THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

DEPARTMENT OF APPLIED MATHEMATICS
應 用 數 學 系

The Hong Kong Polytechnic University
Department of Applied Mathematics

Colloquium

Isometries and isomorphisms of matrix structures

by

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Abstract
Surjective isometries are the most important "symmetries" of metric spaces. When the underlying space is also equipped with some compatible algebraic structure, it frequently turns out that the (surjective) isometries are closely related to corresponding algebraic isomorphisms. In this talk we are concerned with that phenomenon in the cases of certain matrix structures.

In the first part of the talk we present some classical results on linear isometries of matrix algebras. In the second part we consider non-linear problems on the positive definite cone in matrix algebras and explain how certain algebraic considerations help to characterize their isometries with respect to certain important metrics.

Date : 29 March, 2019 (Friday)

Time : 2:30pm – 3:30pm

Venue : TU801, The Hong Kong Polytechnic University

*** * * ALL ARE WELCOME * * ***