

# Eigenvalue asymptotics of a family of Sturm-Liouville operators with boundary and interior singularities

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In this talk we will examine spectral asymptotics of a family of periodic singular Sturm-Liouville problems which are highly non-self-adjoint but have only real eigenvalues. The problem originated from the study of the lubrication approximation of a viscous fluid film in the inner surface of a rotating cylinder and has received a substantial amount of attention in recent years. Our main focus of interest will be the determination of sharp Schatten class inclusions for the associated resolvent operator.

The talk is based on a joint work with M. Levitin, M. Marletta and D. Rule.