

Eigenvalues of self-adjoint extensions for defect larger than one

Jakob Reiffenstein

Stockholm University

Finding eigenvalues of a self-adjoint operator often amounts to determining zeros or singularities of analytic functions. Our recent work provides the theoretical background for this principle in the context of Krein's formula, which parametrizes all self-adjoint extensions of an underlying symmetric operator S . The analytic functions in question are the Weyl function $m(\lambda)$ and the parameter $\tau(\lambda)$. They are both matrix- or operator-valued if the defect of S is larger than one. In this talk I present a complete characterization of the eigenvalues of any given self-adjoint extension in terms of *generalized values* of m and τ .

Based on joint work with A. Luger.