

Colloquium

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TOPOLOGICAL DATA ANALYSIS:
FROM GEOMETRY, ALGEBRA AND COMBINATORICS
TO ANALYSIS, LEARNING AND APPLICATIONS

Friday, February 21, 2025
3:00 p.m. in SS (Social ScienceS) 256
(tea & coffee at 2:40 p.m.)

ABSTRACT. Mathematics has always been motivated by a desire to bring order, structure, and understanding to complex phenomena in the natural world. Topological data analysis (TDA) is a recent variation on this theme, based on ideas from algebraic topology. As this subject gains breadth and depth, it is making surprising connections to diverse mathematical topics. I will give a tour of some of the old and new mathematics involved in the challenge of applying TDA to scientific data.