Séminaire de Probabilités et Statistique

Mardi 22 septembre 2020 à 14h00

Laboratoire Dieudonné
Salle de conférence - LJAD

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On the circle, GMC = CBE

CIn this talk open to a large audience of probabilists and statisticians, I would like to advertise the strict equality between two objects from very different areas of mathematical physics:

- Kahane's Gaussian Multiplicative Chaos (GMC), which uses a Gaussian log-correlated field as input and plays an important role in certain conformal field theories.
- A reference model in random matrices called the Circular Beta Ensemble (CBE), and which will be defined via random orthogonal polynomials. The goal is to give a precise theorem whose loose form is GMC = CBE. Although it was known that random matrices exhibit log-correlated features, such an exact correspondence is quite a surprise