The Szegö strong theorem
for Toeplitz determinants
with symbols of nonstandard smoothness

Alexei Karlovich

Abstract

We prove Szegő's strong limit theorem for Toeplitz determinants with a symbol having a nonstandard smoothness. We assume that the symbol belongs to the Wiener algebra and, moreover, the sequences of Fourier coefficients of the symbol with negative and nonnegative indices belong to weighted Orlicz classes generated by complementary N-functions both satisfying the Δ_2-condition nera zero and by weight sequences satisfying some regularity and compatibility conditions.

These results are obtained in a joint work with Pedro A. Santos (Technical University of Lisbon, Portugal).