



DEPARTAMENTO DE
ANÁLISIS MATEMÁTICO

Conferencia

Seminario de Información Cuántica



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Characterization of quantum correlations

Abstract:

In this talk, we will address the following problem: given some initial correlations among n distant observers, are they attainable by measuring a quantum state? By answering this question, we aim at identifying the set of correlations compatible with the quantum formalism. We present a convergent hierarchy of semidefinite programs characterizing the set of quantum correlations. We show that our hierarchy can be understood as the generalization to non-commuting operators of existing techniques on classical control theory. Finally, we discuss several applications of the derived hierarchy for quantum information processing.

12 de febrero de 2008
12:30 horas, Seminario 222