Moments of random characteristic polynomials

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The moments of the characteristic polynomial of large random matrices have been of interest since Brézin and Hikami. They have been motivated by analogies with L-functions, and more recently they were instrumental to understand some complexity of high dimensional random fields, and the emergence of 1d Gaussian multiplicative chaos measures from self-adjoint random matrices by Webb. I will explain new results for non-integer moments in bidimensional settings, namely dynamics of unitary Brownian motion and non-Hermitian random matrices. This implies convergence of random characteristic polynomials towards 2d Gaussian multiplicative chaos measures. This is based on joint works with Hugo Falconet, and Guillaume Dubach and Lisa Hartung.

Wednesday, June 7, 2023 03:45pm - 04:45pm

Mondi 2 (I01.01.008), Central Building

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