



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

SEMINAR ON PURE MATHEMATICS

Zero-one characters of flagged Weyl modules

by

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Abstract

The flagged Weyl modules associated to diagrams in the plane are representations of the Borel subgroup of the general linear group. The characters of flagged Weyl modules include as special cases two important families of polynomials in Algebraic Combinatorics: Schubert polynomials and key polynomials. In this talk, we shall give an overview of the construction of flagged Weyl modules as well as some combinatorial properties of their characters. Then we prove a criterion of when the characters are zero-one (or, multiplicity-free), confirming a conjecture by Meszaros--St. Dizier--Tanjaya. Based on joint work with Zhuowei Lin and Simon Peng.

Date : 16 March 2025 (Sunday)

Time : 3:00p.m.-4:00p.m.

Venue : Room 4504 (Lift 25/26)

All are Welcome!