



KATHOLISCHE UNIVERSITÄT
EICHSTÄTT-INGOLSTADT

Einladung zum Gastvortrag

Representations of symmetric polyconvex envelopes in 3D via convex duality

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Abstract:

Hyperelastic energies in small-strain elasticity depend on the symmetrized gradient. The study of minimizers for these energies leads to the notion of symmetric polyconvexity. Because materials that exhibit microstructure formation generally lack this property, the concept of the symmetric polyconvex envelope is introduced.

Building on the characterization of symmetric polyconvex functions, we derive both a conjugation formula and a translation formula for the symmetric polyconvex envelope in three dimensions. Furthermore, we show that the corresponding Carathéodory formula can be interpreted as the dual convex program associated with the translation method in Wasserstein spaces.

**Donnerstag, 17. September 2026,
9.00 Uhr, WH-203**

Alle Interessierten sind herzlich eingeladen.

Prof. Dr. C. Kreisbeck, Lehrstuhl für Mathematik – Analysis

MATHEMATISCH-GEOGRAPHISCHE FAKULTÄT