

Meeting: 999, Nashville, Tennessee, SS 9A, Special Session on Inverse Problems

999-34-246 **Daphne J. Gilbert*** (daphne.gilbert@dit.ie), School of Mathematical Sciences, Dublin
Institute of Technology, Kevin Street, 8 Dublin, Ireland. *Application of the Riccati equation to
inverse Sturm-Liouville problems.*

The use of Riccati equations to recover a singular Sturm-Liouville equation from known spectral information is investigated. In particular, it is shown that the differential equation can be recovered in cases where the absolutely continuous spectrum is non-empty or the associated Dirichlet operator is bounded below. This is a development earlier work by Gilbert and Harris. (Received August 24, 2004)