

数学与系统科学研究院

计算数学所学术报告

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报告题目:

**On the equivalent of Korn inequality,
Babuska-Aziz inequality and John
conditions**

邀请人: 明平兵 研究员

报告时间: 2016 年 11 月 4 日 (周五)

上午 10:00-11:00

报告地点: 数学院南楼七层

702 会议室

Abstract:

In this talk, I will present some recent study on the Korn inequality, Babuska-Aziz inequality and their geometric counterparts. Let $\Omega \subset \mathbb{R}^2$ be a bounded finitely connected domain. We show that, the Korn inequality, and the Babuska inequality are equivalent to the domain being a John domain.

Our result provides a geometric characterization of the Korn inequality, and gives positive answers to a question raised by [Costabel & Dauge, Arch. Ration. Mech. Anal. 217 (2015), 873-898] and a question raised by [Russ, Vietnam J. Math. 41 (2013), 369-381]. Our result is best possible in the sense that, there exist infinitely connected domains which are not John but support Korn's inequality. Extensions to higher dimensional cases under some additional requirement will also be presented.

欢迎大家参加！