
Einladung zu einem Vortrag
im Rahmen des DK-Seminars des Karl Popper Kollegs von

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zum Thema

**“Mathematical challenges in analysis of
EBSD images”**

Ort: I.2.01 der Universität Klagenfurt

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Kurzfassung:

Mathematical challenges in analysis of EBSD images Electron backscatter diffraction (EBSD) is an imaging modality in material science where an electron beam is used to locally resolve the crystalline structure in a polycrystalline material. In a first step for each spot on the specimen diffraction patterns, so called Kikuchy pattern, are measured. From these Kikuchy pattern information about the type of the local crystal structure as well as about their alignment are extracted. This process is called indexing. After indexing one ends up with an image with values being rotations representing the local orientation of the crystals at the surface of the material. In this talk we cover several challenges associated with the analysis of EBSD data, including the indexing of the Kikuchy pattern, the colorization of rotations modulo crystal symmetry, the determination of the mean of rotations modulo symmetry, the segmentation of EBSD images into grains and the denoising of EBSD images.

Das Institut für Mathematik freut sich auf Ihren Besuch.

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