Northeastern University

A Joint Seminar By
Mechanical & Industrial Engineering in the COE
and D'Amore-McKim School of Business

Tuesday, February 17, 2026 | 358 Snell Engineering | 3:30 pm—4:30 pm

AI, Optimization and Machine Learning in OM Applications

Seminar Presented By:

Georgia Perakis, William F. Pounds Professor, MIT Sloan
Professor, Operations Management, Operations Research & Statistics, MIT Sloan
Co-Director Operations Research Center
Visiting Scholar Harvard Business School

Abstract: Data-driven decision-making has garnered a growing interest due to the increase in data availability in recent years. With that growth many opportunities as well as challenges arise. AI, Optimization and Machine Learning (ML) and their synergies can play an important role to address these challenges. In fact, nowadays, predictive and prescriptive tasks arise together in Operations Management applications. This makes AI even more important. In this talk, we will discuss how AI connects with optimization and ML in some of these key applications. We will highlight the importance and challenges of integrating predictive and prescriptive tasks in data-driven decision-making. If time permits, we will also discuss the M&SOM journal and describe some of the new initiatives from this past year and the vision moving forward.

Bio: Georgia Perakis is the William F. Pounds Professor and a Professor of Operations Management, Operations Research & Statistics at the MIT Sloan School of Management. She is also serving as co-director of the Operations Research Center. On July 1 she started her sabbatical at Harvard Business School where she is spending the year as a Visiting Scholar.

For the past year and a half, she served as the John C Head III Dean (Interim) at MIT Sloan and before that, she served as an Associate Dean for Social and Ethical Responsibility in Computing (SERC) in the Schwarzman College of Computing and MIT Sloan. Her research has received many awards and focuses on analytics/AI, in particular, in the intersection of optimization and machine learning with applications in pricing, revenue management, supply chain, sustainability and healthcare among others. Among other recognitions, she received the PECASE Award from the Office of the President on Science and Technology. In 2016, she was elected as an INFORMS Fellow, and in 2021 as Distinguished MSOM Fellow. This past Fall, she has also received the Salzburg Medallion from Syracuse University for "outstanding leadership and innovation in the field of Supply Chain Management" and "efforts in solving complex problems and educating others."

Perakis has passion for supervising PhD, masters, and undergraduate students, having graduated 34 PhD and 63 master's students. She has also received numerous awards for teaching including the Graduate Student Council Teaching Award (2002), the Samuel M. Seegal Award (2012), the Jamieson Prize for excellence in Teaching (2014), the Teacher of the Year Award (2017) and the Outstanding Teaching Award (2024) at MIT Sloan.

Perakis is currently the Editor in Chief of the M&SOM journal and has served on the editorial board at a number of other journals. She holds a BS in mathematics from the University of Athens as well as an MS in applied mathematics and a PhD in applied mathematics from Brown University.

Hosted by: *Prof. Tugce Martagan, Associate Professor in the Department of Mechanical & Industrial Engineering*