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# Some rigidity theorems for manifolds with boundary

Mijia Lai

Shanghai Jiao Tong University  
E-mail: [laimijia@sjtu.edu.cn](mailto:laimijia@sjtu.edu.cn)

## Abstract

In this talk, I will present some rigidity theorems for manifolds with boundary. Even though they arise in different settings such as conformal deformation of Riemannian metrics, conformally compact Einstein manifolds and eigenvalue estimates, they share two common technical tools: the analysis of the Obata equation and the analysis of some nonlinear O.D.Es associated with equations coming from conformal deformation of Riemannian metrics.