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Random Matrix Models and Isomonodromic Tau Functions

Marco BERTOLA

Department of Mathematics and Statistics
Concordia University
1400 de Maisonneuve W., LB-901-29
Montréal, Québec H3G 1M8
CANADA

`bertola@crm.umontreal.ca`

Abstract

Introduced by Wigner to model heavy nuclei Hamiltonians, random matrices have known a remarkable development in (relatively) recent years with connections to the most distant areas of mathematics; from number theory (density of the nontrivial zeroes of the Riemann Zeta function) to enumerative geometry (intersection classes on moduli spaces), to asymptotic analysis of ODE and integrable systems.