

Linear, polyhedral optimization and their relatives

Organizer(s):

Tamás Terlaky (McMaster University)

Description:

The set of feasible solutions of a linear optimization (LO) problem is a convex polyhedron. Specially structured (integer) LO problems define polytopes with special structures, thus the theory and algorithms of LO inherently linked to polyhedral theory, properties of convex bodies and graphs theoretical problems. This mini-symposium covers recent fundamental results about geometrical properties of convex bodies; results on graph rigidity; an algorithm for network design problems; facet generation of polytopes by symmetric triangulation; finally results and conjectures about diameters and curvatures.

Titles and Speakers:

- *On the successive face indices of convex bodies*
Károly Bezdek (University of Calgary), Alexander Litvak (University of Alberta)
- *On the Uniqueness, dimensional rigidity and global rigidity of bar-and-joint frameworks*
Abdo Y. Alfakih (University of Windsor)
- *Minimizing the Number of Critical Vertices in Network Design*
Hu Zhang (McMaster U.), Tamás Terlaky (McMaster U), and Anthony Vannelli (U. Guelph).
- *Facet Generation and Symmetric Triangulation*
David Bremner (University of New Brunswick)
- *Central Path & Edge Path: Curvature & Diameter*
Antoine Deza, Eissa Nematollahi, Tamás Terlaky Yuriy Zinchenko (McMaster University, Hamilton, Ontario)