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Analytic Function Spaces and Their Operators

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Analytic Function Spaces and Their Operators

October, 2006

Research Institute for Mathematical Sciences

Kyoto University, Kyoto, Japan

Preface

Complex analysis and operator theory are rich and beautiful subjects in mathematics. In the late nineteenth and in the twentieth century, the theory of analytic functions was developed by such mathematicians as G.H. Hardy and J.E. Littlewood and many others. And, according to the development of functional analysis, it has became important to regard the spaces of analytic functions as Hilbert and Banach spaces. So many methods has been provided into another fields. For example, in 1984, L. de Branges gave an answer to the Bieberbach conjecture, one of the important problems in mathematics in the twentieth century, using the range of (composition) operator on the Dirichlet space.

The purpose of our joint research is the study of analytic function spaces and operators on them, explicitly, Hardy, Bergman and Bloch spaces and Toeplitz, Hankel and composition operators. There were well addressed talks that touched many aspects to complex analysis and operator theory. This is the proceeding of the meeting.

It is my duty to thank the contributors. We would like to thank the following for help of participants' stipends to this joint research:

- Kyoto University Research Institute for Mathematical Science
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Miyashiro 2006

Shûichi OHNO

RIMS Joint Research
Analytic Function Spaces and Their Operators

June 21(Wed)— 23(Fri), 2006

Kyoto University Research Institute for Mathematical Science

http://www.kurims.kyoto-u.ac.jp/

Program

June 21 (Wed)

9:30 — 10:00 Boorim Choe (Korea University)

Sums of products of Bergman space Toeplitz operators

10:20— 10:50 Kyesook Nam (Hanshin University)

Products of Bergman space Toeplitz operaotrs on the polydisk

11:05 — 11:35 Kyunguk Na (Korea University)

Schatten-Herz type positive Toeplitz operators on pluriharmonic Bergman spaces

1:30 — 2:00 Kenro Furutani (Tokyo University of Science)

Geometric Quantization and Toeplitz Operator

2:15 — 2:45 Wolfram Bauer (Tokyo University of Science)

Ψ_0-Algebras and Cone Localization for Toeplitz Operators

3:15 — 3:45 Young Joo Lee (Chonnam National University)

Some algebraic properties of Toeplitz operators on the Dirichlet space

4:00 — 4:30 Shûichi Ohno (Nippon Institute of Technology)

Hankel-type operators on the spaces of analytic functions

5:30 Reception

June 22 (Thu)

9:30 — 10:00 Hyungwoon Koo (Korea University)

A note on the composition operator on the unit ball

10:20— 10:50 Sei-ichiro Ueki (Nippon Institute of Technology)

Weighted composition operator on Bargmann space over $\mathbb{C}^N$

11:05 — 11:35 Yasuyuki Kobayashi (Hokkaido University)

On bounded analytic functions on two-sheeted covering surfaces

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June 23 (Fri)

9:30 — 10:00 Rikio Yoneda (Otaru University of Commerce)

The composition operators on the weighted Bergman space with closed range

10:20— 10:50 Takuya Hosokawa (Nippon Institute of Technology)

Extreme points of the unit ball of the composition algebra

11:05— 11:35 Michio Seto (Kanagawa University)

Inner sequences and submodules in the Hardy space over the bidisk

1:30 — 2:00 Penghui Wang (Fudan University)

Homogenous quotient modules on bidisk

2:15 — 2: 45 Kou Hei Izuchi (Niigata University)

Cyclic vectors in Fock-type space

3:15 — 3:45 Kei Ji Izuchi (Niigata University) and Kou Hei Izuchi

Polynomials having leading terms over $\mathbb{C}^2$ in the Fock space

4:00 — 4:30 Mikihiro Hayashi (Hokkaido University)

On the Shilov boundary of a Riemann surface

Analytic Function Spaces and Their Operators
RIMS 共同研究報告集

２００６年６月２１日～６月２３日
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