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Category Theory and Computer Science - Eugenio Moggi 1997-08-20
This book constitutes the refereed proceedings of the 7th International Conference on Category Theory and Computer Science, CTCS'97, held in Santa Margheria Ligure, Italy, in September 1997. Category theory attracts interest in the theoretical computer science community because of its ability to establish connections between different areas in computer science and mathematics and to provide a few generic principles for organizing mathematical theories. This book presents a selection of 15 revised full papers together with three invited contributions. The topics addressed include reasoning principles for types, rewriting, program semantics, and structuring of logical systems.
Categories for Types - Roy L. Crole 1993
This textbook explains the basic principles of categorical type theory and the techniques used to derive categorical semantics for specific type theories. It introduces the reader to ordered set theory, lattices and domains, and this material provides plenty of examples for an introduction to category theory, which covers categories, functors, natural transformations, the Yoneda lemma, cartesian closed categories, limits, adjunctions and indexed categories. Four kinds of formal system are considered in detail, namely algebraic, functional, polymorphic functional, and higher order polymorphic functional type theory. For each of these the categorical semantics are derived and results about the type systems are proved categorically. Issues of soundness and completeness are also considered. Aimed at advanced undergraduates and beginning graduates, this book will be of interest to theoretical computer scientists, logicians and mathematicians specializing in category theory.
Mathematical Foundations of Programming Semantics - Stephen Brookes 1994-05-20
This volume is the proceedings of the Ninth International Conference on the Mathematical Foundations of Programming Semantics, held in New Orleans in April 1993. The focus of the conference series is the semantics of programming languages and the mathematics which supports the study of the semantics. The semantics is basically denotation. The mathematics may be classified as category theory, lattice theory, or logic. Recent conferences and workshops have increasingly emphasized applications of the semantics and mathematics. The study of the semantics develops with the mathematics and the mathematics is inspired by the applications in semantics. The volume presents current research in denotational semantics and applications of category theory, logic, and lattice theory to semantics.
Basic Category Theory - Tom Leinster 2014-07-24
A short introduction ideal for students learning category theory for the first time.
Category Theory and Computer Science - 1995

Advances in Software Science and Technology - Teruo Hikita 2014-12-01
Advances in Software Science and Technology, Volume 4 provides information pertinent to the

advancement of the science and technology of computer software. This book discusses the various applications for computer systems. Organized into two parts encompassing 10 chapters, this volume begins with an overview of the historical survey of programming languages for vector/parallel computers in Japan and describes compiling methods for supercomputers in Japan. This text then explains the model of a Japanese software factory, which is presented by the logical configuration that has been satisfied by the semantics of software engineering. Other chapters consider fluent joint as an algorithm that operates on relations organized as multidimensional linear hash files. The final chapter deals with the rules for submission of English papers that will be published, which includes papers that are reports of academic research by members of the Society. This book is a valuable resource for scientists, software engineers, and research workers.

Category Theory 1991: Proceedings of the 1991 Summer Category Theory Meeting, Montreal, Canada - Robert Andrew George Seely 1992
Representing this diversity of the field, this book contains the proceedings of an international conference on category theory. The subjects covered here range from topology and geometry to logic and theoretical computer science, from homotopy to braids and conformal field theory. Although generally aimed at experts in the various fields represented, the book will also provide an excellent opportunity for nonexperts to get a feel for the diversity of current applications of category theory.

Deductive Program Design - Manfred Broy 1996-06-18
Advanced research on the description of distributed systems and on design calculi for software and hardware is presented in this volume. Distinguished researchers give an overview of the latest state of the art.

Category Theory and Computer Science - David H. Pitt 1991-08-21
The papers in this volume were presented at the fourth biennial Summer Conference on Category Theory and Computer Science, held in Paris, September 3-6, 1991. Category theory continues to be an important tool in foundationalstudies in

computer science. It has been widely applied by logicians to get concise interpretations of many logical concepts. Links between logic and computer science have been developed now for over twenty years, notably via the Curry-Howard isomorphism which identifies programs with proofs and types with propositions. The triangle category theory - logic - programming presents a rich world of interconnections. Topics covered in this volume include the following. Type theory: stratification of types and propositions can be discussed in a categorical setting. Domain theory: synthetic domain theory develops domain theory internally in the constructive universe of the effective topos. Linear logic: the reconstruction of logic based on propositions as resources leads to alternatives to traditional syntaxes. The proceedings of the previous three category theory conferences appear as Lecture Notes in Computer Science Volumes 240, 283 and 389.

