

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE
UNIVERSITY OF SOUTHERN DENMARK, ODENSE

Mathematics seminar

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Unbounded Kasparov products by differentiable Hilbert C^* -modules

Monday 19 October 2015, 11:15-12:00
IMADA seminar room

Abstract

In this talk I will give an introduction to the current developments in unbounded KK-theory. The starting point for these investigations is to find explicit unbounded representatives for interior Kasparov products in bounded KK-theory. An example would here be to represent a K-homology class by an explicit spectral triple. This turns out to be deeply linked to the understanding of differentiable structures in Hilbert C^* -modules. After having reviewed the general framework I will focus on a situation of particular interest for the theory: One could consider a hereditary subalgebra of a C^* -algebra which already carries a spectral triple (for example an open subset in n -dimensional Euclidean space). The problem of computing the unbounded Kasparov product then amounts to (the highly non-trivial task of) restricting the spectral triple to the hereditary subalgebra in question.

Host: Wojciech Szymanski