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Im Rahmen der

AG Komplexe Analysis

laden wir zu folgendem Vortrag ein:

On the L^p Bergman theory

Professor Liyou Zhang (Capital Normal University, China)

am **Mittwoch, den 28.06.2023, um 14 Uhr s.t. in G.10.05 (Hörsaal 07).**

Abstract: We would like to introduce the properties of L^p Bergman kernels on bounded domains in \mathbb{C}^n . To indicate the basic difference between L^p and L^2 cases, we show that the L^p Bergman kernel is not real-analytic on some bounded complete Reinhardt domains when $p > 4$ is an even number. By the Calculus of Variations, we get a fundamental reproducing formula. This together with certain techniques from nonlinear analysis of the p -Laplacian yields a number of results, for instance, the off-diagonal L^p Bergman kernel $K_p(z, \cdot)$ is Hölder continuous of order $\frac{1}{2}$ for $p > 1$ and of order $\frac{1}{2(n+2)}$ for $p = 1$. If time permits, we shall also talk about the geometric aspect of the L^p Bergman theory, as well as some recent progress on the stability of L^p Bergman kernels as the domain varies and the differential regularity of the L^p Bergman kernel, for both diagonal and off-diagonal cases. The talk is based on a joint work with Bo-Yong Chen.

Alle Interessenten sind herzlich eingeladen!

gez. Prof. N. Shcherbina