Leibniz Universität Hannover

Oberseminar Analysis und Theoretische Physik

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Sums of linear operators in Hilbert C*-modules

Abstract: Given two closed unbounded operators A, B in a Banach space. There is a rich literature on the problem whether the sum A+B is closed and regular on the intersection of the domains $D_A \cap D_B$.The seminal paper by da Prato and Grisvard (1975) and its successors are mostly motivated by applications to PDE. Another completely different and quite recent motivation comes from the unbounded picture of KK-theory. Here, the basic objects are selfadjoint unbounded operators in a Hilbert C*-module. Hilbert C*-modules are Banach spaces which retain certain properties of Hilbert spaces but they are lacking many properties which depend on anti-self-duality or the Projection Theorem. Hence Hilbert C*-modules are much better than Banach spaces and still far from being as nice as Hilbert spaces; e.g. any C*-algebra is naturally a Hilbert C*-module. In my talk I will present a Hilbert C*-module version and an elementary proof of a noncommutative Dore-Venni type Theorem for noncommuting operators. The result grew out of discussions with Bram Mesland and is part of an ongoing joint work in progress.

Dienstag, 10.1.2017, 15:00 Uhr, 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, Prof. Dr. Christoph Walker und Prof. Dr. Emil Wiedemann.