Title Linear Preserver Problems and Quantum Information Science

Speaker: Chi-Kwong Li

Department of Mathematics, College of William & Mary, USA

Institute for Quantum Computing, University of Waterloo, Canada.

Abstract:

Linear preserver problems concern the study of linear maps on matrices or operators leaving invariant certain functions, subsets, or relations. In this talk, an introduction of the subject will be given. Its connections to other areas will be discussed. Special attention will be given to results and problems related to quantum information science.

A brief bio of Li

Li is the Ferguson Professor of Mathematics at the College of William & Mary, and is an affiliated member of the Institute for Quantum Computing at the University of Waterloo. His research is on matrix theory, operator theory, combinatorial theory and their applications. He has more than 360 research papers published. He has severed on several editorial boards of journals. (Currently, on "Linear Algebra and its Applications", "INVOLVE - A Journal of Mathematics", retired from chief editor positions from "Linear and Multilinear Algebra" and "Operators and Matrices"). He has organized and co-organized many conferences, workshops, symposiums on different topics in matrix and operator theory, served on different positions of the International Linear Algebra Society. He has won a number of awards including the Fulbright Fellowship in 2021 (not able to accept due to the pandemic) and 2011. Very recently, he was selected as a recipient of the 2025 Hans Schneider Prize of the International Linear Algebra Society. His research has been supported by different grant agencies including the Simons Foundation, NSF, NATO, etc. Besides mathematics, Li likes music and cooking. He plays Chinese flute and cooks Chinese dishes. For more information, one may see

homepage at http://cklixx.people.wm.edu,

CV at http://cklixx.people.wm.edu/vitae.pdf,

list of publication at http://cklixx.people.wm.edu/pub.html