SFB-Colloquium at ZIB

TIME:
1 Jul 2008, 16:00 - 19:00

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

PROGRAM:

16:00 - 17:00 **Dr. Evgeny Volkov (HU Berlin)**

Symplectic cobordisms between stable Hamiltonian structures
A stable Hamiltonian structure on a closed oriented
-manifold
is a pair
where
is a
-form and
is a nowhere zero closed
-form such that the relation
holds and
for some smooth function
on
. This generalizes the notion of a contact structure in the following sense: for a contact form
on
the pair
±
is a stable Hamiltonian structure. The notion of a symplectic cobordism between contact structures generalizes to the case of stable Hamiltonian structures in a straightforward way. The main concern of the talk is the problem of existence of a symplectic cobordism between two given stable Hamiltonian structures. We will illustrate this problem on concrete examples always looking back at

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the simpler case of contact structures.

17:00 - 17:30 Coffee Break

17:30 - 18:30 **Prof. Dr. Klaus Mohnke (HU Berlin)**

Symplectic hypersurfaces and transversality in Gromov-Witten theory

We present a new method to prove transversality for holomorphic curves in symplectic manifolds, and show how it leads to a definition of genus zero Gromov-Witten invariants. The main idea is to introduce additional marked points that are mapped to a symplectic hypersurface of high degree in order to stabilize the domains of holomorphic maps.

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