

数学与系统科学研究院

计算数学所学术报告

报告人: **Dr. Hayk Mikayelyan**

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报告题目:

**Regularity of Mumford-Shah
minimizers at the crack-tip**

邀请人: 许现民 副研究员

报告时间: **2016 年 4 月 28 日 (周四)**

上午 9:00-10:00

报告地点: 科技综合楼三层

311 报告厅

Abstract:

We consider the Mumford-Shah functional in the plane and study the asymptotics of the solution near the crack-tip. This problem arises in certain models of fracture mechanics. It is well-known that the leading term in the asymptotics at the crack-tip is related to the stress intensity factor. We calculate the higher order terms in the asymptotic expansion, and show that those are related to the curvature of the crack close to the tip. Moreover, we derive a new Euler-Lagrange condition for the minimizers. We also develop a new numerical method to compute the minimizers.

(joint work with John Andersson and Zhilin Li)

欢迎大家参加！