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HABILITATIONSVORTRAG

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“Some aspects of CR manifolds”

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Abstract:

Cauchy-Riemann (CR) geometry is a fundamental area in mathematics which originated from the work of H. Poincaré in 1907 which studies analytic functions of two complex variables. Broadly speaking, CR geometry studies biholomorphically invariant geometry of real submanifolds of complex spaces. Nowadays it has become a broad field which has connections to many other branches of mathematics such as algebra, differential geometry, and PDE.

In this talk I will discuss some specific problems in this fascinating area. Namely, I will discuss the problem of CR-umbilicity which asks when a CR manifold can be osculated by a biholomorphic image of the sphere up to higher order, the problem of characterizing the sphere among CR manifolds by the first spectral gap of the Kohn Laplacian (a CR-analogue of the Laplacian of Riemannian manifolds) and its Ricci curvature, and some other interrelated problems.

Mittwoch, 24. Juni 2020

13:30 Uhr – 14:30 Uhr

<https://us02web.zoom.us/j/88025112974?pwd=VkxzUTF4VS9UWUZRQU1Mb2t4V2Q3Zz09>

Meeting ID: 880 2511 2974

Password: 7AF16Q

Andreas Cap
Christian Krattenthaler