

Einladung zum  
**Würzburger  
Mathematischen Kolloquium**

Julius-Maximilians-Universität Würzburg • Fakultät für Mathematik und Informatik

Prof. Dr. Michael Weiss  
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## **New developments in plumbing with applications to spaces of diffeomorphisms of disks**

Mittwoch, den 9. Juli 2014 • 16:15 Uhr  
Raum SE 40, Mathematik Ost, Emil-Fischer-Str. 40, Campus Hubland-Nord

### **Inhaltsangabe**

Smooth automorphisms of disks are closely related to smooth automorphisms of spheres and to (exotic) smooth structures on spheres. In the 1960s, exotic spheres were constructed by Kervaire and Milnor. Their method was to attach some handles to a disk according to a linking scheme expressed by a quadratic form over the integers, in such a way that the boundary of the resulting smooth manifold has the homology of a sphere. Fifty years later, we are in a good position to construct interesting families of smooth structures on disks and spheres using similar ideas. In addition two new developments in differential topology contribute to this: (1) the theory of cobordism categories and (2) the homotopy theory of spaces of smooth embeddings,  $emb(M,N)$ , by a kind of reduction to spaces of embeddings of finite sets in  $M$  and  $N$ . My talk will be an attempt to explain how these seemingly unrelated themes are in fact related.



[www.mathematik.uni-wuerzburg.de/kolloquium.html](http://www.mathematik.uni-wuerzburg.de/kolloquium.html)

Zu diesem Vortrag laden wir Sie herzlich ein.  
Im Anschluss an die Vorträge Kaffee und Tee im Foyer vor dem SE 40.

Die Dozentinnen und Dozenten der Mathematik

