

SCMS Seminar



HEAT KERNEL ESTIMATES ON RIEMANNIAN MANIFOLDS I,II,III

Prof. Alexander Grigor'yan

Bielefeld University

Lecture 1

Time: 9:30-11:30 am., Thursday, September 10, 2015

Venue: Room 2201, East Main Guanghua Tower, Handan Campus

Lecture 2

Time: 9:30-11:30 am., Thursday, September 17, 2015

Venue: Room 2201, East Main Guanghua Tower, Handan Campus

Lecture 3

Time: 9:30-11:30 am., Thursday, September 24, 2015

Venue: Room 2201, East Main Guanghua Tower, Handan Campus

Abstract: The lectures are devoted to the techniques of heat kernel estimates on Riemannian manifolds. The following topics will be covered.

1. The notion of heat kernel.
2. On-diagonal upper bounds of heat kernel and Faber-Krahn inequality.
3. Two-sided Gaussian estimates of heat kernel, parabolic Harnack inequality, and Poincare inequality.
4. Heat kernel estimates on manifolds with ends.
5. Heat kernels of some Schroedinger operators.