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Nota di contenuto	Monochromatic Random Waves for general Riemannian manifolds (Canzani) -- A Brief Review of the "ETH- Approach to Quantum Mechanics" (Fröhlich) -- Linear and non-linear harmonic boundaries of graphs; an approach with p-cohomology in degree one (Gournay) -- Polyharmonic functions for finite graphs and Markov chains (Hirschler) -- Interacting electrons in a random medium: a simple one-dimensional model (Klopp) -- Entropies for negatively curved manifolds (Ledrappie)- Two-dimensional quantum Yang-Mills theory and the Makeenko-Migdal equations (Lévy) -- Limit operators for circular ensembles (Maples) -- Gibbs measures of nonlinear Schrödinger equations as limits of quantum many-body states in dimension d 3 (Sohinger) -- Interfaces in spectral asymptotics and nodal sets (Zelditch).
Sommario/riassunto	The volume presents extensive research devoted to a broad spectrum of mathematical analysis and probability theory. Subjects discussed in this Work are those treated in the so-called Strasbourg–Zürich Meetings. These meetings occur twice yearly in each of the cities, Strasbourg and Zürich, venues of vibrant mathematical communication and worldwide gatherings. The topical scope of the book includes the study of monochromatic random waves defined for general Riemannian

manifolds, notions of entropy related to a compact manifold of negative curvature, interacting electrons in a random background, \mathbb{L}^p -cohomology (in degree one) of a graph and its connections with other topics, limit operators for circular ensembles, polyharmonic functions for finite graphs and Markov chains, the ETH-Approach to Quantum Mechanics, 2-dimensional quantum Yang–Mills theory, Gibbs measures of nonlinear Schrödinger equations, interfaces in spectral asymptotics and nodal sets. Contributions in this Work are composed by experts from the international community, who have presented the state-of-the-art research in the corresponding problems treated. This volume is expected to be a valuable resource to both graduate students and research mathematicians working in analysis, probability as well as their interconnections and applications.
