

# OPERATOR \*-CORRESPONDENCES: REPRESENTATIONS AND PAIRINGS WITH UNBOUNDED KK-THEORY

**Jens Kaad**

Radboud University, Nijmegen

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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.