

# SALZBURG MATHEMATICS COLLOQUIUM

Winter 2018/2019

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## „Smooth and non-smooth aspects of Ricci curvature lower bounds“

January 17, 2019

### Abstract:

After recalling the basic notions coming from differential geometry, the colloquium will be focused on spaces satisfying Ricci curvature lower bounds. The idea of compactifying the space of Riemannian manifolds satisfying Ricci curvature lower bounds goes back to Gromov in the '80s and was pushed by Cheeger and Colding in the '90s who investigated the fine structure of possibly non-smooth limit spaces. A completely new approach via optimal transportation was proposed by Lott-Villani and Sturm almost ten years ago. Via such an approach one can give a precise definition of what means for a non-smooth space to have Ricci curvature bounded below. Such an approach has been refined in the last years giving new insights to the theory and yielding applications which seems to be new even for smooth Riemannian manifolds.

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

Hörsaal 414, 1. Stock