



Mathematics > Probability

# Mod- $\phi$ convergence

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Using Fourier analysis, we study local limit theorems in weak-convergence problems. Among many applications, we discuss random matrix theory, some probabilistic models in number theory, the winding number of complex brownian motion and the classical situation of the central limit theorem, and a conjecture concerning the distribution of values of the Riemann zeta function on the critical line.

Comments: 31 pages; updated a reference, add math.NT category

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MSC classes: 60F05, 60B12, 60B20, 11K65, 11M06

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