Rice University as a Fulbright Scholar and is a co-recipient of the SIAM–Mathematical Optimization Society Lagrange Prize for his book ***Introduction to Derivative-Free Optimization***.

Lehigh ISE faculty member receives NSF award for research in quantum computing optimization

We are pleased to announce that **Xiu Yang**, Associate Professor at Lehigh ISE, has received a three-year National Science Foundation (NSF) award as part of a collaborative research project titled *"Collaborative Research: Noise-Aware Optimization Algorithms for Hybrid Quantum Computing."* The project, funded through NSF's Division of Mathematical Sciences (DMS) Computational Mathematics program, will run from July 1, 2026, through June 30, 2029. The total award is approximately $300K, including $100K supporting Yang's research at Lehigh.

The project aims to develop new optimization algorithms that make hybrid quantum computing more reliable and scalable despite the significant noise and uncertainty present in today's quantum hardware. The research will create mathematically rigorous methods for training quantum algorithms using only noisy measurements, helping bridge the gap between theoretical advances and practical quantum applications. The resulting techniques will be tested on problems in quantum optimization, quantum machine learning, and scientific computing, with potential applications in artificial intelligence, molecular design, and computational biotechnology. The project will also produce open-source software, benchmark problems, and educational resources while supporting interdisciplinary training for undergraduate and graduate students.

Dr. Yang's research spans uncertainty quantification, scientific computing, physics-informed machine learning, and quantum computing. He received the prestigious NSF CAREER Award in recognition of his outstanding contributions to research and education, and his work is also supported by the U.S. Department of Energy through collaborative research initiatives. He earned his Ph.D. in Applied Mathematics from Brown University and previously served as a research scientist at Pacific Northwest National Laboratory.

The collaborative project is led by **Baoyu Zhou**, Assistant Professor of Mathematics at the State University of Arizona, who earned his Ph.D. in Lehigh ISE in 2022 under the supervision of Professor Frank E. Curtis. As a doctoral student, Zhou received the 2022 Rossin College Stout Dissertation Award, recognizing the outstanding doctoral dissertation in Lehigh's P.C. Rossin College of Engineering and Applied Science. His continued collaboration with Lehigh ISE highlights the department's long-standing leadership in optimization and its growing impact on emerging fields such as quantum computing.



XIU YANG

"Reliable optimization is essential for unlocking the potential of quantum computing,"* said Yang. *"I'm excited to collaborate with Baoyu on developing algorithms that can make quantum technologies more practical and impactful."

LEHIGH ISE HOSTS A LANDMARK WEEK OF OPTIMIZATION EVENTS



Lehigh ISE brought together the optimization community

for an exceptional series of events on campus, hosting the inaugural Future Optimization Graduate Student Workshop (GradOpt) on August 17, MOPTA 2026 on August 18–19, and the inaugural Optimization Junior Faculty Colloquium (ColOpt) on August 20.

The three events were organized under the umbrella of the Lehigh ISE Optimization Science (LIOS) program, a key component of our department endowment program. The resources provided through the endowment have enabled ISE to expand its investment in optimization science and create new initiatives with national and international reach. In particular, the inaugural editions of GradOpt and ColOpt were made possible by the support of the endowment program. Together with the established MOPTA conference, these new initiatives created a unique week spanning the optimization academic pipeline—from students considering doctoral study, to established researchers from academia and industry, to junior faculty shaping the future of the field.



GradOpt 2026 opened the week by welcoming 15 undergraduate and master's students selected from a highly competitive pool of approximately 90 applicants interested in pursuing PhD studies in optimization. Participants learned about research directions and open problems, interacted directly with Lehigh ISE faculty and PhD students, and heard from our alumni about careers in academia and industry.

The following two days featured **MOPTA 2026** (Modeling and Optimization: Theory and Applications), the 26th edition of Lehigh's longstanding international optimization conference. This year's edition was the largest in the conference's history, attracting more than 160 participants and featuring seven plenary talks and more than 110 technical presentations spanning a broad spectrum of

optimization, from theory and algorithms to applications. This success was due in part to ColOpt, which encouraged junior faculty participants to also attend MOPTA and contributed several excellent technical sessions to the program.

The 18th AIMMS–MOPTA Optimization Modeling Competition challenged 17 teams to solve a dedicated truck-routing problem proposed by Interfor. Team "Woodchucks" from the University of Bern—Miriam Keller, Deborah Stritt, and Loris Trotter, advised by Nicklas Klein—won the competition.



Team "Éliane" from Université Laval, represented by Éliane Nguemaleu and advised by Nadia Lehoux, placed second, while "OptiRoute" from the Indian Institute of Technology Delhi—Chanchal Kumar Salode and Satadru Banerjee, advised by Prasanna Ramamoorthy—finished third.

The week concluded with the inaugural **ColOpt 2026**, which gathered nearly 50 junior faculty and researchers from leading universities in the United States. ColOpt was designed around both scientific exchange and the particular opportunities and challenges of building an academic career in optimization. In addition to research presentations and networking, the program featured dedicated sessions connecting participants with leaders from industry and research funding organizations. Speakers from NVIDIA and Gurobi discussed AI and its connections with mathematical optimization, while representatives from the National Science Foundation (NSF) and WISE Investigator provided perspectives on research funding opportunities and the funding landscape for early-career researchers.

