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

Mathematics seminar

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Operator *-correspondences: Representations and pairings with unbounded KK-theory

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Abstract
In this talk I will describe a very general class of hermitian bimodules called operator *-correspondences. This kind of bimodules typically arise as the domain of a metric connection acting on a C*-correspondence. Relying on the representation theory of completely bounded multilinear maps we shall then see how operator *-correspondences can be represented as bounded operators on a Hilbert space. As a further application and motivation for introducing operator *-correspondences we will describe how they (under an extra compactness assumption) admit an explicit pairing with a suitable abelian monoid of twisted unbounded Kasparov modules. The talk is partly based on joint work with David Blecher and Bram Mesland.