



北京理工大学

数学与统计学院学术报告

Sobolev Spaces on Graphs and Their Applications

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时间: 2023年11月8日(周三)下午15:00-16:00

地点: 文萃楼E1008

摘要: We focus on the definition and several basic properties for Sobolev spaces on locally finite graphs. Different from the Euclidean space, there is no exact concept of dimension on graphs and we introduce a new space composed of vector-valued functions with variable dimensions to deal with this topic. As fundamental analytical tools, all these results would be extremely useful for partial differential equations on locally finite graphs and we will introduce their applications on several nonlinear equations or systems on locally finite graphs.

The report is based on collaborative works with Han X.L., Shao M.Q., Yang Y.Y, etc.

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