Together, GradOpt, MOPTA, and ColOpt brought multiple generations of the optimization community to Lehigh, reflecting the broader mission of LIOS: to advance optimization as a scientific discipline while strengthening connections among education, research, professional development, industry, and community building. The events were co-chaired by Lehigh ISE PhD student Zhara Khatti and the department chair Luis Nunes Vicente, with contributions from faculty across the department. MOPTA 2026 also benefited from the involvement of its founder and honorary chair, Lehigh ISE Professor Tamás Terlaky.

The success of this inaugural LIOS week also demonstrates the impact of the Lehigh ISE endowment program in enabling ambitious new initiatives that would otherwise not have been possible. By supporting programs such as GradOpt and ColOpt and complementing the long-running MOPTA conference, the endowment is helping Lehigh ISE strengthen its role as a national and international hub for optimization science.



Lehigh ISE INFORMS Student Chapter earns Summa Cum Laude for second consecutive year



Professor Frank E. Curtis (Chapter faculty adviser; on the left) and PhD student Oluwatosin Akande (2026-2027 Chapter president; on the right).

Our **INFORMS PhD Student Chapter** has once again earned **Summa Cum Laude** recognition in the **2026 Student Chapter Annual Awards**, receiving the highest distinction for the second consecutive year! Congratulations to the 2025–2026 Chapter board: **Oluwatosin Akande** (President), **Josline Mwape** (Vice President), **Ken Wu** (Secretary), and **Chia-Yuan Wu** (Treasurer)! We also thank Faculty Advisor Prof. Frank E. Curtis for his guidance and support, and all our student members for their contributions to the department's academic and social life.

The Institute for Operations Research and the Management Sciences (INFORMS) presents these awards annually to recognize the outstanding achievements of its student chapters. There are four award levels: Honorable Mention, Cum Laude, Magna Cum Laude, and Summa Cum Laude. Our chapter's sustained progress reflects the commitment of successive student boards: after earning Cum Laude recognition from 2014 through 2021 and Magna Cum Laude in 2022, 2023, and 2024, the chapter reached Summa Cum Laude in 2025 and has now maintained this distinction in 2026. This latest award celebrates both this year's accomplishments and the strong foundation established by previous boards.

A highlight of the year was the INFORMS Distinguished Lecture by Professor Pascal Van Hentenryck on March 24, 2026, titled "AI for Engineering Optimization." In addition to coordinating the lecture, the chapter arranged lunch and dinner with the speaker, giving students opportunities for informal discussions about research and academic careers. The chapter also organized 19 PhD seminars featuring 25 student presentations, a time management seminar by Professor Frank E. Curtis, and a career panel with alumni Muqing Zheng of Pacific Northwest National Laboratory and Baoyu Zhou of Arizona State University. An Internship Tips Session complemented these activities with practical advice from fellow students.

The chapter continued its exchange program with Rutgers University and hosted a university-wide graduate student breakfast to strengthen connections across disciplines. Members also supported departmental recruitment through student panels, campus tours, and activities welcoming prospective PhD students. Participation in OutreachISE further connected our doctoral students with educational and research outreach efforts beyond the department.

Community building remained central to the chapter's mission. The annual department picnic and an end-of-year farewell celebration brought students, faculty, staff, and postdoctoral researchers together. The chapter also helped complete the furnishing of the new PhD Student Lounge, creating a welcoming space for collaboration, recreation, and everyday interaction.

As its program continues to grow, the chapter is focusing on continuity across student boards, stronger coordination with other Lehigh student organizations, and effective participation in outreach. We are proud of our students' leadership and grateful for their sustained efforts to make Lehigh ISE a welcoming, connected, and intellectually vibrant community.

Lehigh ISE Co-Hosts Joint Reception at the 2026 INFORMS Annual Meeting

Lehigh ISE joined NC State, Virginia Tech, and the University of Southern California to host a joint reception during the 2026 INFORMS Annual Meeting in San Francisco. Held on Monday, November 2, at the San Francisco Marriott Marquis, the "Meet Us by the Bay" reception marked the second consecutive year of this collaborative format.

The reception provided an opportunity for students, faculty, alumni, and colleagues from the four universities to connect beyond the conference sessions, exchange ideas, and strengthen ties across the operations research and industrial engineering communities.

Lehigh ISE was pleased to continue this shared tradition with its partner institutions, creating a welcoming setting to renew friendships, make new connections, and celebrate our broader professional community.



Marriot Marquis, San Francisco





2026 Lehigh ISE Career Fair connects students with industry

Lehigh ISE hosted its annual Career Fair on September 16 in Mohler Laboratory, bringing together about 100 registered students and representatives from eight companies for an evening of conversation, networking and career exploration.

EY, BD, B. Braun, EIR Healthcare, Lutron, Air Products, OraSure Technologies, and Optamo participated in this year's event. Together, they represented industries ranging from consulting and manufacturing to healthcare and technology, giving students the opportunity to learn about internships, full-time positions and the many career paths open to ISE graduates. EIR Healthcare and OraSure Technologies attended the fair for the first time.





