



Факультет математики и компьютерных наук  
Санкт-Петербургский государственный университет

### КОЛЛОКВИУМ

27 марта (четверг) в 17:30, ауд. 201, 14-я линия В.О., 29

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**Сергей Грудский (Sergei Grudsky)**

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**"Асимптотика собственных значений и собственных векторов Матрицы Топлица"**

Title: Asymptotics of eigenvalues and eigenvectors of Toeplitz matrices

Abstract: Analysis of the asymptotic behaviour of the spectral characteristics of Toeplitz matrices as the dimension of the matrix tends to infinity has a history of over 100 years. For instance, quite a number of versions of

Szego 's theorem on the asymptotic behaviour of eigenvalues and of the so-called strong Szego theorem on the asymptotic behaviour of the determinants of Toeplitz matrices are known. Starting in the 1950s, the asymptotics of the maximum and minimum eigenvalues were actively investigated. However, investigation of the individual asymptotics of all the eigenvalues and eigenvectors of Toeplitz matrices started only quite recently: the first papers on this subject were published in 2009-2010. A survey of this new field is presented here.