USF
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Dr. Hadi Charkhgard, Assistant Professor
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Friday, December 1st, 2017, 3:00 p.m. - 4:00 p.m.
College of Engineering (ENB) Room 118

Multi-Objective Integer Programming from Theory to Practice: Transportation, Conservation Planning, Energy, and Healthcare

Abstract

The Multi-objective Optimization Laboratory at USF focuses on solving challenging theoretical and/or algorithmic questions in optimization. Our research is highly computationally-oriented and integer programming plays a key role in our studies. This is highlighted by the fact that we have developed several general purpose multi-objective integer programming solvers in Julia and C++ so far. This talk will present an overview of the problems that we are studying. Some of them are purely theoretical and algorithmic but the others are optimization problems arising in transportation, conservation planning, energy, and healthcare.

Biography

Dr. Hadi Charkhgard is an Assistant Professor of Industrial and Management Systems Engineering and the Director of Multi-Objective Optimization Laboratory at USF. Prior to this position, he was a postdoctoral research fellow in the School of Industrial and Systems Engineering at Georgia Tech. He is a specialist in operations research, in particular (multi-objective) integer programming, and has prepared and submitted 21 scientific articles for publication in highly-ranked journals. To date, 11 of these articles have already been published, including some in prestigious journals such as Mathematical Programming Computation, INFORMS Journal of Computing, Computers and Operations Research, and the European Journal of Operational Research, and the rest of them are under review/revision. He has also won some notable awards for his research work including: (1) A runner-up for the 2017 best PhD dissertation award from the International Society on Multiple Criteria Decision Making; (2) A runner-up for the 2016 INFORMS computing society student paper award; (3) Outstanding postgraduate (research) student achievement award from the University of Newcastle (2014); and (4) The best student paper award from Australian Society for Operational Research (2013).