Einladung

Würzburger Mathematisches Kolloquium

Julius-Maximilians-Universität Würzburg • Institut für Mathematik

Jan Kristensen

University of Oxford, UK

Morrey‘s Problem in the Calculus of Variations

Dienstag, 22. Oktober 2024 • 14:15 Uhr

Seminarraum SE41 • Humboldt-Bau (Emil-Fischer-Straße 41, 97074 Würzburg)

Der Vortrag wird auch als Zoom-Meeting übertragen: go.uniwue.de/ifmcolloquium-zoom

Abstract. The area formula of Gronwall and Bieberbach for holomorphic maps can be viewed as a precise way to express that the 2D Jacobian is a null Lagrangian.
In this talk I discuss a quasiconvexity inequality for the Burkholder functional in the context of planar quasiconformal maps and its links to Morrey's problem. This inequality can be viewed as an extention of the area formula to an Lp context. It also motivates the introduction of a new convexity notion that we call principal quasiconvexity. We give additional examples of such functionals, relevant in planar nonlinear elasticity, and show how it in combination with Stoilow factorization allows to establish existence of minimizers in related variational problems.

Alle sind herzlich eingeladen.

Die Dozentinnen und Dozenten der Mathematik