THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

SEMINAR ON PURE MATHEMATICS

Extension and combinatorial configurations of hyperplane arrangements

by

Dr. Houshan FU
Guangzhou University

Abstract

We examine three types of extensions of hyperplane arrangements: elementary lift, parallel translation and adding a new hyperplane arbitrarily. The configuration spaces of elementary lift, parallel translation, and adding a new hyperplane are parametrized by continuous multi-variables. We classify the combinatorial types (finitely many) of the configuration spaces of the hyperplane arrangements for each of the three extensions and characterize their intersection lattices. Furthermore, we also describe the order-preserving relations on various combinatorial invariants of the extended hyperplane arrangements.

Date : **28 February 2024 (Wednesday)**
Time : **3:00pm – 4:00pm**
Venue : **Room 4475 (Lifts 25/26)**

All are Welcome!