IST AUSTRIA
Institute of Science and Technology

Mathematics and CS Seminar

Single eigenvalue fluctuations of random matrices

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Host: M. Beiglböck, N. Berestycki, L. Erdös, J. Maas, F. Toninelli

Gustavsson proved that the fluctuations of a bulk GUE eigenvalue around its mean are asymptotically Gaussian after a suitable rescaling. O'Rourke extended this to the GOE and GSE using a coupling of Forrester and Rains. In this talk we present recent results on the universality of these fluctuations for other classes of random matrices, including matrices of general Wigner-type under a one-cut assumption. We use as input the homogenization theory of Dyson Brownian motion of L.-Sosoe-Yau as well as the works on the theory of the quadratic vector equation and general Wigner-type matrices of Ajanki-Erd\H{o}s-Kr{\"u}ger. Based on joint work with P. Lopatto and P. Sosoe.

Tuesday, June 15, 2021 04:30pm - 05:15pm

IST Austria Campus Online via Zoom

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