



Mathematics and CS Seminar

Combinatorial and algorithmic aspects of CAT(0) complexes

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Host: Vladimir Kolmogorov

A CAT(0) space is a geodesic metric space having globally non positive curvature. In this talk, I will discuss combinatorial and algorithmic aspects of CAT(0) spaces associated with combinatorial objects (graphs, posets, etc), from applied mathematics points of view.

Topics include:

- (1) The space of phylogenetic trees (Billera, Holmes, Vogtmann 2001), and Owen-Provan algorithm (Owen, Provan 2011) computing the geodesic between two phylogenetic trees, via parametric network flow.
- (2) Orthoscheme complexes associated with posets (Brady-McCammond 2010), classes of lattices/semilattices having CAT(0) orthoscheme complexes, and their application to sub-modular optimization.

Friday, November 15, 2019 10:00am - 11:00am

IST Austria Campus Mondi Seminar Room 3, Central Building



This invitation is valid as a ticket for the IST Shuttle from and to Heiligenstadt Station. Please find a schedule of the IST Shuttle on our webpage: <https://ist.ac.at/en/campus/how-to-get-here/> The IST Shuttle bus is marked IST Shuttle (#142) and has the Institute Logo printed on the side.