



The Hong Kong University of Science and Technology

Department of Mathematics

MPhil THESIS EXAMINATION

***Transition Formulas for Affine Involution
Schubert Polynomials***

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ABSTRACT

We study families of symmetric functions \hat{F}_z indexed by affine involutions z and \hat{F}_z^{FPF} indexed by affine fixed-point-free involutions z . These power series are analogues of Lam's affine Stanley symmetric functions and generalizations of the (fixed-point-free) involution Stanley symmetric functions introduced by Hamaker, Marberg, and Pawlowski. Our main result is to prove transition formulas for these two families of symmetric functions which can be used to define an affine (fixed-point-free) involution analogues of the Lascoux-Schützenberger tree. Our proof of these two formulas is based on Lam and Shimozono's transition formula for affine Stanley symmetric functions and the property that affine fixed-point-free involutions form a quasiparabolic set as introduced by Rains and Vazirani.

Date : **12 August 2019, Monday**
Time : **9:30 a.m.**
Venue : **Room 5501 (near lifts 25-26)**
Thesis Examination Committee : **Prof. Yongchang ZHU (Chairman)**
Prof. Eric MARBERG (Supervisor)
Prof. Maosheng XIONG

(Open to all faculty and students)

The student's thesis is now being displayed on the reception counter in the General Administration Office (Room 3461).