PIMS-UCalgary Operations Research & Analytics Series:

Dr. Tamás Terlaky

January 20, 2017
11:00 AM
Room: Evans Room, Rozsa Centre
University of Calgary

Mixed-Integer Second-Order Cone Optimization (MISOCO):Disjunctive Conic Cuts (DCCs) and Portfolio Models

The use of integer variables naturally occurs in Second Order Conic Optimization (SOCO) problems, just as in linear and nonlinear optimization, thus the need for dedicated Mixed Integer SOCO (MISOCO) algorithms and software is evident. This talk gives some insight into the design of Disjunctive Conic Cuts (DCCs) for MISOCO problems, and into the complexity of identifying disjunctive conic cuts. The novel DCCs may be used to develop Branch-and-Conic-Cut algorithms for MISOCO problems. Preliminary computational experiments by solving classes of MISOCO Portfolio Selection problems show the power of the DCC approach.Finally, we discuss some pathological cases when DCCs are not useful. Based on joint work with J. Góez, S. Cay, M. Shahabsafa, P. belotti, I. Pólik, and T. Ralphs

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Website and Speaker Biography: ***http://www.pims.math.ca/scientific-event/170120-puorasdtt***

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