

On Approximation of a Boundary Value Problem at 'Regular Singular' Endpoint

Yu. Shondin

joint work with A. Dijksma and A.Luger

We consider Sturm-Liouville expressions which have a 'regular singular' point, say at zero, e.g. the Bessel expression, and for which in L^2 setting the 'limit point' case at zero prevails. In this case there is a Pontryagin space realization of the minimal operator, which is symmetric and has nonzero defect indices, and the 'limit circle' case at zero is reproduced. We discuss the approximation of associated boundary value problems by appropriate boundary value problems at close to zero regular points.