

Dependence of eigenvalues on potentials and weights and optimal estimates of eigenvalues

Meirong Zhang

Beijing, China

In this talk, we will first discuss the dependence of eigenvalues of Sturm-Liouville problems on potentials and weights. Besides the usual continuity results, it will be shown that eigenvalues are continuously dependent on potentials and weights even when the weak topologies for potentials and weights are considered. As an application, we will then show how the optimal estimates on these eigenvalues can be obtained by the variational method and some topological results of the Lebesgue spaces.