



# Analysis Seminar

## “Caratheodory Type Representations”

By

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**Abstract:** We show that any operator valued function that is holomorphic in a neighbourhood of the origin of the complex plane has a compressed resolvent representation in terms of a unitary operator in a Krein space. The proof is based on a construction involving the Caratheodory kernel associated to the function and the shift operator on a certain function space. We also show that this result implies the existence of unitary dilations for bounded operators in Krein spaces.

**Date:** Tuesday, April 16, 2019

**Time:** 16:00-17:00

**Place:** Mathematics Seminar Room, SA – 141

Tea and cookies will be served before the seminar.