Undergraduate and master's students met directly with company representatives, asked questions about available opportunities and learned more about the skills employers seek. Recent Lehigh ISE graduates who represented Lutron offered a particularly valuable perspective, sharing firsthand experiences of the transition from the department's programs to careers in industry.

The event welcomed students from across the Lehigh ISE community, from undergraduates in ISE and master's students in our in-house programs—Industrial Engineering and Operations Research, Healthcare Systems Engineering, and Optimization—to students in interdisciplinary programs such as Integrated Business and Engineering at the undergraduate level and Data Science and Financial Engineering at the master's level.

The student-driven event was organized by ISE master's student Eve Ngwenya, with guidance and support from ISE Office. Faculty, staff and student volunteers also contributed to the event.

The annual fair is part of Lehigh ISE continuing effort to strengthen its relationships with industry and help students connect their education in analytics, optimization and systems thinking with professional opportunities across a wide range of sectors.



EVE NGWENYA

SPENCER C. SCHANTZ *lecture series*



Lehigh ISE was pleased to welcome Ed Rothberg, Chairman of the Board and Chief Scientist, Gurobi Optimization, to deliver a Spencer C. Schantz Lecture

ED ROTHBERG

The Lehigh ISE Department was honored to host **Ed Rothberg**, co-founder of the leading optimization software company Gurobi Optimization, who delivered a Spencer C. Schantz Lecture "***Looking at PDHG Through a Practitioner's Lens***," on Tuesday, August 18, 2026, from 11:30-12:30. Ed's Lecture was the opening plenary talk for the MOPTA 2026 Conference, August 18 and 19, 2026.

Abstract: First-order methods built on the PDHG algorithm have received significant attention because of their potential to exploit GPU architectures for solving large linear programming models. This talk examines the approach from a practitioner's point of view, considering the current and potential future impact of these methods on practical optimization applications, their limitations, and techniques for working around some of those limitations.

Bio: Ed Rothberg is a co-founder of Gurobi Optimization and serves as Chairman of the Board and Chief Scientist. He served as Gurobi's Chief Executive Officer from 2015 to 2022 and as Chief Operating Officer from the company's founding in 2008 through 2015. Before co-founding Gurobi, he led the ILOG CPLEX development team. Rothberg has held senior leadership positions in mathematical optimization software for more than twenty years and has played a central role in the development of high-performance commercial optimization technology. He received the INFORMS Test of Time Paper Award for "An Evolutionary Algorithm for Polishing Mixed Integer Programming Solutions," recognizing the lasting influence of that work on mixed-integer optimization and solver development.

(continued next page)

GUROBI OPTIMIZATION

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Lehigh ISE Spencer C. Schantz Distinguished Lecture Series: This lecture series is endowed in the name of the late Spencer C. Schantz, who graduated from Lehigh in 1955 with a B.S. in Industrial Engineering. Following progressive responsibilities with several electrical manufacturing companies, in 1969 he founded U.S. Controls Corporation and became its first CEO and President. **The Spencer C. Schantz Distinguished Lecture Series** was established by his wife Jerelyn as a valuable educational experience for faculty, students, and friends of Lehigh's Industrial and Systems Engineering department.



ISE Seminar Series

In Fall 2026, our Seminar Series showcased an impressive field of experts who shared their research with the Lehigh ISE faculty and students.

FALL 2026

TUESDAY, SEPTEMBER 15, 2026
Dr. Ambitabh Basu, Johns Hopkins University
"Sample Complexity of Stochastic Optimization with Integer Variables"

TUESDAY, SEPTEMBER 22, 2026
Dr. Negar Soheili, University of Illinois
"Weakly Time-Coupled Approximation of Markov Decision Processes"

TUESDAY, SEPTEMBER 29, 2026
Dr. Jing Li, Georgia Tech
"Graph Learning and Inference for Complex Systems"

TUESDAY, OCTOBER 6, 2026
Dr. Willem-Jan van Hoeve, Carnegie Mellon University
"Decision Diagrams for Integer Optimization"

TUESDAY, OCTOBER 27, 2026
Dr. Xiaodi Wu, University of Maryland, Overland Park
"Quantum and Quantum-Inspired Optimization for Applications in AI and Healthcare"

TUESDAY, NOVEMBER 10, 2026
Dr. Abdullah Konak, Pennsylvania State University
"From Community Insight to Operational Change: Participatory Operations Research in Charitable Food Systems"

TUESDAY, NOVEMBER 17, 2026
Dr. Guanghui (George) Lan, Georgia Tech
"Policy Optimization for Reinforcement Learning"



DEGREES AWARDED SUMMER 2026



PH.D. INDUSTRIAL AND SYSTEMS ENGINEERING

- Shannon Kelley
- Yakun Wang

M.S. INDUSTRIAL AND SYSTEMS ENGINEERING

- Barbara Perevalov
- Andres Urrutia

B.S. INDUSTRIAL AND SYSTEMS ENGINEERING

- Emily Bramah
- Natan Driker
- Juliet Simmet





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