Handbook of Spatial Logics - Marco Aiello 2007-09-04
The aim of this handbook is to create, for the first time, a systematic account of the field of spatial logic. The book comprises a general introduction, followed by fourteen chapters by invited authors. Each chapter provides a self-contained overview of its topic, describing the principal results obtained to date, explaining the methods used to obtain them, and listing the most important open problems. Jointly, these contributions constitute a comprehensive survey of this rapidly expanding subject.

Current Trends in Theoretical Computer Science - G Rozenberg 1993-06-29
The book is a very up-to-date collection of articles in theoretical computer science, written by leading authorities in the field. The topics range from algorithms and complexity to algebraic specifications, and from formal languages and language-theoretic modeling to computational geometry. The material is based on columns and articles that have appeared in the EATCS Bulletin during the past two to three years. Although very recent research is discussed, the largely informal style of writing makes the book accessible to readers with little or no previous knowledge of the topics. Contents:Computational Geometry (H Edelsbrunner et al.)Algebraic Specification (H

Ehrig et al.):On the Potential Role of Algebraic Specification within Computer Science (H Ehrig & P Pepper)Linking Schemas and Module Specifications: A Proposal (H Ehrig & M A Arbib)A Short Oxford Survey of Order Sorted Algebra (J Goguen & R Diaconescu)Logic in Computer Science (Y Gurevich et al.):On Kolmogorov Machines and Related IssuesTopoi and Computation (A Blass)Structural Complexity (J Hartmanis et al.):Gödel, von Neumann and the P = ? NP ProblemCounting Hierarchies: Polynomial Time and Constant Depth Circuits (E W Allender & K W Wagner)Formal Language Theory (A Salomaa et al.):Decidability in Finite AutomataParallel Communicating Grammar Systems (L Santean)and other papers Readership: Computer scientists, students and researchers. keywords:Theoretical Computer Science;Formal Methods;Algebraic Specification;Graph Transformation;Petri Net Technology;Integration;Consistency;Verification

Semantics of Programming Languages - Carl A. Gunter 1992
Semantics of Programming Languages exposes the basic motivations and philosophy underlying the applications of semantic techniques in computer science. It introduces the mathematical theory of programming languages with an emphasis on higher-order functions and type systems. Designed as a text for upper-level and graduate-level students, the mathematically sophisticated approach will also prove useful to professionals who want an easily referenced description of fundamental results and calculi. Basic connections between computational behavior, denotational semantics, and the equational logic of functional programs are thoroughly and rigorously developed. Topics covered include models of types, operational semantics, category theory, domain theory, fixed point (denotational). semantics, full abstraction and other semantic correspondence criteria, types and evaluation, type checking and inference, parametric polymorphism, and subtyping. All topics are treated clearly and in depth, with complete proofs for the major results and numerous exercises.

Conditional and Typed Rewriting Systems - Stephane Kaplan 1991-08-07
In recent years, extensions of rewriting techniques that go beyond the traditional untyped algebraic rewriting framework have been investigated and developed. Among these extensions, conditional and typed systems are particularly important, as are higher-order systems, graph rewriting systems, etc. The international CTRS (Conditional and Typed Rewriting Systems) workshops are intended to offer a forum for researchers on such extensions of rewriting techniques. This volume presents the proceedings of the second CTRS workshop, which contributed to discussion and evaluation of new directions of research. (The proceedings of the first CTRS workshop are in Lecture Notes in Computer Science, Vol. 308.) Several important directions for extensions of rewriting techniques were stressed, which are reflected in the organization of the chapters in this volume: - Theory of conditional and Horn clause systems, - Infinite terms, non-terminating systems, and termination, - Extension of Knuth-Bendix completion, - Combined systems, combined languages and modularity, - Architecture, compilers and parallel computation, - Basic frameworks for typed and order-sorted systems, - Extension of unification and narrowing techniques.

Domains and Lambda-Calculi - Roberto M. Amadio 1998-07-02
Graduate text on mathematical foundations of programming languages, and operational and denotational semantics.

Extensional Constructs in Intensional Type Theory - Martin Hofmann 2012-12-06
Extensional Constructs in Intensional Type Theory presents a novel approach to the treatment of equality in Martin-Loef type theory (a basis for important work in mechanised mathematics and program verification). Martin Hofmann attempts to reconcile the two different ways that type theories deal with identity types. The book will be of interest particularly to researchers with mainly theoretical interests and implementors of type theory based proof assistants, and also fourth year undergraduates who will find it useful as part of an advanced course on type theory.

