Stanford

Yinyu Ye

Kwoh-Ting Li Professor in the School of Engineering and Professor, by courtesy, of Electrical Engineering

Management Science and Engineering

📄 Curriculum Vitae available Online   📄 Resume available Online

CONTACT INFORMATION

- **Administrator**

  Roz Morf - Administrative Associate

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Bio

BIO

Yinyu Ye is currently the Kwoh-Ting Li Professor in the School of Engineering at the Department of Management Science and Engineering and Institute of Computational and Mathematical Engineering, Stanford University. He received the B.S. degree in System Engineering from the Huazhong University of Science and Technology, China, and the M.S. and Ph.D. degrees in Engineering-Economic Systems and Operations Research from Stanford University. Ye's research interests lie in the areas of optimization, complexity theory, algorithm design and analysis, and applications of mathematical programming, operations research and system engineering. He is also interested in developing optimization software for various real-world applications. Current research topics include Liner Programming Algorithms, Markov Decision Processes, Computational Game/Market Equilibrium, Metric Distance Geometry, Dynamic Resource Allocation, and Stochastic and Robust Decision Making, etc. He is an INFORMS (The Institute for Operations Research and The Management Science) Fellow, and has received several research awards including the winner of the 2014 SIAG/Optimization Prize awarded every three years to the author(s) of the most outstanding paper, the inaugural 2012 ISMP Tseng Lectureship Prize for outstanding contribution to continuous optimization, the 2009 John von Neumann Theory Prize for fundamental sustained contributions to theory in Operations Research and the Management Sciences, the inaugural 2006 Farkas prize on Optimization, and the 2009 IBM Faculty Award. He has supervised numerous doctoral students at Stanford who received received the 2015 and 2013 Second Prize of INFORMS Nicholson Student Paper Competition, the 2013 INFORMS Computing Society Prize, the 2008 Nicholson Prize, and the 2006 and 2010 INFORMS Optimization Prizes for Young Researchers. Ye teaches courses on Optimization, Network and Integer Programming, Semidefinite Programming, etc. He has written extensively on Interior-Point Methods, Approximation Algorithms, Conic Optimization, and their applications; and served as a consultant or technical board member to a variety of industries, including MOSEK.

ACADEMIC APPOINTMENTS

- Professor, Management Science and Engineering
- Professor (By courtesy), Electrical Engineering
- Member, Institute for Computational and Mathematical Engineering (ICME)

HONORS AND AWARDS

- SIAM Optimization Prize, SIAM (2015)
- Lectureship Prize (Inaugural Recipient), ISMP Tseng (2012)
- John von Neumann Theory Prize (Co-Recipient), INFORMS (2009)

- Faculty of the Year Award, Stanford Asian American Society (2007)

- Inaugural recipient of the Farkas Prize, INFORMS Optimization Society (2006)

- Fellow, INFORMS (November 6, 2006)

- Plenary speaker, International Symposium on Mathematical Programming, Berlin (2012)

- Plenary speaker, Workshop on Internet and Network Economics (2008)

- Semi-Plenary speaker, 17th International Symposium on Mathematical Programming, Atlanta (2000)

- Area Editor, Optimization & Engineering (2000)

- Associate Editor, Mathematics of Operations Research (1998-2001)

- Section Officer (Linear Programming), Institute for Operations Research and the Management Sciences (1997-2000)

- Co-organizer, DIMACS Princeton workshop on discrete optimizatio (1999)

PROGRAM AFFILIATIONS

- Center for East Asian Studies

PROFESSIONAL EDUCATION

- BS, Huazhong University of Science and Technology (HUST), China , Systems and Control (1982)

- MS, Stanford University , Engineering Economic Systems (1983)

- PhD, Stanford University , Engineering Economic Systems and Operations Research (1988)

LINKS

- Personal: https://web.stanford.edu/~yyye/index.html

- Lab Site: https://web.stanford.edu/~yyye/index.html

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

My current research interests include Continuous and Discrete Optimization, Algorithm Development and Analyses, Algorithmic Game/Market Theory and Mechanism-Design, Markov Decision Process and Reinforcement Learning, Dynamic/Online Optimization and Resource Allocation, and Stochastic and Robust Decision Making. These areas have been the unique and core disciplines of MS&E, and extended to new application areas in AI, Machine Learning, Data Science, and Business Analytics.

Teaching

COURSES

2023-24

- Introduction to Optimization: ENGR 62, MS&E 111, MS&E 211 (Aut)

- Linear Programming: MS&E 310 (Aut)

- Optimization in Data Science and Machine Learning: MS&E 314 (Win)

2021-22

- Introduction to Optimization (Accelerated): ENGR 62X, MS&E 111X, MS&E 211X (Aut)

- Linear Programming: MS&E 310 (Aut)

- Optimization: CME 307, MS&E 311 (Win)

2020-21

- Introduction to Optimization (Accelerated): ENGR 62X, MS&E 111X, MS&E 211X (Aut)

- Linear Programming: MS&E 310 (Aut)

- Optimization: CME 307, MS&E 311 (Win)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Sirui Lin, Saied Mahdian, Haoran Xu

Orals Evaluator

Annie Marsden

Doctoral Dissertation Advisor (AC)

Chunlin Sun

Master's Program Advisor

Jin Moh, Aubrey Wang, Nicole Yang, Angelina You, Selina Zhang

Doctoral (Program)

Jiale Chen, Louis Liu

Publications

PRESENTATIONS

- Various Topics - Various Institutions (1/1/2020 - 3/1/2024)