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Leibniz
Universität
Hannover

Oberseminar
Analysis und Theoretische Physik
Prof. Dr. Nikolai Vasilevski
CINVESTAV, Mexico City
Algebras of Toeplitz operators
on the unit ball

One of the common strategies in the study of Toeplitz operators consists in selecting of various special symbol classes $S \subset L_\infty$ so that the properties of both the individual Toeplitz operators T_a , with $a \in S$, and of the algebra generating by such Toeplitz operators can be characterized.

A motivation to study an algebra generating by Toeplitz operators (rather than just Toeplitz operators themselves) lies in a possibility to apply more tools, in particular those coming from the algebraic toolbox, and furthermore the results obtained are applicable not only for generating Toeplitz operators but also for a whole variety of elements of the algebra in question.

To make our approach more transparent we restrict the presentation to the case of the two-dimensional unit ball \mathbb{B}^2 . We consider various sets S of symbols that are invariant under a certain subgroup of biholomorphisms of \mathbb{B}^2 ($\{1\} \times \mathbb{T}$ in the talk). Such an invariance permits us *to lower the problem dimension* and to give a recipe, supplied by various concrete examples, on how the known results for the unit disk \mathbb{D} can be applied to the study of various algebras (both commutative and non-commutative) that are generated by Toeplitz operators on the two-dimensional ball \mathbb{B}^2 .

Although we consider the operators acting on the weighted Bergman space on \mathbb{B}^2 with a *fixed* weight parameter, the Berezin quantization effects (caused by a *growing* weight parameter of the corresponding weighted Bergman spaces on the unit disk \mathbb{D}) have to be taken into account.

Dienstag, 31.5.2016, 15:00h, Raum c311
Hauptgebäude der Leibniz Universität

Dazu laden herzlich ein:

Prof. Dr. Wolfram Bauer, Prof. Dr. Joachim Escher, Prof. Dr. Olaf Lechtenfeld,
Prof. Dr. Elmar Schrohe und Prof. Dr. Christoph Walker

Weitere Informationen finden Sie auch unter http://www.ifam.uni-hannover.de/os_analysis.html