“Towards Explainable and Reliable AI Models for Optimization”
Thursday, April 25, 2024 • 10:00AM • MSB 318 • Zoom

Abstract:
AI and data science have demonstrated remarkable potential in enhancing optimization algorithms. Compared with traditional methods, utilizing AI/ML techniques can potentially offer improvements in aspects like computational speed and solution quality. Despite these advancements, a deep, systematic understanding of these methods remains underdeveloped. In this talk, the speaker will demonstrate through concrete examples how mathematical tools, particularly optimization theory, can be used to unravel the mysteries of these “black boxes.” The speaker will also discuss the development of interpretable and reliable AI models for optimization, grounded in these mathematical principles.

Bio:
Jialin Liu received the B.S. degree in automation from Tsinghua University in 2015 and received the Ph.D. degree in applied mathematics at University of California, Los Angeles (UCLA) in 2020. He is currently a senior algorithm engineer at DAMO Academy, Alibaba Group US. His research interest lies in the intersection of optimization, statistics, and machine learning, with a particular focus on developing and analyzing machine-learning-driven algorithms for solving various optimization problems, such as continuous and combinatorial optimization. He won "Best Student Paper: Third Place" at the 2017 International Conference on Image Processing (ICIP).