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CINVESTAV

**Uniform individual asymptotics for the eigenvalues and eigenvectors of large
Toeplitz matrices**

Abstract

The asymptotic behavior of the spectrum of large Toeplitz matrices has been studied for almost one century now. Among this huge work, we can find the Szegő theorems on the eigenvalue distribution and the asymptotics for the determinants, as well as other theorems about the individual asymptotics for the smallest and largest eigenvalues. Results about uniform individual asymptotics for all the eigenvalues and eigenvectors appeared only five years ago. The goal of the present lecture is to review this area, to talk about the obtained results. This review is based on joint works with Manuel Bogoya, Albrecht Böttcher, and Egor Maximenko.

Talk time: 07/19/2016 3:30PM— 07/19/2016 3:50PM

Talk location: Cupples I Room 215

Special Session: Toeplitz operators and related topics. Organized by S. Grudsky and N. Vasilevski.