

数学与系统科学研究院
计算数学所网络学术报告

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报告题目:

**Dynamics of Grain Boundaries
Based on Underlying Microstructure**

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报告时间: 2020 年 12 月 3 日 (周四)

下午 15:00-16:00

报告工具: Zoom 会议 (ID: 962 5933 8670)

入会密码: 142917

Abstract:

Grain boundaries are the interfaces of grains with different orientations in polycrystalline materials. Properties of grain boundaries strongly depend on their microscopic structures. We present a three dimensional continuum model for the dynamics of grain boundaries based on the continuum distribution of the line defects (dislocations) on them. The long-range elastic interaction between these line defects is included to maintain stable microstructure on grain boundaries during the evolution. Numerical formulation based on projection method is developed for efficient implementation of this long-range interaction. The continuum model is able to describe both normal motion and tangential translation of the grain boundaries due to both coupling and sliding effects that were observed in atomistic simulations and experiments.

欢迎大家参加！