1. Record Nr. UNISA996466367803316 Autore Gerhard Jürgen Titolo Modular Algorithms in Symbolic Summation and Symbolic Integration [[electronic resource] /] / by Jürgen Gerhard Pubbl/distr/stampa Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, , 2005 **ISBN** 3-540-30137-2 Edizione [1st ed. 2005.] Descrizione fisica 1 online resource (XVI, 228 p.) Collana Lecture Notes in Computer Science, , 0302-9743;; 3218 Classificazione 54.10 005.1 Disciplina Soggetti Algorithms Numerical analysis Computer science—Mathematics Computer mathematics Algorithm Analysis and Problem Complexity **Numeric Computing** Symbolic and Algebraic Manipulation Computational Science and Engineering Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph Includes bibliographical references (p. [207]-216) and index. Nota di bibliografia Nota di contenuto 1. Introduction -- 2. Overview -- 3. Technical Prerequisites -- 4. Change of Basis -- 5. Modular Squarefree and Greatest Factorial Factorization -- 6. Modular Hermite Integration -- 7. Computing All Integral Roots of the Resultant -- 8. Modular Algorithms for the Gosper-Petkovšek Form -- 9. Polynomial Solutions of Linear First Order Equations -- 10. Modular Gosper and Almkvist & Zeilberger Algorithms. Sommario/riassunto This work brings together two streams in computer algebra: symbolic integration and summation on the one hand, and fast algorithmics on the other hand. In many algorithmically oriented areas of computer science, theanalysisof- gorithms-placedintothe limelightbyDonKnuth' stalkat the 1970ICM -provides a crystal-clear criterion for success. The researcher who designs an algorithmthat is faster (asymptotically, in the worst case) than any previous method receives instant grati?cation:

her result will be recognized as valuable. Alas, the downside is that

such results come along quite infrequently, despite our best efforts. An alternative evaluation method is to run a new algorithm on examples; this has its obvious problems, but is sometimes the best we can do. George Collins, one of the fathers of computer algebra and a great experimenter, wrote in 1969: "I think this demonstrates again that a simple analysis is often more revealing than a ream of empirical data (although both are important). "Within computer algebra, some areas have traditionally followed the former methodology, notably some parts of polynomial algebra and linear algebra. Other areas, such as polynomial system solving, have not yet been amenable to this - proach. The usual "input size" parameters of computer science seem inadequate, and although some natural "geometric" parameters have been identi?ed (solution dimension, regularity), not all (potential) major progress can be expressed in this framework. Symbolic integration and summation have been in a similar state.

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Autore Evans Ben <1976->

Titolo NASA's Voyager missions: exploring the Outer Solar system and

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Nota di contenuto Chapter 1. Wanderers Chapter 2. Chance of Three Lifetimes Chapter 3.

Into the Realm of Jove Chapter 4. Lord of the Rings Chapter 5. Bullseye Uranus Chapter 6. Wild Neptune Chapter 7. A Message from Humanity

Sommario/riassunto 2022 marks the 45th anniversary of the Voyager probe launches.

Launched into space in 1977, these twin probes explored the farthest reaches of the Solar System before venturing on a one-way journey

beyond, all the while testing the bounds of science, robotic exploration and our collective imagination. This heavily revised commemorative book takes a comprehensive look at their incredible achievements. future potential and overall legacy. Chronicled herein is an epic journey to unveil the mysterious outer reaches of the Solar System for the first time. The book recounts the Voyagers travels through the asteroid belt and past the giant gaseous planets Jupiter and Saturn, as well as Voyager 2s forays near the distant ice giants Uranus and Neptune. Each chapter details in full the game-changing scientific data and glorious imagery they sent back to Earth. This new edition incorporates all the new data we have learned in the nearly 20 years since its original publication, discussing how the knowledge first gleaned with Voyager has been built upon in subsequent decades by Cassini, Juno and New Horizons. The Voyager probes captured imaginations around the world; now is an opportune time to reflect on their unparalleled guest across the edges of the Solar System and the enigmatic interstellar medium beyond

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Autore Barbara Sladonja

Titolo The Mediterranean Genetic Code: Grapevine and Olive / / edited by

Danijela Poljuha and Barbara Sladonja

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Soggetti Genetic Code

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Sommario/riassunto The book ""The Mediterranean Genetic Code - Grapevine and Olive""

collects relevant papers documenting the results of research in grapevine and olive genetics, as a contribution to overall compendium of the existing biodiversity for both species with insight into molecular mechanisms responsible for their desirable and important traits. Book encompasses a broad and diverse palette of different topics related to grapevine and olive genetics, with no areal or any other strict limitation, keeping the title as a loose frame for borderless science. Divided in four sections it takes us for a ""molecular walk"" through different levels of genetic variability, uncovering the remains of still existing wild populations and treasures of neglected local peculiarities, weaving the network from plant to product and back to the beginning, to the hearth of all questions asked and answers hidden in genetics.