



SFB Colloquium/ 1st Andrejewski Lecture

TIME:

14 Nov 2006, 15:00 - 18:00

LOCATION:

Humboldt-Universität zu Berlin
Invalidenstr. 42, Nordbau, Hörsaal 8

PROGRAM:

15:00 - 16:00 **Prof. Dr. Kenji Fukaya (Kyoto University, Japan)**

Mirror symmetry and homological Mirror symmetry

We first review the story of Mirror symmetry. Special emphasis is put to its version proposed by Kontsevitch, which is called homological Mirror symmetry. A general introduction to Floer homology is included in this talk as far as we need to explain the story of homological mirror symmetry. The expected relation of homological mirror symmetry to the calculation of the number of rational curves is mentioned.

16:00 - 16:30 Pause

16:30 - 17:30 **PD Dr. Alan Rendall**

Exotic matter models in cosmology

Efforts to find an explanation for the accelerated expansion of our universe and to understand more about the initial cosmological singularity have led to the investigation of a variety of exotic matter models in general relativity and alternative theories of gravity. The first aim of this talk is to give an introduction to these developments. The second is to explain some recent mathematical results on the asymptotics of cosmological models. The main emphasis is on the mildly exotic massive scalar field and $f(R)$ theories of gravity.

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