Sahar Tahernejad

Contact Information	200 W. Packer Ave. Industrial and Systems Engineering Lehigh University Bethlehem, PA 18015 USA	*Cell:* 610-608-1946 sat214@lehigh.edu

Research Interests Discrete optimization, bilevel optimization, scheduling

Languages Persian (Native)

English (Fluent)

- Excellent in communication skills

Education

Lehigh University, Bethlehem, Pennsylvania USA

Ph.D., Operations Research, *Expected:* May 2019

- Research Topic: *Mixed-integer bilevel optimization*
- Advisor: Theodore K. Ralphs

Sharif University of Technology, Tehran Iran

M.S., Industrial Engineering, Sept. 2012

- Thesis: *Train scheduling on a two-way and single track railway line considering the train stops for prayer*
- Advisor: Nasser Salmasi

Sharif University of Technology, Tehran Iran

B.S., Industrial Engineering, Sept. 2010

Awards

- Deans Doctoral Assistantship, Industrial and Systems Engineering, Lehigh University Sept. 2014
- Direct entrance to graduate studies as a talented student by Dean of Sharif University of Technology with full scholarship Sept. 2011
- 263^{rd} in the Nationwide University Entrance Examination in Mathematics and Physics Field(among more than two million students) Sept. 2006

Talks

- MibS solver for integer bilevel optimization problems, Informs Optimization Society Conference, Princeton University. Mar.2016
- Integer bilevel linear optimization problems, COR@L seminar, Lehigh University. Jan. 2016
- Branch-and-cut algorithm for integer bilevel linear optimization problems, Informs Annual Meeting, Philadelphia. Nov. 2015

Academic Experience

Teaching Assistant Jan. 2016 to May 2016
- Simulation
  Industrial and Systems Engineering Department
  Lehigh University

Teaching Assistant Sept. 2015 to Dec. 2015
- Optimization models and applications
  Industrial and Systems Engineering Department
  Lehigh University

Teaching Assistant Jan. 2015 to May 2015
- Information systems analysis and design
  Industrial and Systems Engineering Department
  Lehigh University

Teaching Assistant Sept. 2014 to Dec. 2014
- Material handling and facility planning
  Industrial and Systems Engineering Department
  Lehigh University

Teaching Assistant Jan. 2011 to May 2011
- Production planning
  Industrial Engineering Department
  Sharif University of Technology

Project Experience

Study on polytope separator for binary classification in machine learning May. 2016

Implementation of a branch-and-cut algorithm for integer bilevel optimization problems in SYMPHONY Dec.2015

Implementation of revised simplex algorithm Nov.2015

Implementation of a line search and trust region based optimization package for unconstrained nonlinear optimization Apr.2015

Implementation of spatial branch-and-bound algorithm with disjunctive cuts for non-convex MINLP Dec.2014

Computer Skills

Operating Systems: Unix/Linux, Windows

Languages: C/C++, Python, MATLAB, Parallel computing with OpenMP and MPI

Mathematical modeling: AMPL, GAMS

optimization solvers: GUROBI, MOSEK, SeDuMi, CPLEX

Statistical Packages: R, Minitab, SAS

Simulation: Rockwell Arena

Relevant Course Work

Lehigh University
Integer optimization, Mathematical optimization, Convex optimization, Nonlinear optimization, Computational methods in optimization, Conic optimization, Optimization methods in machine learning, Mining massive datasets

Sharif University of Technology
Operations research, Graph theory, Sequencing and scheduling theory, Discrete events simulation