Record Nr. UNISA996465624703316 Design and Implementation of Symbolic Computation Systems **Titolo** [[electronic resource]]: International Symposium DISCO '90, Capri, Italy, April 10-12, 1990. Proceedings / / edited by Alfonso Miola Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, Pubbl/distr/stampa 1990 **ISBN** 3-540-47014-X Edizione [1st ed. 1990.] Descrizione fisica 1 online resource (XII, 286 p.) Lecture Notes in Computer Science, , 0302-9743 ; ; 429 Collana 004.2/1 Disciplina Soggetti Computers Computer programming Software engineering Programming languages (Electronic computers) Artificial intelligence Computer graphics Theory of Computation **Programming Techniques** Software Engineering Programming Languages, Compilers, Interpreters Artificial Intelligence Computer Graphics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph Nota di contenuto Current problems in computer algebra systems design -- The design of cayley — a language for modern algebra -- CoCoA: A user-friendly system for commutative algebra -- The design of SISYPHE: a system for doing symbolic and algebraic computations -- Scratchpad's view of algebra I: Basic commutative algebra -- Design issues for a computed-

aided environment for constructive mathematics -- Efficient type

symbolic computation systems analysis of an example -- The

inference and coercion in computer algebra -- Abstract specification of mathematical structures and methods -- Programming paradigms for

computation of Gröbner bases on a shared memory multiprocessor --A theory for program and data type specification -- Context induction: A proof principle for behavioural abstractions -- Completion modulo associativity, commutativity and identity (AC1) -- Polymorphic type checking with subtypes in Prolog -- On the power of subsumption and context checks -- Putting algebraic components together: A dependent type approach -- The use of proof plans in formal methods -- A prolog technology theorem prover: A new exposition and implementation in Prolog -- Parametric queries, linear constraints and variable elimination -- AC-unification race: The system solving approach and its implementation -- Heuristical criteria in refutational theorem proving -- Requirements for standards in knowledge base systems --Reconciling symbolic and numeric computation in a practical setting --The design and specification of the ASSPEGIQUE database -- A functional and logic language with polymorphic types -- Graphical object oriented executable specification for an automation oriented paradigm of software development -- Building graphic user interfaces for computer algebra systems -- A system independent graphing package for mathematical functions -- A model of interaction for graphical systems -- Praxis: A rule-based expert system for MACSYMA -- Will DELiA grow into an expert system? -- The GANITH algebraic geometry toolkit -- Mas Modula-2 algebra system -- Prototypes for the automatic translation of computer algebra languages -- The implementation of A PC-based list processor for symbolic computation -- Implementation of the symbol analytic transformations language FLAC -- Design and development of ENprover, an automated theorem proving system based on EN-strategy -- Towards a logic language: An object-oriented implementation of the connection method --Suggestions for a friendlier user interface.

Sommario/riassunto

The growing importance of the systems for symbolic computation has greatly influenced the decision of organizing DISCO '90 which is short for International Symposium on Design and Implementation of Symbolic Computation Systems. DISCO '90 focuses mainly on the most innovative methodological and technological aspects of hardware and software system design and implementation for Symbolic and Algebraic Computation, Automated Reasoning, Software Environments (Languages and User Interfaces), and Automatic Programming. In particular, it includes papers on the design and the development of significant running systems. The general objective of DISCO '90 is to present an up-to-date view of the field, while encouraging the scientific exchange among academic, industrial and user communities of the development of systems for symbolic computation.