THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

ALGEBRA AND GEOMETRY SEMINAR

Symmetric polynomials and interpolation polynomials

by

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Abstract

Symmetric polynomials---for example, Schur, Jack, and Macdonald polynomials---are classical objects in the study of algebra, representation theory, and combinatorics. Interpolation polynomials are certain inhomogeneous versions of Jack and Macdonald polynomials. In this talk, after reviewing some basics on symmetric polynomials, I will introduce interpolation polynomials and discuss our recent work on their properties. As an application, I will give a characterization of the containment partial order in terms of Schur positivity or Jack positivity. This result parallels the works of Cuttler--Greene--Skandera, Sra, and Khare--Tao, which characterize two other partial orders in terms of Schur positivity. This work is joint with Siddhartha Sahi.

Date : 14 May 2024 (Tuesday)

Time : 4:30pm – 5:30pm

Venue : Room 4504 (Lifts 25/26)

All are Welcome!