Canonical systems of differential equations on star-like graphs

Henrik Winkler

For n canonical systems of differential equations the corresponding n copies of their domain $[0, \infty)$ are thought of as a graph with vertex 0. An interface condition at 0 is given by a so-called Nevanlinna pair. Explicit formulas are deduced for the spectral representation of the corresponding underlying selfadjoint relation and the generalized Fourier transformation. Further, results on compressions of the Fourier transformation to closed linear subspaces and the multiplicity of the eigenvalues if the spectrum is discrete are presented.

Joint work with Henk de Snoo