1. Record Nr. UNISA996466079803316 Mathematics of Program Construction [[electronic resource]]: Second **Titolo** International Conference, Oxford, U.K., June 29 - July 3, 1992. Proceedings / / edited by Richard S. Bird, C.Carroll Morgan, James C.P. Woodcock Pubbl/distr/stampa Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, 1993 **ISBN** 3-540-47613-X Edizione [1st ed. 1993.] Descrizione fisica 1 online resource (VIII, 380 p.) Collana Lecture Notes in Computer Science, , 0302-9743;; 669 Disciplina 005.1/01/5113 Soggetti Software engineering Computers Applied mathematics **Engineering mathematics** Computer programming Algorithms Software Engineering/Programming and Operating Systems Theory of Computation **Applications of Mathematics Programming Techniques** Software Engineering Algorithm Analysis and Problem Complexity Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph Nota di contenuto Extended calculus of constructions as a specification language -- On the economy of doing Mathematics -- Pretty-printing: An exercise in functional programming -- True concurrency: Theory and practice --Programming for behaviour -- Calculating a path algorithm -- Solving optimisation problems with catamorphisms -- A time-interval calculus -- Conservative fixpoint functions on a graph -- An algebraic

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Sommario/riassunto

Not very long ago, the uninhibited use of mathematics in the development of software was regarded as something for academics alone. Today, there is moreand more interest from industry in formal methods based on mathematics. This interest has come from the success of a number of experiments on real industrial applications. Thus, there is not only a belief, but also evidence, that the study of computer programs as mathematical objects leads to more efficient methods for constructing them. The papers in this volume were presented at the Second International Conference on the Mathematics of Program Construction, held at St. Catherine's College, Oxford, June 29 - July 3, 1992. The conference was organized by the Oxford University Programming Research Group, and continued the theme set by the first - the use of crisp, clear mathematics in the discovery and design of algorithms. The second conference gives evidence of the ever-widening impact of precise mathematical methods in program development. There are papers applying mathematics not only to sequential programs but also to parallel and on-current applications, real-time and reactive systems, and to designs realised directly in hardware. The volume includes 5 invited papers and 19 contributed papers.