Speaker: Viswanath Ramakrishna

Title: Parametrizations of Positive Matrices With Applications to Quantum Information Processing

Abstract:
This talk will discuss two parametrizations of positive matrices. Both parametrizations simultaneously yield the Cholesky factorization of the positive matrix in question. The applications include a simple test for purity of quantum states and a systematic technique for finding one Kraus representation for quantum channels. Time permitting some combinatorial aspects of these two parametrizations will also be discussed. This is joint work with late professor Tiberiu Constantinescu and Nermine El-Sissi. This talk is dedicated to the memory of Tibi Constantinescu, a giant not only with his mathematical expertise but also in the rare art of being genuinely humane.