1. Record Nr. UNINA9910699502503321

Autore	Prosser William H
Titolo	Distributed impact detector system (DIDS) health monitoring system evaluation [[electronic resource] /] / William H. Prosser, Eric I. Madaras
Pubbl/distr/stampa	Hampton, Va. : , : National Aeronautics and Space Administration, Langley Research Center, , [2010]
Descrizione fisica	1 online resource (34 pages) : illustrations
Collana	NASA TM- ; ; 2010-216694
Altri autori (Persone)	MadarasEric I (Eric Irvine)
Soggetti	Space debris Micrometeoroids Damage Systems health monitoring Detection Large space structures Thermal protection
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from title screen (viewed on Oct. 29, 2010). "May 2010." "NESC-RP-07-035."
Nota di bibliografia	Includes bibliographical references (pages 11-12).

2. Record Nr. UNINA9910437588003321

Titolo	Computer Algebra in Quantum Field Theory : Integration, Summation and Special Functions / / edited by Carsten Schneider, Johannes Blümlein
Pubbl/distr/stampa	Vienna : , : Springer Vienna : , : Imprint : Springer, , 2013
ISBN	3-7091-1616-3
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (422 p.)
Collana	Texts & Monographs in Symbolic Computation, A Series of the Research Institute for Symbolic Computation, Johannes Kepler University, Linz, Austria, , 0943-853X
Disciplina	530.1430285
Soggetti	Particles (Nuclear physics) Quantum field theory Mathematical physics String models Functions, Special Computer science—Mathematics Elementary Particles, Quantum Field Theory Mathematical Physics Quantum Field Theories, String Theory Special Functions Symbolic and Algebraic Manipulation
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 and index.
Nota di contenuto	Harmonic sums, polylogarithms, special numbers, and their generalizations -- Multiple Zeta values and modular forms in quantum field theory -- Computer-assisted proofs of some identities for Bessel functions of fractional order -- Conformal methods for massless Feynman integrals and large Nf methods -- The holonomic toolkit -- Orthogonal polynomials -- Creative telescoping for holonomic functions -- Renormalization and Mellin transforms -- Relativistic Coulomb integrals and Zeilberger's holonomic systems approach -- Hypergeometric functions in Mathematica -- Solving linear recurrence equations with polynomial coefficients -- Generalization of Risch's

algorithms to special functions -- Multiple hypergeometric series -- Appell series and beyond -- Simplifying multiple sums in difference fields -- Potential of FORM 4.0 -- Feynman graphs.

Sommario/riassunto

The book focuses on advanced computer algebra methods and special functions that have striking applications in the context of quantum field theory. It presents the state of the art and new methods for (infinite) multiple sums, multiple integrals, in particular Feynman integrals, difference and differential equations in the format of survey articles. The presented techniques emerge from interdisciplinary fields: mathematics, computer science and theoretical physics; the articles are written by mathematicians and physicists with the goal that both groups can learn from the other field, including most recent developments. Besides that, the collection of articles also serves as an up-to-date handbook of available algorithms/software that are commonly used or might be useful in the fields of mathematics, physics or other sciences.