TUESDAY (August 12)

Lightning talks

16:45-17:00

Chung-Ming Pan: Singular Gauduchon metrics and their geometric applications

Abstract: In this talk, I will introduce the singular version of Gauduchon's theorem and explain its application to the Hermite-Einstein problem.

17:00-17:15

Kyoung-Seog Lee: Cohomology of LVMB manifolds

Abstract: In this talk, I will discuss constructions and basic properties of LVMB manifolds and their cohomology groups. This talk is based on a joint work with L. Katzarkov, E. Lupercio and L. Meersseman.

Poster session

17:15-18:45

Pietro Ciusa:The constant scalar curvature equation with B-field on blow ups

Abstract: The constant scalar curvature equation with B-field is a generalization of cscK equation for complexified Kähler classes. We want to prove an analogue of the Arezzo-Pacard theorem for these coupled equations. We present some results in this direction regarding the case when the coupled solution is in some sense trivial coming from an actual cscK metric.

Vlad Marchidanu: An Aubin-Yau theorem for transversally Kähler foliations

Abstract: We prove an analogue of the Aubin-Yau theorem for transversally Kähler foliation. As an application, we show how to arrive at a suitable analogue for the Aubin-Yau theorem for Vaisman manifolds.

Zehao Sha: Canonical metrics on strictly pseudoconvex domains

Abstract: We study the constant scalar curvature Kähler metric on strictly pseudoconvex domains. We proved that if the metric satisfies some Monge-Ampère type equations, then it is Kähler-Einstein.

Alejandro Tolcachier: Special Hermitian metrics on products of two Sasakian manifolds

Abstract:It is known that the product of two Sasakian manifolds carries a 2-parameter family of Hermitian structures $(J_{a,b}, g_{a,b})$. In this poster we will investigate under which conditions these Hermitian structures are balanced, locally conformally Kähler, strong Kähler with torsion, Gauduchon or k-Gauduchon ($k \geq 2$). Moreover, we will study the Bismut connection associated to $(J_{a,b}, g_{a,b})$ and as an application we show that the associated Bismut-Ricci tensor Ric^B and the Bismut-Ricci form ρ^B vanish if and only if each Sasakian factor is η-Einstein with appropriate constants and we will also exhibit some examples fulfilling these conditions, thus providing new examples of Calabi-Yau with torsion manifolds.

THURSDAY (AUG 14)
Lightning talks

16:45-17:00

Guilherme Cerqueira Gonçalves: Hölderness for complex Monge-Ampère equations on Stein Spaces

Abstract: In recent years, the use of PDEs and pluripotential theory have produced important results in both differential and algebraic complex geometry. In this talk, I will address, using pluripotential theory, the modulus of continuity of solutions to Dirichlet problems for complex Monge-Ampère equations with Lp densities on a Stein domain inside a complex analytic space with isolated singularities. Moreover, obtaining that if the boundary data is Hölder, then so is the solution outside of the singular set.

17:00-17:15

Abdou Oussama Benabida: Asymptotics for resolutions and smoothings of Calabi-Yau conifolds

Abstract: In this talk, we describe a gluing construction of degenerating families of Ricci-flat Kähler metrics on resolutions and on smoothings of Calabi-Yau manifolds with isolated conical singularities under generic assumptions and we obtain asymptotic expansions in terms of the parameters of degeneration. Such resolutions and smoothings are important to address a folklore conjecture on Calabi-Yau manifolds known as Reid's fantasy conjecture.

17:15-17:30

Abdelouahab Khelifati: Hyperbolicity notions in Complex Geometry

Abstract: Hyperbolicity is an important concept in the theory of complex manoifolds which allows us to characterize their geometric and topological properties. During this talk, we will present classical notions as well as some recently developed notions of hyperbolicity. We will try to emphasize the intuition from a differential and geometric point of view behind each of these notions.