Nonlocality in pure and mixed n-qubit X states

By: Batle, J (Batle, J.) [1]; Ooi, CHR (Ooi, C. H. Raymond) [2]; Farouk, A (Farouk, Ahmed) [3]; Abdalla, S (Abdalla, S.) [4]

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Abstract
Nonlocality for general multiqubit X states is studied in detail. Pure and mixed states are analyzed as far as their maximum amount of nonlocality is concerned, and analytic results are obtained for important families of these states. The particular form of nonzero diagonal and antidiagonal matrix elements makes the corresponding study easy enough to obtain exact results. We also provide a numerical recipe to randomly generate an important family of X states endowed with a given degree of mixture.

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Author Information
Reprint Address: Batle, J (reprint author)

Addresses:
[ 1 ] Univ Illes Balears, Dept Fis, Palma De Mallorca 07122, Balearic Island, Spain
[ 2 ] Univ Malaya, Dept Phys, Kuala Lumpur 50603, Malaysia

E-mail Addresses: jbv276@uib.es

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