1.	Record Nr.	UNINA9910464499403321
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	Titolo	Applications of unitary symmetry and combinatorics [[electronic resource] /] / James D. Louck
	Pubbl/distr/stampa	Hackensack, N.J., : World Scientific, c2011
	ISBN	1-283-43383-4
		9786613433831
		981-4350-72-9
	Descrizione fisica	1 online resource (381 p.)
	Disciplina	511.6
	Soggetti	Symmetry (Physics)
		Combinatorial analysis
		Electronic books.
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Description based upon print version of record.
	Nota di bibliografia	Includes bibliographical references and index.
	Nota di contenuto	Preface and Prelude; OVERVIEW AND SYNTHESIS OF BINARY COUPLING THEORY; TOPICAL CONTENTS; MATTERS OF STYLE, READERSHIP, AND RECOGNITION; Contents; Notation; 1 Composite Quantum Systems; 1.1 Introduction; 1.2 Angular Momentum State Vectors of a Composite System; 1.2.1 Group Actions in a Composite System; 1.3 Standard Form of the Kronecker Direct Sum; 1.3.1 Reduction of Kronecker Products; 1.4 Recoupling Matrices; 1.5 Preliminary Results on Doubly Stochastic Matrices and Permutation Matrices; 1.6 Relationship between Doubly Stochastic Matrices and Density Matrices in Angular Momentum Theory 2 Algebra of Permutation Matrices2.1 Introduction; 2.2 Basis Sets of Permutation Matrices; 2.2.1 Summary; 3 Coordinates of A in Basis P n(e, p); 3.1 Notations; 3.2 The A-Expansion Rule in the Basis P n(e,p); 3.3 Dual Matrices in the Basis Set n(e, p); 3.3.1 Dual Matrices for 3(e, p); 3.3.2 Dual Matrices for 4(e, p); 3.4 The General Dual Matrices in the Basis n(e, p); 3.4.1 Relation between the A-Expansion and Dual Matrices; 4 Further Applications of Permutation Matrices; 4.1 Introduction; 4.2 An Algebra of Young Operators; 4.3 Matrix Schur Functions 4.4 Real Orthogonal Irreducible Representations of Sn4.4.1 Matrix

Sommario/riassunto	This monograph is a synthesis of the theory of the pairwise coupling of the angular momenta of arbitrarily many independent systems to the total angular momentum in which the universal role of doubly stochastic matrices and their quantum-mechanical probabilistic interpretation is a major theme. A uniform viewpoint is presented based on the structure of binary trees. This includes a systematic method for the evaluation of all 3n-j coefficients and their relationship to cubic graphs. A number of topical subjects that emerge naturally are also developed, such as the algebra of permutation matrice