

Meeting on Computational and Analytic Problems in Spectral Theory

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Abstract of Talk

CONSTRUCTION OF THE SELFADJOINT DILATION OF A MAXIMAL DISSIPATIVE OPERATOR - AN APPROACH IN THE SPIRIT OF BOUNDARY TRIPLES

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Similarly to the way that boundary triples naturally associate ‘boundary operators’ with an adjoint pair of operators, allowing e.g. Weyl functions to be introduced in an abstract setting, we introduce an abstract framework for a maximally dissipative operator A and its anti-dissipative adjoint. In the framework, we construct the selfadjoint dilation of A using the Štraus characteristic function. The advantage of this construction is that the parameters arising in the dilation are explicitly given in terms of parameters of A (such as coefficients of a differential expression). The abstract theory will be illustrated by the example of dissipative Schrödinger operators.