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Autore	Arkani-Hamed Nima
Titolo	Records from the S-Matrix Marathon : Selected Topics on Scattering Amplitudes // edited by Nima Arkani-Hamed, Mathieu Giroux, Holmfridur Sigridar Hannesdottir, Sebastian Mizera, Celina Pasiecznik
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Altri autori (Persone)	GirouxMathieu HannesdottirHolmfridur Sigridar MizeraSebastian PasiecznikCelina
Disciplina	530.14
Soggetti	Particles (Nuclear physics) Quantum field theory Mathematical physics Gravitation Cosmology Elementary Particles, Quantum Field Theory Particle Physics Theoretical, Mathematical and Computational Physics Classical and Quantum Gravity
Lingua di pubblicazione	Inglese
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Nota di contenuto	Tasty bits of several complex variables -- Scattering on periodic lattices -- Dispersion relation in QCD -- Schwinger Keldysh formalism -- Boundary view on analyticity -- Observables in expanding universes -- The analytic S-matrix revisited -- A timeless history of time -- Gravitational physics from scattering amplitudes.
Sommario/riassunto	This book is a collection of pedagogical lecture notes on topics related to S-matrix theory. It presents recent progress in understanding the foundations of S-matrix theory from different perspectives, covering aspects such as analytic properties and infrared divergences,

observables on time-folded contours and cosmological backgrounds, as well as lattice simulations and phenomenological applications in strongly-coupled QCD. The chapters are based on lectures given at the S-Matrix Marathon workshop, hosted in Princeton during the spring of 2024. The purpose is to provide a pedagogical introduction to the evolving ideas surrounding S-matrix theory and to highlight emerging directions in the field. This book is intended for junior researchers and advanced students who are interested in deepening their understanding of particle interactions.

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