

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

## Mathematics seminar

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### On a theorem of Kucerovsky for half-closed chains

Thursday 26 October 2017, 14:15-15:00  
IMADA seminar room

#### Abstract

Kucerovsky's theorem provides conditions for verifying that an unbounded Kasparov module is an unbounded Kasparov product of two unbounded Kasparov modules. When working with open manifolds, from a noncommutative geometry point of view, the natural object to consider is a half-closed chain instead of an unbounded Kasparov module. In this talk I will discuss how to extend Kucerovsky's theorem to the setting of half-closed chains. On our way we shall see how to construct unbounded modular cycles out of half-closed chains and this procedure is in fact a key ingredient for obtaining a suitable extension of Kucerovsky's theorem. The presentation will be spiced up by a nice geometric example. The talk is based on joint work with Walter van Suijlekom.