DAVID SHER, DePaul University
Bessel function zeroes and Polya's conjecture

I will discuss some recent results giving uniform bounds for zeroes of Bessel functions and their derivatives. These bounds can be used to analyze the spectrum of the Laplacian on domains with radial symmetry, and in particular, to prove Polya's conjecture for Euclidean balls. This is joint work with N. Filonov (St. Petersburg), M. Levitin (Reading), and I. Polterovich (Montreal).