Abstract:
In this talk, we will analyze boundary value problems on infinite intervals subject to generalized boundary conditions. In particular, results are obtained for problems in the differential equation setting for a wide variety of problems. For such problems, we establish sufficient conditions for the existence of solutions as well as a qualitative description of solutions according to a parameter. Conditions for solvability are obtained by employing the Lyapunov-Schmidt procedure and an application of the implicit function theorem.