UNIVERSITY OF MALTA
Faculty of Science
Department of Mathematics

COMPLETELY POSITIVE MATRICES

real, rational and integral

by

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A *completely positive factorization* of a matrix A is $A=BB^T$, where B is a nonnegative matrix. A *rational completely positive factorization* of a matrix A is $A=BB^T$, where B is a nonnegative matrix such that its entries are rational. An *integral completely positive factorization* of a matrix A is $A=BB^T$, where B is a nonnegative matrix such that its entries are integers. A matrix is *completely positive* if it has a completely positive factorization. In the talk we will discuss the following questions:

- When is a symmetric nonnegative matrix, completely positive?
- Does every rational completely positive matrix have a rational completely positive factorization?
- Does every integral completely positive matrix have an integral completely positive factorization?

Date: Tuesday, 11th July 2017
Time: 11:00am
Place: Room 405 Math and Phys Bldg.

Everyone is cordially invited to attend. Contact Prof I. Sciriha for further details.
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