

SALZBURG MATHEMATICS COLLOQUIUM

Summer 2016

Jochen Brüning (Berlin)

„Zur Differentialtopologie gewisser stratifizierter Räume“

March 17, 2016

Abstract:

We study a class of abstract stratified spaces which comprises simplicial complexes, algebraic varieties, and orbit spaces of proper Lie group actions on manifolds. Generally, they may be thought of as compactifications of a manifold by „adding“ lower dimensional manifolds. These spaces are named after René Thom and John Mather and originated with the problem of stability of smooth maps. It is of interest to develop differential geometry and elliptic theory on such spaces which presupposes, however, a certain amount of differential topology. In this talk, we will concentrate on an extension of the Ehresmann Theorem and the Whitney Embedding (into \mathbb{R}^m) Theorem to Thom-Mather spaces. We will sketch the proofs and outline some (possible) applications to elliptic theory, in particular the index theory of Dirac operators.

Thursday, **15:00-15:45**

Hörsaal 414, 1. Stock