Abstract. The meeting continued the biannual conference series *Differentialgeometrie im Großen* at the MFO which was established in the 60’s by Klingenberg and Chern. Global Riemannian geometry with its connections to topology, geometric group theory and geometric analysis remained an important focus of the conference. Special emphasis was given to Einstein manifolds, geometric flows and to the geometry of singular spaces.


Introduction by the Organisers

The meeting continued the biannual conference series *Differentialgeometrie im Großen* at the MFO which was established in the 60’s by Klingenberg and Chern. Traditionally, the conference series covers a wide scope of different aspects of global differential geometry and its connections with geometric analysis, topology and geometric group theory. The Riemannian aspect is emphasized, but the interactions with the developments in complex geometry and physics play also an important role. Within this spectrum each particular conference gives special attention to two or three topics of particular current relevance.

The scientific program of the last conference had consisted of only 17 talks which left ample time for informal discussions and worked out very well. Nevertheless, we returned this time to a program of 22 talks in order to be able to schedule more of the many interesting talk proposals, especially by young people who attended the conference for the first time.
This time, a main focus of the workshop were *Einstein manifolds* and related topics, represented by six talks concerned with regularity and rigidity results, the structure of 4-manifolds with Ricci curvature bounds, gravitational instantons and Kähler-Einstein metrics.

Another focus were *geometric flows*, with five talks in particular on the Ricci flow in dimensions three and four where its singularities and the long time asymptotics in certain equivariant situations were studied, but also on stability questions for the Ricci flow in higher dimension and noncompact situations, and on other geometric flows related to metrics with special holonomy.

A prominent theme was also the *geometry of singular spaces*, that is, metric spaces with upper or lower sectional curvature bounds (in the sense of Alexandrov), with five talks discussing the smoothing problem for singular nonpositively curved structures, deformations of hyperbolic cone structures in dimension three, and Tits buildings from the perspective of comparison geometry.

Other talks presented results in complex geometry about extremal Kähler metrics and obstructions to Kähler-Einstein metrics, results on rigidity questions in conformal dynamics, on isoperimetric problems in Lorentzian geometry, and discussed regularity properties of metric spaces in connection with subriemannian (Carnot) geometry.

There were 53 participants from 12 countries, more specifically, 21 participants from Germany, 11 from the United States of America, 8 from France, 3 from Switzerland, 2 from China, 2 from Japan and respectively 1 from Belgium, England, Mexico, Poland, Russia and Spain. This time only 1 participant was a woman (whereas last time 6 women participated). 42% of the participants (22) were young researchers (less than 10 years after diploma or B.A.), both on doctoral and postdoctoral level.

The organizers would like to thank the institute staff for their great hospitality and support before and during the conference. The financial support for young participants, in particular from the Leibniz Association and from the National Science Foundation, is gratefully acknowledged.
Workshop: Differentialgeometrie im Großen

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