SFB Colloquium

TIME:
13 Jul 2010, 16:00 - 19:00

LOCATION:
Konrad-Zuse-Zentrum für Informationstechnik Berlin
Takustrasse 7
14195 Berlin-Dahlem

PROGRAM:

16:00 - 17:00   **Prof. Dr. Samuel Grushevsky**

The (super)string measure and modular forms
The (super)string measure is one of the central quantities involved in the formulation of string theory. Various expressions for the bosonic string measure were proposed in 1980s, while the superstring case is much harder due to the presence of the supermoduli in the theory. D'Hoker and
Phong originated the program of computing the superstring measure by factorization (restriction to lower genera), and did the genus 2 case.
   In this talk we discuss our recently proposed ansatz for the superstring measure, using factorization, and a detailed study of the moduli spaces of Riemann surfaces with spin structures, and appropriate modular forms. The resulting ansatz turns out to also be relevant to the classical Schottky
problem of characterizing Jacobians of curves among all abelian varieties.
   Knowledge of string theory or of modular forms will not be required to understand this talk.

17:00 - 17:30   COFFEE BREAK

17:30 - 18:30   **Prof. Dr. Alexander Bobenko**

Conformal models in Discrete Differential Geometry

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Discrete differential geometry aims at the development of discrete equivalents of the geometric notions and methods of differential geometry. The latter appears then as a limit of refinements of the discretization. We present various conformal models in discrete differential geometry, including circle packings and circle patterns, conformal equivalent simplicial metrics, and discrete uniformization theory. Relation to the theory of integrable systems is discussed.

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