



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

## **SEMINAR ON PURE MATHEMATICS**

### **Some recent progress on permutation polynomials (Part I)**

by

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#### Abstract

In this talk, we will introduce a general procedure for producing large classes of permutation polynomials over  $F_{q^2}$  from any prescribed permutation rational function over  $F_q$ , and we will show that even the simplest permutation rational functions yield many interesting permutation polynomials. We will also classify permutation polynomials with certain forms using tools from algebraic geometry and group theory which have not previously been used in this topic.

This is a joint work with Michael Zieve.

**Date : 20 May 2022 (Friday)**

**Time : 2:00pm – 3:00pm**

**Zoom Meeting : <https://hkust.zoom.us/j/95290971371> Passcode (322024)**

*All are Welcome!*