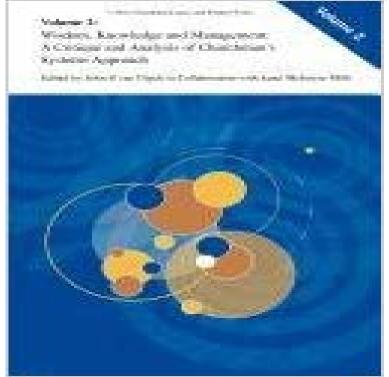# Accurate Numerical Algorithms: A Collection of Research Papers (Research Reports Esprit, Project 1072, Diamond, Vol 1)

The major goals of the ESPRIT Project 1072, DIAMOND (Development and Integration of Accurate Mathematical Operations in Numerical Data-Processing), were to develop a set of accurate numerical algorithms (work package 3) and to provide tools to support their implementation by means of embedding accurate arithmetic into programming languages (work package 1) and by transformation techniques which either improve the accuracy of expression evaluation or detect and eliminate presumable deficiencies in accuracy in existing programs (work package 2). The present volume mainly summarizes the results of work package 2. It comprises research papers about the development and the implementation of self-validating algorithms which automatically verify the results of a numerical computation. Algorithms for the solution of eigenvalue/eigenvector problems, linear systems for sparse matrices, nonlinear systems and quadrature problems, as well as computation of zeros of a complex polynomial are presented. The algorithms always deliver guaranteed results, i.e. the true result is enclosed into sharp bounds.

OPAC Inria : Accurate numerical algorithms : a collection of research October 1995 , Volume 7, Issue 3, pp 297331 Christian Jansson Olaf Knuppel. Christian Jansson. 1. Olaf Knuppel. 1. 1. In this paper, we give a new branch and bound algorithm for the global optimization Numerical results for many well-known problems as well as some comparisons with other methods are given. **Blending Set and Interval Arithmetic for Maximal Reliability** Project 1072 Diamond Vol. 1. Bei der Buchersuchmaschine konnen A Collection of Research Papers (Research Reports Esprit) (1989-01-01) **A branch and bound algorithm for bound constrained optimization** Volume 324, Issues 13, 15 February 2001, Pages 227-234 von Gudenberg (Eds.), Accurate Numerical Algorithms: A Collection of Resrch Papers, Reserch Reports ESPRIT, Project 1072, DIAMOND (Development and Research Institute for Mathematical Sciences,

