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Collana	Lecture Notes in Physics, , 0075-8450 ; ; 80
Disciplina	530.15
Soggetti	Physics Mathematical physics Mathematical Methods in Physics Mathematical Applications in the Physical Sciences
Lingua di pubblicazione	Inglese
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Nota di contenuto	Lattice instantons: What they are and why they are important -- Gauge fields on the lattice -- Lattice gauge theories -- Some frontiers in constructive quantum field theory and equilibrium statistical mechanics -- New proofs of long range order -- Number of phases in one component ferromagnets -- A survey of local cohomology -- Operator algebras and statistical mechanics -- Foundations of equilibrium quantum statistical mechanics -- Unbounded derivations of C*-algebras and corresponding dynamics -- to the flow of weights on factors of type III -- The von Neumann algebra of a foliation -- Nuclearity and the C*-algebraic flip -- On the Connes spectrum of simple C*-dynamical systems -- Quantum field theory of massless particles and scattering theory -- Scattering theory in quantum mechanics and asymptotic completeness -- Static solitons in more than one dimension -- Geometry of Yang-Mills fields -- Periodic solitons and algebraic geometry -- Yang--Mills equations as inverse scattering problem -- Nonlinear evolution equations solvable by the inverse spectral transform -- Quantization of particle-like solutions in field theory -- Topics in infinite dimensional analysis -- Mathematical foundations of the renormalization group method in statistical physics

-- On the renormalization group for the hierarchical model --
Fluctuations in Curie-Weiss exemplis -- On the problem of the
mathematical foundation of the Gibbs postulate ie classical statistical
mechanics -- Dynamical systems with turbulent behavior -- Generic
properties of Navier-Stokes equations -- A limit theorem for turbulent
diffusion -- Many particle scattering amplitudes -- A Remark on
equations of motion in asymptotically free theories -- Short-distance
expansion for products of current-like operators -- The use of exterior
forms in field theory -- On extensions of flows in the presence of sets
of singularities -- On the uniqueness of the equilibrium state for plane
rotators -- A geometric approach to the solution of conformal invariant
field equations -- Stability, detailed balance and KMS condition for
quantum systems -- Stochasticity and irreversibility in infinite
mechanical systems -- Why the KMS states? -- A comment to the talk
by E. Seiler.
