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CENTER FOR R&D IN MATHEMATICS AND
APPLICATIONS

universidade
de aveiro
Departamento de Matemática

Seminário OGTC

Optimization, Graph Theory and Combinatorics

28 de outubro de 2019
(15h00–16h00 — Sala 11.3.21)

Majorization - some recent developments in matrix theory

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Resumo

Majorization is an important notion in mathematics and its applications. The basic, and classical, concept is an ordering of vectors which, partially motivated by concepts in economics, reflects how "spread out"the components are. Extensions exist for ordering functions, measures etc. Pioneering work in this area was done by famous mathematicians as Schur, Hardy, Littlewood and Polya. Today it is active research area in matrix theory, with applications in spectral (graph) theory, combinatorics, probability etc.

The talk contains two parts. In the first part we introduce the classical majorization concept and discuss some basic results in the area. Some examples of recent research are briefly mentioned. In the second part I will present some recent work on matrix majorization with focus on this order for (0,1)-matrices. Several orders for matrices are presented in this setting. This part of the talk is based on joint work with Alexander Guterman and Pavel Shteyner (Moscow State University).

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