Institute of Geometry

Geometrieseminar

19.6.2018, 8:30

Seminarraum 2, Geometrie

Discussions on Discrete Stratified Morse Theory

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Inspired by the works of Forman on discrete Morse theory, we give a combinatorial adaptation of stratified Morse theory of Goresky and MacPherson, referred to as the discrete Stratified Morse theory. We relate the topology of a finite simplicial complex with the critical simplices of a discrete stratified Morse function on the complex. We provide an algorithm that constructs such a function on any finite simplicial complex equipped with a real-valued function. We also discuss on-going work that study the relation to classical stratified Morse theory. This is joint work with Kevin Knudson (Univ. Florida).

Michael Kerber