



## **Prof. Markus J. Pflaum (Colorado) Higher index theorems on orbifolds**

### **TIME:**

24 Jun 2009, 17:30

### **LOCATION:**

HU Berlin  
Institut für Mathematik  
Rudower Chaussee 25, Rm. 1.410  
Berlin-Adlershof

We show how the higher index introduced by Connes-Moscovici can be reinterpreted as a pairing in Alexander-Spanier homology theory. This opens up the way to define algebraic and analytic higher indices for orbifolds. Given a symplectic orbifold and a deformation quantization on it, we then prove an algebraic higher index theorem on orbifolds by computing the pairing between cyclic cocycles and the K-theory of the formal deformation quantization. As an application, we obtain the analytic higher index theorem by Connes-Moscovici and its extension to orbifolds.

The talk is based on joint work with X. Tang and H. Posthuma.

### **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

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