

NORTH BRITISH FUNCTIONAL ANALYSIS SEMINAR

A meeting of the North British Functional Analysis Seminar will be held at the University of Leeds on Friday, November 2nd, 2007, and Saturday, November 3rd, 2007. All talks will take place in Room MALL1 in the School of Mathematics.

Friday November 2nd, 1pm

Postgraduate talk

Dr Isabelle Chalendar, Université Lyon I

Introduction to Hardy spaces and Blaschke products

Friday November 2nd, 2.30 pm and 4pm

Prof. Pamela Gorkin, Bucknell University, USA

What interpolating Blaschke products can do

What interpolating Blaschke products cannot do

Saturday November 3rd, 9.30 am and 11 am

Prof. Stefaan Vaes, Katholieke Universiteit Leuven, Belgium

Rigidity results for von Neumann algebras and Bernoulli actions

All interested are welcome to attend.

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Abstracts

What Blaschke products can do, *Prof P. Gorkin*

Blaschke products play an important role in the study of bounded analytic functions. An equally important role is played by a much smaller class of functions: the interpolating Blaschke products. Interpolating Blaschke products have zero sequences that are separated in a very natural way, while a general Blaschke product does not. Yet, it seems that interpolating Blaschke products are more flexible than might be expected. In this talk, we begin with an overview of the current literature of the work on interpolation and interpolating Blaschke products, including a look at the role such products have played in the study of bounded analytic functions and some recent results on approximation by interpolating Blaschke products.

What Blaschke products cannot do, *Prof P. Gorkin*

In this talk we look at some other problems that have sparked recent work in this area and we take a closer look at a surprising new class of Blaschke products, the so-called WEP Blaschke products. We discuss some of the known properties of these functions that suggest they act like finite products of interpolating Blaschke products and we show that there exist WEP Blaschke products that are not finite products of interpolating Blaschke products. We conclude this talk with some new open questions in this area.

Rigidity results for von Neumann algebras and Bernoulli actions, *Prof S. Vaes*

Group actions on probability spaces give rise to von Neumann algebras through the group measure space construction of Murray and von Neumann. Recently, Sorin Popa has introduced very powerful techniques allowing in certain cases to recover the group and the action from the associated von Neumann algebra. After an introduction to the theory of II_1 factors and group actions, I will present the proof of Popa's orbit equivalence superrigidity theorem for Bernoulli actions as well as a survey of my recent work on the computation of all finite index bimodules for a family of II_1 factors.