

Center of Applied Mathematics & Sciences

Department of Mathematics at UWG

Talk: Recovering even potentials of Sturm-Liouville operators

Speaker: Dr. Amin Boumenir,

Time: Wednesday, 20 January at 4:00pm

Place: Room 301

Abstract: We are concerned with the recovery of an even polynomial potential associated with a Sturm-Liouville operator from one spectrum. More precisely we reconstruct an even polynomial of degree $2n$ from $n+1$ Taylor coefficients. It is well known that we need two spectra to recover a potential, however because we are looking for only half a function, its even component, we shall need only one spectrum. Computational issues and the current computer power at CAMS will be discussed and numerical examples with complex valued potentials are treated at the end.