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   Soggetti   Functional analysis
                       Global analysis, analysis on manifolds
                       Partial differential equations
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   Lingua di pubblicazione   Inglese

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   Sommario/riassunto This book gives a detailed account of the analytic foundations of gauge
                       theory - Uhlenbeck's compactness theorems for general connections
                       and for Yang-Mills connections. It intends to guide graduate students
                       into the analysis of Yang-Mills theory as well as to serve as a reference
                       for researchers in the field. The book is largely self-contained. It
                       contains a number of appendices (e.g. on Sobolev spaces of maps
                       between manifolds) and an introductory part covering the Lp-regularity
                       theory for the inhomogenous Neumann problem. The two main parts
                       contain the full proofs of Uhlenbeck's weak and strong compactness
                       theorems on closed manifolds as well as their generalizations to
                       manifolds with boundary and noncompact manifolds. These parts
                       include a number of useful analytic tools such as general patching
                       constructions and local slice theorems.