A-Fri-Ka Riemannian Topology Research Seminar

Meeting, June 17th 2021 (online)

2:00 - 3:00 pm
(CET)

Intermediate Ricci, Homotopy, and Submanifolds of Symmetric Spaces

Speaker:
Masoumeh Zarei (Augsburg)

Abstract:
In the spirit of combining Riemannian geometry, topology, and algebra to the study of symmetric spaces, we apply the "generalized connectedness lemma" by Guijarro-Wilhelm to certain classes of submanifolds of symmetric spaces, including totally geodesic ones, to show that within certain codimension ranges such submanifolds have the same "Cartan type" as their ambient spaces, (possibly) up to product with spheres. This is joint work with Manuel Amann and Peter Quast.

3:15 - 4:15 pm
(CET)

On the topology of moduli spaces of Ricci flat metrics

Speaker:
David Degen (Karlsruhe)

Abstract:
I will show that the moduli space of Ricci flat metrics on a K3 surface is simply connected and that it has non-trivial higher homotopy groups. Furthermore,by considering products of the K3 manifold with tori I will show that in any dimension (≥ 4) there are compact manifolds with non-flat Ricci flat metrics whose moduli space is simply connected with non-trivial topology.

5:00 - 6:00 pm
(CET)

Classifying sufficiently connected PSC 4, 5 manifolds

Speaker:
Otis Chodosh (Stanford)

Abstract:
I will discuss recent joint work with C. Li and Y. Liokumovich concerning the topological classification of PSC 4-manifolds with $\pi_2 = 0$ (and PSC 5-manifolds with $\pi_2 = \pi_3 = 0$).