



Differential Equations and Applied Math Seminar

Dr. Selim Sukhtaiev, Auburn University

12-1pm April 15th, 2022

330 DH and Zoom

Title: Schrodinger operators with slowly decaying singular potentials

Abstract: This talk concerns spectral theory of half-line Schrodinger operators with singular potentials. In the first part, we will focus on a general spectral theoretic framework for such operators and discuss self-adjointness, quadratic forms, Weyl–Titchmarsh theory, and Prufer variables. In addition, we will provide a Last–Simon-type description of the absolutely continuous spectrum and necessary conditions for absence thereof. In the second part, we will discuss spectral types of Schrodinger operators with slowly decaying sparse singular potentials and a spectral transition on the scale of short-range to long-range potentials. (Joint work with M. Lukic, X. Wang)

Interested faculty, graduate and undergraduate students are encouraged to attend.