Prof. Dr. Andrei Teleman
Donaldson classes on instanton moduli spaces over definite 4-manifolds

TIME:
9 Jun 2008, 16:15

LOCATION:
Freie Universitaet Berlin
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n classical Donaldson theory, the Donaldson invariants are defined by evaluating products of certain canonical cohomology classes (called Donaldson classes) on the fundamental cycle of a (compactified) moduli space of instantons. This theory has been developed for 4-manifolds with
. Im my talk I will explain several properties of certain Donaldson classes on instantons moduli spaces over 4-manifolds with negative definite intersection form (with
). These properties play a fundamental role in understanding the geometry of the instanton moduli spaces on class VII complex surfaces, which are not classified yet. This is very important, because we have shown in previous articles that (at least in the case
) one can prove existence of holomorphic curves on such surfaces using geometric properties of certain instanton moduli spaces.

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