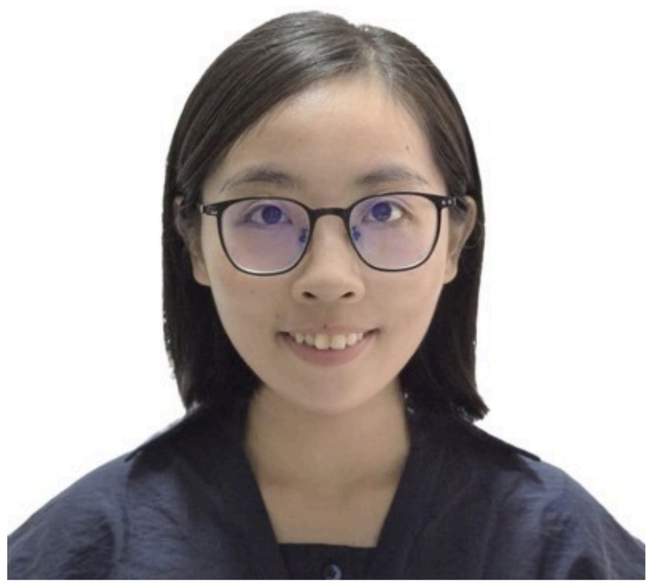
XIAMEN UNIVERSITY MALAYSIA
厦門大學馬來西亞分校

Research Talk - XMUM

Threshold model of contagion in networks

May 5, 2025 (Monday), 3:30–4:30 pm Room A4#G04



Keng Ying Ying

Assistant Professor

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Research interests: Dr. Keng Ying Ying research centers on leveraging the analytical power of mathematics to derive valuable insights into network-related problems.

Speaker Introduction

Dr. Keng Ying Ying is an assistant professor at Xiamen University Malaysia. She graduated from Universiti Malaya in 2024.

Abstract

We consider a model of contagion where each non-seed is assumed to adopt an action if and only if the proportion of its adopting neighbors is no less than its adoption threshold. We then examine two measures for a seed set: (1) the contagion probability, defined as the probability of full contagion when the adoption threshold of each non-seed is drawn independently and uniformly at random, and (2) the contagion threshold, which is the probability of full contagion when all non-seeds share a common adoption threshold that is chosen uniformly at random. In this talk, I will highlight how the two measures are shaped by different network structures. This is a joint work with Kwa Kiam Heong.