Foundations of Software Science and Computation Structures - Furio Honsell 2007-12-03
ETAPS 2001 was the fourth instance of the European Joint Conferences on Theory and

Practice of Software. ETAPS is an annual federated conference that was established in 1998 by combining a number of existing and new conferences. This year it comprised ve conferences (FOSSACS, FASE, ESOP, CC, TACAS), ten satellite workshops (CMCS, ETI Day, JOSES, LDTA, MMAABS, PFM, RelMiS, UNIGRA, WADT, WTUML), seven invited lectures, a debate, and ten tutorials. The events that comprise ETAPS address various aspects of the system de- lopment process, including speci cation, design, implementation, analysis, and improvement. The languages, methodologies, and tools which support these - tivities are all well within its scope. Di erent blends of theory and practice are represented, with an inclination towards theory with a practical motivation on one hand and soundly-based practice on the other. Many of the issues involved in software design apply to systems in general, including hardware systems, and the emphasis on software is not intended to be exclusive.

Basic Category Theory for Computer Scientists - Benjamin C. Pierce 1991-08-07
Basic Category Theory for Computer Scientists provides a straightforward presentation of the basic constructions and terminology of category theory, including limits, functors, natural transformations, adjoints, and cartesian closed categories. Category theory is a branch of pure mathematics that is becoming an increasingly important tool in theoretical computer science, especially in programming language semantics, domain theory, and concurrency, where it is already a standard language of discourse. Assuming a minimum of mathematical preparation, Basic Category Theory for Computer Scientists provides a straightforward presentation of the basic constructions and terminology of category theory, including limits, functors, natural transformations, adjoints, and cartesian closed categories. Four case studies illustrate applications of category theory to programming language design, semantics, and the solution of recursive domain equations. A brief literature survey offers suggestions for further study in more advanced texts. Contents Tutorial • Applications • Further Reading

Algebraic Foundations of Systems Specification - Egidio Astesiano 2012-12-06
This IFIP report is a collection of fundamental, high-quality contributions on the algebraic foundations of system specification. The contributions cover and survey active topics and recent advances, and address such subjects as: the role of formal specification, algebraic preliminaries, partiality, institutions, specification semantics, structuring, refinement, specification languages, term rewriting, deduction and proof systems, object specification, concurrency, and the development process. The authors are well-known experts in the field, and the book is the result of IFIP WG 1.3 in cooperation with Esprit Basic Research WG COMPASS, and provides the foundations of the algebraic specification language CASL designed in the CoFI project. For students, researchers, and system developers.

The Formal Semantics of Programming Languages - Glynn Winskel 1993-02-05
The Formal Semantics of Programming Languages provides the basic mathematical techniques necessary for those who are beginning a study of the semantics and logics of programming languages. These techniques will allow students to invent, formalize, and justify rules with which to reason about a variety of programming languages. Although the treatment is elementary, several of the topics covered are drawn from recent research, including the vital area of concurency. The book contains many exercises ranging from simple to miniprojects.Starting with basic set theory, structural operational semantics is introduced as a way to define the meaning of programming languages along with associated proof techniques. Denotational and axiomatic semantics are illustrated on a simple language of while-programs, and fall proofs are given of the equivalence of the operational and denotational semantics and soundness and relative completeness of the axiomatic semantics. A proof of Godel's incompleteness theorem, which emphasizes the impossibility of achieving a fully complete axiomatic semantics, is included. It is supported by an appendix providing an introduction to the theory of computability based on while-programs. Following a presentation of domain theory, the semantics and methods of proof for several functional languages are treated. The simplest language is that of recursion equations with both call-by-value and

call-by-name evaluation. This work is extended to lan guages with higher and recursive types, including a treatment of the eager and lazy lambda-calculi. Throughout, the relationship between denotational and operational semantics is stressed, and the proofs of the correspondence between the operation and denotational semantics are provided. The treatment of recursive types - one of the more advanced parts of the book - relies on the use of information systems to represent domains. The book concludes with a chapter on parallel programming languages, accompanied by a discussion of methods for specifying and verifying nondeterministic and parallel programs.

