

Workshop on
**Compactifications of buildings and
symmetric spaces**

RTG 2229

Organizers: Anna Schilling, Petra Schwer, Anna Wienhard

Abstracts

Daniele Alessandrini: The horofunction compactification of Teichmüller spaces of surfaces with boundary

The Teichmüller space of surfaces with boundary can be equipped with an asymmetric distance, the arc distance, that generalizes Thurston asymmetric metric. In this talk I will describe the horofunction compactification of this distance and I will show that it coincides with Thurston's compactification of Teichmüller spaces. This is joint work with Lixin Liu, Athanase Papadopoulos and Weixu Su.

Thomas Haettel: Chabauty and horofunction compactifications

We will present an overview of two natural compactifications of various spaces. We will first discuss the Chabauty compactifications of homogeneous spaces, and consider the particular case of symmetric spaces and their spaces of maximal flats. We will then discuss the horofunction compactifications of metric spaces, and consider the particular case of symmetric spaces with various Finsler metrics (joint work with Anna Schilling and Anna Wienhard).

Lizhen Ji: Compactifications and modular interpretation of symmetric spaces

The analogy between symmetric spaces and moduli spaces is classical and fruitful. Many questions and results about moduli spaces of Riemann surfaces and Teichmüller spaces were motivated by those about locally symmetric spaces and symmetric spaces. We will discuss several results on compactifications of locally symmetric spaces and symmetric spaces in the opposite direction.

Linus Kramer: Rigidity of group topologies

We present old and new results on automatic continuity of 'abstract' homomorphisms between topological groups, with an emphasis on Lie groups, Polish groups, and locally compact groups. The problem itself was originally motivated by a geometric question about CAT(0) spaces. (This is partially joint work with O. Braun and K.H. Hofmann)

Cormac Walsh: The horofunction compactification of symmetric cones

Symmetric cones are examples of non-compact symmetric spaces. In this setting, it is usual to consider the Riemannian metric, but one can also take an invariant Finsler metric. In particular, on symmetric cones, the metrics of Hilbert and Thompson are very natural. I will discuss the horofunction compactification that arises when one uses either of these two metrics.