



SFB Colloquium

TIME:

11 May 2010, 16:00 - 19:00

LOCATION:

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

PROGRAM:

16:00 - 17:00 **Prof. Dr. Oscar Garcia-Prada**

Higgs bundles on Riemann surfaces

Higgs bundles on Riemann surfaces were introduced by Hitchin in the mid 1980s. After giving some background on how they originated from the study of Yang-Mills connections, and describing their main properties, we show how they can be used to study representations of the fundamental group of the surface into a real reductive Lie group.

17:00 - 17:30 Kaffeepause

17:30 - 18:30 **Prof. Dr. Dirk Kreimer, IHES, Bures-sur-Yvette**

Inside QFT: From local interactions to transcendental periods

Fundamental physics is formulated in terms of quantized fields. Predictions often are obtained from computations of a perturbative series in terms of Feynman graphs. We explore the mathematical structure behind these computations and highlight in particular number-theoretic aspects and challenges for the future.

Contact:

Humboldt-Universität zu Berlin . Institut für Mathematik
SFB 647 . Unter den Linden 6 . 10099 Berlin
Tel. +49 30 2093 1804 . Fax. +49 30 2093 2727
sfb647@math.hu-berlin.de

www.raumzeitmaterie.de