

1. Record Nr.	UNINA9910451177403321
Autore	Wilczek Frank
Titolo	Fantastic realities [[electronic resource]] : 49 mind journeys and a trip to Stockholm / / Frank Wilczek, with a contribution from Betsy Devine
Pubbl/distr/stampa	Hackensack, N.J., : World Scientific, c2006
ISBN	1-281-37895-X 9786611378950 981-277-430-0
Descrizione fisica	1 online resource (533 p.)
Classificazione	33.00
Altri autori (Persone)	DevineBetsy
Disciplina	530
Soggetti	Physics Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Constructing this world, and others. The world's numerical recipe ; Analysis and synthesis 1: What matters for matter ; Analysis and synthesis 2: Universal characteristics ; Analysis and synthesis 3: Cosmic groundwork ; Analysis and synthesis 4: Limits and supplements. -- Musing on mechanics. Whence the force of $F = ma$? 1: Culture shock ; Whence the force of $F = ma$? 2: Rationalization ; Whence the force of $F = ma$? 3: Cultural diversity. -- Making light of mass. The origin of mass ; Mass without mass 1: Most of matter ; Mass without mass 2: The medium is the mass-age. -- QCD exposed. QCD made simple ; 10 p12 s degrees in the shade ; Back to basics at ultrahigh temperatures. -- Breathless at the heights. Scaling Mount Planck 1: A view from the bottom ; Scaling Mount Planck 2: Base camp ; Scaling Mount Planck 3: Is that all there is? -- At sea in the depths. What is quantum theory? ; Total relativity: Mach 2004 ; Life's parameters. -- Once and future history. The Dirac equation ; Fermi and the elucidation of matter ; The standard model transcended ; Masses and molasses ; In search of symmetry lost ; From 'Not wrong' to (maybe) right ; Unification of couplings. -- Methods of our madness. The social benefit of high energy physics ; When words fail ; Why are there analogies between condensed matter and particle theory? ; The persistence of ether ; Reaching bottom, laying foundations. -- Inspired, irritated, inspired.

What did Bohr do? ; Dreams of a final theory ; Shadows of the mind ; The inflationary universe ; Is the sky made from Pi? -- Big ideas. Quantum field theory ; Some basic aspects of fractional quantum numbers. -- Grand occasions. From concept to reality to vision ; Nobel biography ; Asymptotic freedom: from paradox to paradigm ; Advice to students. -- Breaking into verse. Virtual particles ; Gluon rap ; Reply in sonnet form ; From beneath an e-avalanche ; Frog sonnet ; Archaeopteryx. -- Another dimension. Nobel blog: a year in the life.

Sommario/riassunto

Podcast of Frank Wilczek and Betsy Devine's interview with Steve Mirsky of Scientific American The fantastic reality that is modern physics is open for your exploration, guided by one of its primary architects and interpreters, Nobel Prize winner Frank Wilczek. Some jokes, some poems, and extracts from wife Betsy Devine's sparkling chronicle of what it's like to live through a Nobel Prize provide easy entertainment. There's also some history, some philosophy, some exposition of frontier science, and some frontier science, for your lasting edification. 49 pieces, including many from Wilczek's awa
