hausdorff center for mathematics

UNIVERSITÄT BONN

New Mathematical Methods in Geometry Processing

Organizers:

Martin Rumpf (University of Bonn), Peter Schröder (University of Bonn, California Institute of Technology)

Venue: Lipschitz Lecture Hall · Mathematics Center · Endenicher Allee 60 · 53115 Bonn

Geometry processing is a vibrant research area with novel mathematical models and an increasing impact of machine learning tools. The challenges include the sheer size of data sets, robustness in the presence of noise and damaged data, the arbitrary topology of surface meshes, and the need for structure-preserving algorithms.

Lecture Series by:

- **Justin Solomon** (Massachusetts Institute of Technology)
  Convex Models for Machine Learning, Graphics, and Geometry Processing

- **Gabriele Steidl** (TU Berlin)
  Flows in Measure Spaces and Generative Modelling

- **Niloy Mitra** (University College London)
  Neural Surfaces: Analyzing Geometric Surfaces Encoded as Neural Networks

- **Maks Ovsjanikov** (École Polytechnique)
  Neural Network Architectures on non-Euclidean Spaces

The special topics school will combine 4 times 3 lectures delivered by the lecturers, interactive practical sessions, and ample time for discussions and exchange between participants. It will foster interaction at the interface between mathematical analysis, numerics, vision and graphics.

Call for participation: Participation is free. If you are interested in participating, please fill out the application form: **https://math-events.uni-bonn.de/event/598/**. Successful applicants are selected based on research background. To be considered , please submit a CV and research overview. To encourage the participation of researchers facing increased financial burden, such as many researchers from developing countries, a small number of funded places are available (including support for travel and/or accommodation). You can indicate in the application form, for which type of financial support you would like to be considered. Additional participants are welcome to join at their own cost. **The deadline for applications to participate in the school is January 11th, 2026.**