

数学与系统科学研究院

计算数学所学术报告

报告人: **Prof. Weimin Han**

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报告题目:

**Variational and Hemivariational  
Inequalities in Mechanics**

邀请人: 曹礼群 研究员

报告时间: 2018 年 7 月 12 日 (周四)

下午 16:00-17:00

报告地点: 数学院南楼七层

714 教室

## **Abstract:**

Inequality problems in mechanics can be divided into two main categories: that of variational inequalities which is concerned with nonsmooth and convex functionals (potentials), and that of hemivariational inequalities which is concerned with nonsmooth and nonconvex functionals (superpotentials). Mathematical studies of variational inequalities started in the sixties, whereas that of hemivariational inequalities are more recent. Through the formulation of hemivariational inequalities, problems involving nonmonotone, nonsmooth and multivalued constitutive laws, forces, and boundary conditions can be treated successfully. In this talk, sample variational and hemivariational inequalities in contact mechanics are introduced and studied. The focus will be on recent and new results on the numerical solution of hemivariational inequalities. Numerical examples will be reported to illustrate the numerical evidence of the theoretically predicted optimal convergence orders.

**欢迎大家参加！**