



Im Rahmen der

AG Komplexe Analysis

laden wir zu folgendem Vortrag ein:

Hardy spaces on hyperconvex domains: recent advances

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am **Dienstag, den 26.04.2016, um 16 Uhr c.t. in Raum G.15.25.**

Abstract: In 2008 M. Stessin and the speaker introduced on a general hyperconvex domain D the spaces of holomorphic functions as analogs of the classical Hardy spaces on the unit disk. These spaces are defined via a plurisubharmonic exhaustion function u on D and denoted by $H_u^p(D)$. When D is strictly pseudoconvex they all are the subsets of classical Hardy spaces $H^p(D)$ and coincide with $H^p(D)$ when the exhaustion function u is a pluricomplex Green function.

There are two natural questions:

1. How do the spaces $H_u^p(D)$ depend on the exhaustions functions?
2. Have functions in $H_u^p(D)$ boundary values?

For the first question we will explain how we can introduce an order on the family of such spaces and show that the projective limit of the spaces is $H^\infty(D)$ when D is strictly pseudoconvex.

The natural and important question in the classical theory of Hardy spaces is about boundary values of functions. The major tool in establishing the existence of such values in the classical theory is the Poisson kernel and its properties. It was shown by the speaker that certain properties of the pluricomplex Poisson kernel on hyperconvex domains provide sufficient conditions for existence of boundary values of functions in Hardy spaces on hyperconvex domains.

Alle Interessenten sind herzlich eingeladen!

gez. Prof. N. Shcherbina