



Mathematics and CS Seminar

Combinatorial and algorithmic aspects of CAT(0) complexes

Hiroshi Hirai

University of Tokyo

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

Mondi Seminar Room 3, Central Building



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