**THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY**

## Department of Mathematics

# ALGEBRA AND GEOMETRY SEMINAR

# Quantum A-polynomial from TQFT

by

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### Abstract

The classical A-polynomial of a knot encodes the "peripheral map" from the fundamental group of the two-torus to the fundamental group of the knot complement. Much work has gone into studying various q-deformations of the A-polynomial, known as the quantum A-polynomial, and its relationship to the Jones polynomial. In this talk, I will report on joint work with Jennifer Brown, which constructs the quantum A-polynomial using skein modules with defects, refining an earlier construction of Dimofte involving cluster algebras.

**Date** : **6 March 2024 (Wednesday)**

**Time** : **4:00pm – 5:30pm**

**Venue** : **Room 2405 (Lifts 17/18)**

*All are Welcome!*