



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

## **SEMINAR ON PROBABILITY**

# **How do the eigenvalues of a large random matrix behave?**

By

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### Abstract

We prove that the fluctuations of eigenvalues converge to the Gaussian Free Field (GFF) on the unit disk. Due to strong correlations between the eigenvalues, these fluctuations appear on a non-natural scale. We then explore extremal values of this Gaussian field and investigate certain space--time correlations of the eigenvalues.

**Date: 30 November 2023 (Thursday)**

**Time: 10:00am**

**Zoom Meeting: <https://hkust.zoom.us/j/93404141818> (Passcode: 229272)**

*All are Welcome!*