TECHNISCHE UNIVERSITÄT DRESDEN

tu-dresden.de/mathematik

Wintersemester 2018/2019

Dresdner Mathematisches Seminar

Prof. Dr. Max Wardetzky
Georg-August-Universität Göttingen

Discrete curvative functionals - and some of their challenges

Discrete notions of curvatures are by now quite far developed, partially motivated by applications in shape-space analysis, computer graphics, and physical simulation. When establishing discrete notions of curvatures, one is often guided by mimicking structural properties of the classical smooth setting and by the desire to recover classical notions in the limit of refinement. While we have gained quite a bit of knowledge about the convergence of discrete curvatures and differential operators by now, one question remains widely open and poses interesting challenges: Do those minimizing shapes that we are able to compute approximate their smooth counterparts or do they just provide us with pretty pictures? Building on tools from variational analysis, I will present a framework for treating convergence of discrete minimizers of geometric energy functionals. As a particular example, I will discuss convergence of the perhaps most prominent minimizers of geometric energy functionals: discrete minimal surfaces.

Mittwoch, 05.12.2018, 17:00 Uhr - Willers-Bau B 321
Leitung: Prof. Dr. Oliver Sander

Bereich Mathematik und Naturwissenschaften
Fakultät Mathematik