

The Hong Kong University of Science & Technology

Department of Mathematics

PhD Student Seminar

On the Empirical Spectral Distribution of Random Matrices from Codes

by

Mr. Chin Hei CHAN

<u>Abstract</u>

Empirical spectral distribution is a major area of study in random matrix theory. In a series of papers, researchers considered a sample-covariance type random matrix model on sequences based on linear codes over finite fields. They found that the empirical spectral distribution converges to the Marchenko-Pastur distribution as the length of the code increases to infinity, like truly random matrix model and prove that its empirical spectral distribution converges to the Wigner's semicircle law under the same dual distance condition and possibly some other algebraic properties. We also investigate the convergence rate of these two distributions by using the Stieltjes transform.

Date: Monday, 6 May 2019

- *Time:* 3:00 p.m. 4:00 p.m.
- Venue: Room 3598, Academic Building (near Lifts 27-28), HKUST

All are welcome!