Sturm-Liouville operators with operator potentials
HAGEN NEIDHARDT (WIAS BERLIN)

We consider self-adjoint extensions of symmetric operators of the form
\[
(Af)(x) := -\frac{d^2}{dx^2}f(x) + Tf(x), \quad f \in \text{dom}(A) := W_0^{2,2}(\mathbb{R}_+, \mathfrak{h})
\]
in the Hilbert space $\mathcal{H} := L^2(\mathbb{R}_+, \mathfrak{h})$ where $T$ is a (unbounded) self-adjoint op-
erator in the infinite dimensional Hilbert space $\mathfrak{h}$. In particular, we find con-
ditions under which the absolutely continuous parts of different self-adjoint
extensions of $A$ are unitarily equivalent.

The investigations are carried out in the framework of boundary triplets. In
particular, the Weyl function is computed explicitly. The results are applied
to elliptic partial differential operators in $L^2(\mathbb{R}_+ \times \mathbb{R})$.

\[1\] Joint work with Mark M. Malamud