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Quantum Information on Complex Hadamard Diagonalizable Graphs

If the Laplacian matrix associated to a graph is diagonalizable by a Hadamard matrix, we say that the graph is Hadamard diagonalizable. In light of recent work on quantum state transfer with respect to Hadamard diagonalizable graphs, showing a direct relationship to cubelike graphs, we extend the notion of Hadamard diagonalizability to allow for complex Hadamard matrices.