The Hong Kong University of Science and Technology

Department of Mathematics

<u>Seminar on Probability</u>

Rigidity of eigenvalues for beta ensemble in multi-cut regime

by

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<u>Abstract</u>

I will first talk about the background and some well-known results of the beta ensemble. Then I will introduce the rigidity of eigenvalues for beta ensemble in multi-cut regime, i.e., the fact that each eigenvalue in the bulk is very close to its "classical location". The probability that the distance between the eigenvalue and its classical location is larger than N^{-1+r} is exponentially small where r is an arbitrarily small positive number. The model is a generalization of the beta ensemble in one-cut regime for which the rigidity of eigenvalues was proved by Bourgade, Erdos and Yau. If time allows I will explain the difference between the proof in one-cut case and the proof in multi-cut case.

Date: **Thursday, 11 July 2019**

Time: **11:00a.m. - 12:00noon**

Venue: **Room 3472, Academic Building, (near Lifts 25-26), HKUST**

All are welcome!