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	Nota di contenuto	From the Contents: Introduction -- The Strategy of Regions -- Scalar SCET -- Generalization to QCD -- Resummation by RG Evolution -- Threshold Resummation in Drell-Yan Production -- Transverse Momentum Resummation -- n-Jet Processes and IR Divergences of Gauge Theory Amplitudes -- Applications of SCET -- Summary of Notations and Conventions -- One-Loop Integrals -- Inverse Derivative Operator -- Wilson Lines and Gauge Transformations -- Momentum-Space Feynman Rules for Soft Wilson Lines -- Decoupling Transformation and the Gluon Kinetic Term -- Integrals for Transverse PDFs at NLO -- Color Space Formalism -- Anomalous Dimensions.
	Sommario/riassunto	Among resummation techniques for perturbative QCD in the context of collider and flavor physics, soft-collinear effective theory (SCET) has emerged as both a powerful and versatile tool, having been applied to a large variety of processes, from B-meson decays to jet production at the LHC. This book provides a concise, pedagogical introduction to this technique. It discusses the expansion of Feynman diagrams around the high-energy limit, followed by the explicit construction of the effective Lagrangian - first for a scalar theory, then for QCD. The underlying concepts are illustrated with the quark vector form factor at large momentum transfer, and the formalism is applied to compute soft-gluon resummation and to perform transverse-momentum

resummation for the Drell-Yan process utilizing renormalization group evolution in SCET. Finally, the infrared structure of n-point gauge-theory amplitudes is analyzed by relating them to effective-theory operators. This text is suitable for graduate students and non-specialist researchers alike as it requires only basic knowledge of perturbative QCD.