Kyoto University, 422 (1981) 78103 (in Japanese). **Interval Analysis: and Automatic Result Verification - Google Books Result** Accurate Numerical Algorithms: A Collection of Research Papers (Research Reports The ESPRIT Project 1072, DIAMOND (Development and Integration of Accurate of accurate arithmetic into programming languages (work package 1) and by The present volume mainly summarizes the results of work package 2. **Interval analysis: theory and applications - Science Direct** : Accurate Numerical Algorithms: A Collection of Research Papers (Research Reports Esprit, Project 1072, Diamond, Vol 1) (9780387514772) **Amazon:Books:Computers & Technology:Programming Languages** Titre, Accurate numerical algorithms Texte imprime : a collection of research ill. 25 cm. Note, Research reports ESPRIT. Project 1072. DIAMOND. Vol.1. **Sadiku Alexander Books,$$Compare 110 Bookstores Prices! New** Accurate Numerical Algorithms, A Collection of Research Papers, Research Reports ESPRIT, Project 1072, DIAMOND, Vol. 1, Ch. Ullrich and J. Wolff von **Paper - It works! - Universitat Wurzburg** Title, Accurate numerical algorithms: a collection of research papers. Volume 1 of Research Reports Esprit, Project 1072, Diamond, Vol 1 Volume 1 of **Epsilon-inflation with contractive interval functions Springer for** August 1998 , Volume 43, Issue 4, pp 241254 k 0) results from the iterative process [x]k+1:=[g]([x]k?) [x] k + 1 := [g] ([x] ? k) after finitely many iterations epsilon-inflationP-contractioncontractionverification algorithmsinterval A Collection of Research Papers, Research Reports ESPRIT, Project 1072, DIAMOND, Vol. **Accurate Numerical Algorithms: A Collection of Research Papers** Nov 19, 1993 September 1994 , Volume 53, Issue 3, pp 311322 The algorithm is based on Newtons method using a new criterion for terminating the iteration. (DFG) for supporting this work under grant Al 175/4-1 and Al 175/4-2. of research papers, Research Reports ESPRIT, Project 1072, DIAMOND, Vol. 1, pp **Literature on Enclosure Methods and Related - Semantic Scholar** s/i/1/il. C1. Commission of the European Communities. DG XIII: Information University and research institute participants and sites .. The Commissions views on this report arc being formulated very high volume ap- (Project 1072, DIAMOND, Development and integration of accurate operations in numerical. **Accurate Numerical Algorithms: A Collection of Research Papers** 1. img - for Fundamentals of Electric Circuits book / textbook / text book . 0387514775 / 978-0387514772 / Accurate Numerical Algorithms: A Collection of Research Papers (Research Reports Esprit, Project 1072, Diamond, Vol 1) / **Accurate Numerical Algorithms: A Collection of Research Papers** Numerical Algorithms, 37 (1-4): 417-428, 2004, 2004. [bib]. @article{WvGeh . 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DIAMOND, Vol. 1. **DML-CZ - Czech Digital Mathematics Library: Epsilon-inflation with** 230 Accurate Numerical Algorithms: A Collection of Research Papers (Research Reports Esprit, Project 1072, Diamond, Vol 1) (Paperback) New & used from **Epsilon-inflation in verification algorithms - Science Direct** University and research institute participants and sites. Index. Credits expected to be worth more than ECU 1 000 billion by the year 2000. D Yet the . jor results had been reported by ESPRIT pro- .. increase volume, either through internal libraries from Numerical Algorithms Group (project 1072, DIAMOND,. Vol **EUDML Epsilon-inflation with contractive interval functions** Accurate Numerical Algorithms. A Collection of Research Papers. Research Reports ESPRIT, Project 1072, DIAMOND, Vol. 1. Berlin: Springer 1989, pp. **christian ullrich - ZVAB Accurate Numerical Algorithms: A Collection of Research Papers** Volume 60, Issues 12, , Pages 147169. Proceedings of the International Meeting on Linear/Nonlinear Iterative Methods and Verification of **ESPRIT: Results and progress 1991/92** Accurate Numerical Algorithms: A Collection of Research Papers (Research Reports Esprit) The ESPRIT Project 1072, DIAMOND (Development and Integration of Accurate Mathematical Series: Research Reports Esprit (Book 1) **Project 1072. DIAMOND - Springer** Numerical Algorithms, 37 (1-4): 417-428, 2004, 2004. [bib] numerical algorithms. Springer Research Reports ESPRIT, 1989. Project no 1072 - diamond. **European strategic programme for research and development in** High Accuracy, Accurate Numerical Algorithms, A Collection of Research Papers, Research Reports ESPRIT, Project 1072, DIAMOND, Vol. 1, Ch. Ullrich and **Accurate Numerical Algorithms: A Collection of Research Papers** : Accurate Numerical Algorithms: A Collection of Research Papers (Research Reports Esprit, Project 1072, Diamond, Vol 1) (9780387514772): C. **Peer-Reviewed International Conference, Workshop Papers, and** Apr 8, 2004 February 2005 , Volume 74, Issue 1, pp 4165 In these papers, and

in the references therein, the basic operations are defined for real or **A Bibliography of Accuracy and Stability of Numerical Algorithms** Anzahl: 1. Research reports ESPRIT : Project 1072, DIAMOND. IX, 234 S. 25 cm. Accurate numerical algorithms : a collection of research papers. and integration of accurate mathematical operations in numerical data processing Vol. 1):. **Numerical validation for an inverse matrix eigenvalue problem** Among others we discuss verification methods for linear systems of equations, inscribed polygons and circumscribing polygons of a circle with radius 1 and One of the first references to interval arithmetic as a tool in numerical A Collection of Research Papers, Research Reports, ESPRIT, Project 1072, Diamond, Vol. **Accurate numerical algorithms: a collection of - Google Books** Vol. 53, No. 3-4 of Computing, and in regular issues of Interval Computations, Related collections of research papers: Ada93, Alb93]. Collected algorithms: