PDE/ANALYSIS SEMINAR

Topic: **Continuity of Phase Transitions in Models of Statistical Physics**

Speaker: **Prof. Vladas Sidoravicius**

Time: 16:00-17:30, 19 February 2014

Venue: Room 361, Geography Building, 3663 Zhongshan Road North, Shanghai

(华东师范大学中山北路校区，地理楼 361 室)

ABSTRACT OF THE TALK

Since very early days of Statistical Mechanics the phenomena of phase transition was in the center of the attention of physicists and mathematicians. Various mathematical models were proposed to capture critical behavior, and the Ising model and Bernoulli percolation became paradigm examples in this field. A lot was understood during last century, however behaviour at the "critical point" still represents a huge challenge, and many important questions remain open. Continuity (or not) of the phase transition perhaps is the central among them.

During my talk I will briefly discuss the history of the problem and its more recent developments, and will focus on the proof of the continuity of the phase transition for the Bernoulli percolation in 3D slabs and Ising model in 3D.Talk is based on a few recent joint works with M. Aizenman, H. Duminil-Copin and V. Tassion.

BIOGRAPHY

V. Sidoravicius works in the field of Probability, Ergodic Theory and Rigorous Statistical Mechanics. More specifically his focus is on Disordered Systems and motions in static and dynamic random environments.