



**The Hong Kong Polytechnic University
Department of Applied Mathematics**

**Seminar
On**

Higher Rank Numerical Range in Quantum Computing

by

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Abstract

Fixed a positive integer k , the higher rank (rank- k) numerical range of a matrix A is the set of complex λ such that for some rank k projection P we have $PAP = \lambda P$. The study of higher rank numerical range was motivated in connection to the construction of quantum error correction code in quantum information theory. In this talk, basic properties, examples, and some recent results on the higher rank numerical range will be presented. Open problems will also be discussed if time permits

Date : 9 January, 2009 (Friday)
Time : 3:30 – 4:30 p.m.
Venue : Departmental Conference Room HJ610
The Hong Kong Polytechnic University

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