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| | Collana | Lecture notes in mathematics (Springer-Verlag) ; ; 1957 |
| | Altri autori (Persone) | GuionnetAlice |
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| | Soggetti | Random matrices<br>Asymptotic expansions |
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| | Formato | Materiale a stampa |
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| | Note generali | Bibliographic Level Mode of Issuance: Monograph |
| | Nota di bibliografia | Includes bibliographical references and index. |
| | Nota di contenuto | Wigner matrices and moments estimates -- Wigner#x2019;s theorem -- Wigner's matrices; more moments estimates -- Words in several independent Wigner matrices -- Wigner matrices and concentration inequalities -- Concentration inequalities and logarithmic Sobolev inequalities -- Generalizations -- Concentration inequalities for random matrices -- Matrix models -- Maps and Gaussian calculus -- First-order expansion -- Second-order expansion for the free energy -- Eigenvalues of Gaussian Wigner matrices and large deviations -- Large deviations for the law of the spectral measure of Gaussian Wigner's matrices -- Large Deviations of the Maximum Eigenvalue -- Stochastic calculus -- Stochastic analysis for random matrices -- Large deviation principle for the law of the spectral measure of shifted Wigner matrices -- Asymptotics of Harish-Chandra-Itzykson-Zuber integrals and of Schur polynomials -- Asymptotics of some matrix integrals -- Free probability -- Free probability setting -- Freeness -- Free entropy -- Basics of matrices -- Basics of probability theory. |
| | Sommario/riassunto | Random matrix theory has developed in the last few years, in connection with various fields of mathematics and physics. These notes emphasize the relation with the problem of enumerating complicated graphs, and the related large deviations questions. Such questions are also closely related with the asymptotic distribution of matrices, which is naturally defined in the context of free probability and operator algebra. The material of this volume is based on a series of nine |

lectures given at the Saint-Flour Probability Summer School 2006.
Lectures were also given by Maury Bramson and Steffen Lauritzen.