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Altri autori (Persone)	VoiculescuD. V <1949-> (Dan V.) StammeierNicolai WeberMoritz
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Nota di contenuto	Background and outlook / Dan-Virgil Voiculescu -- Basics in free probability / Moritz Weber -- Random matrices and combinatorics / Roland Speicher -- Free monotone transport / Dimitri L. Shlyakhtenko -- Free group factors / Ken Dykema -- Free convolution / Hari Bercovici -- Easy quantum groups / Moritz Weber.
Sommario/riassunto	Free probability is a probability theory dealing with variables having the highest degree of noncommutativity, an aspect found in many areas (quantum mechanics, free group algebras, random matrices etc). Thirty years after its foundation, it is a well-established and very active field of mathematics. Originating from Voiculescu's attempt to solve the free group factor problem in operator algebras, free probability has important connections with random matrix theory, combinatorics, harmonic analysis, representation theory of large groups, and wireless communication. These lecture notes arose from a masterclass in Munster, Germany and present the state of free probability from an operator algebraic perspective. This volume includes introductory

lectures on random matrices and combinatorics of free probability (Speicher), free monotone transport (Shlyakhtenko), free group factors (Dykema), free convolution (Bercovici), easy quantum groups (Weber), and a historical review with an outlook (Voiculescu). In order to make it more accessible, the exposition features a chapter on basics in free probability, and exercises for each part. This book is aimed at master students to early career researchers familiar with basic notions and concepts from operator algebras.

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