SFB General Meeting and SFB Colloquium

TIME:
5 Feb 2013, 14:00 - 18:15

LOCATION:
Universität Potsdam
Audimax
Am Neuen Palais 10
14469 Potsdam

PROGRAM:

14:00 - 14:45 SFB General Meeting

14:45 - 15:15 **Dr. Batu Güneysu (HU)**

Path integrals from Brownian motion

15:15 - 15:45 Coffee Break

15:45 - 16:45 **Prof. Dr. Peter Teichner (MPI Bonn)**

Path integrals via algebraic topology?
We'll discuss the structural analogies between path integrals and push-forwards in certain generalized cohomology theories. As a consequence, we propose a new way of rigorously defining the 2-dimensional super symmetric Sigma model, at least up to deformation.
This is a report on joint work with Stephan Stolz.

16:45 - 17:15 Coffee Break

17:15 - 18:15 **Dr. Sonia Mazzucchi (Trient, Italy)**

Feynman Path Integrals as Infinite Dimensional Oscillatory Integrals
Since their introduction in the 40s Feynman path integrals have

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represented a suggestive and powerful tool for the description of the dynamics of several quantum systems. On the other hand, it is commonly believed that they are ill defined from a mathematical point of view and represent just an heuristic computational tool. In this talk I shall give an overview of the possible rigorous mathematical definitions of Feynman path integrals, focusing on the infinite dimensional oscillatory integrals , a generalization of classical oscillatory integrals to the case where the integration is performed on an infinite dimensional real separable Hilbert space.

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