

NORTH BRITISH FUNCTIONAL ANALYSIS SEMINAR

A meeting of the North British Functional Analysis Seminar will be held at the University of Nottingham from 2.30–3.30pm and 4.00–5.00pm on Friday, 5 March 2010. Both talks will be in C17 of the Pope building on the main campus. Directions can be found at http://www.maths.nottingham.ac.uk/directions_and_maps/.

Prof. Søren Eilers

University of Copenhagen, Denmark

Classifying Graph C^ -Algebras*

2.30pm and 4.00pm on Friday 5 March 2010

Abstract: Just like a finite group, any C^* -algebra A with finitely many ideals has a decomposition series

$$0 = I_0 \triangleleft I_1 \triangleleft \dots \triangleleft I_n = A$$

in such a way that all subquotients I_k/I_{k-1} are simple. As in the group case, the simple subquotients are unique up to permutation of isomorphism classes, but far from determine the isomorphism class of A . If we further assert that all simple subquotients are classifiable by algebraic invariants such as K -theory we are naturally lead to the pertinent question of which algebraic invariants, if any, classify all of A . This question has previously been studied with much success when all subquotients are AF , or all are purely infinite, but in the case when some are of one type and some of another, only sporadic results have been found. In this talk I will describe a general framework in which classification can be proved for a large class of C^* -algebras of mixed type associated to graphs. In this ongoing joint project with Restorff and Ruiz, we are able to do so by combining several recent important developments in classification theory, notably the corona factorization property, Kirchbergs isomorphism result by ideal-related KK -theory, and the Universal Coefficient Theorem of Meyer and Nest with refinements of our previous work inspired by an idea of Rørdam.

All interested are welcome to attend.

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