Theorem Proving in Higher Order Logics - Richard J. Boulton 2003-06-30
This volume constitutes the proceedings of the 14th International Conference on Theorem Proving in Higher Order Logics (TPHOLs 2001) held 3–6 September 2001 in Edinburgh, Scotland. TPHOLs covers all aspects of theorem proving in higher order logics, as well as related topics in theorem proving and veri?cation. TPHOLs 2001 was collocated with the 11th Advanced Research Working Conference on Correct Hardware Design and Veri?cation Methods (CHARME 2001). This was held 4–7 September 2001 in nearby Livingston, Scotland at the Institute for System Level Integration, and a joint half-day session of talks was arranged for the 5th September in Edinburgh. An excursion to Traquair House and a banquet in the Playfair Library of Old College, University of Edinburgh were also jointly organized. The proceedings of CHARME 2001 have been p- lished as volume 2144 of Springer-Verlag's Lecture Notes in Computer Science series, with Tiziana Margaria and Tom Melham as editors. Each of the 47 papers submitted in the full research category was refereed by at least 3 reviewers who were selected by the Program Committee. Of these submissions, 23 were accepted for presentation at the conference and publication in this volume. In keeping with tradition, TPHOLs 2001 also o?ered a venue for the presentation of work in progress, where researchers invite discussion by means of a brief preliminary talk and then discuss their work at a poster session. A supplementary proceedings containing associated papers for work in progress was published by the Division of Informatics at the University of Edinburgh.

A Decade of Concurrency - J.W.de Bakker 1994-06-28
The REX School/Symposium "A Decade of Concurrency - Reflections and Perspectives" was the final event of a ten-year period of cooperation between three Dutch research groups working on the foundations of concurrency. Ever since its inception in 1983, the goal of the project has been to contribute to the cross-fertilization between formal methods from the fields of syntax, semantics, and proof theory, aimed at an improved understanding of the nature of parallel computing. The material presented in this volume was prepared by the lecturers (and their coauthors) after the meeting took place. In total, the volume constitutes a thorough state-of-the-art report of the research activities in concurrency.

Algebraic Methods in Semantics - Maurice Nivat 1985-12-05
This book, which contains contributions from leading researchers in France, USA and Great Britain, gives detailed accounts of a variety of methods for describing the semantics of programming languages, i.e. for attaching to programs mathematical objects that encompass their meaning. Consideration is given to both denotational semantics, where the meaning of a program is regarded as a function from inputs to outputs, and operational semantics, where the meaning includes the sequence of states or terms generated internally during the computation. The major problems considered include equivalence relations between operational and denotational semantics, rules for obtaining optimal computations (especially for nondeterministic programs), equivalence of programs, meaning-preserving transformations of programs and program proving by assertions. Such problems are discussed for a variety of programming languages and formalisms, and a wealth of mathematical tools is described.

Logic Colloquium '87 - H.-D. Ebbinghaus 2000-04-01
Fourteen papers presented at the 1987 European Summer Meeting of the Association for Symbolic Logic are collected in this volume. The main areas covered by the conference were

Logic, Set Theory, Recursion Theory, Model Theory, Logic for Computer Science and Semantics of Natural Languages.

Computational Science - ICCS 2007 - Yong Shi 2007-07-14
Part of a four-volume set, this book constitutes the refereed proceedings of the 7th International Conference on Computational Science, ICCS 2007, held in Beijing, China in May 2007. The papers cover a large volume of topics in computational science and related areas, from multiscale physics to wireless networks, and from graph theory to tools for program development.

Topology Via Logic - Steven Vickers 1996-08-22
Now in paperback, Topology via Logic is an advanced textbook on topology for computer scientists. Based on a course given by the author to postgraduate students of computer science at Imperial College, it has three unusual features. First, the introduction is from the locale viewpoint, motivated by the logic of finite observations: this provides a more direct approach than the traditional one based on abstracting properties of open sets in the real line. Second, the methods of locale theory are freely exploited. Third, there is substantial discussion of some computer science applications. Although books on topology aimed at mathematics exist, no book has been written specifically for computer scientists. As computer scientists become more aware of the mathematical foundations of their discipline, it is appropriate that such topics are presented in a form of direct relevance and applicability. This book goes some way towards bridging the gap.

Algebraic Methodology and Software Technology - Helene Kirchner 2002-08-26
This volume contains the proceedings of AMAST 2002, the 9th International Conference on Algebraic Methodology and Software Technology, held during September 9–13, 2002, in Saint-Gilles-les-Bains, R´eunion Island, France. The major goal of the AMAST conferences is to promote research that may lead to setting software technology on a ?rm mathematical basis. This goal is achieved through a large international cooperation with contributions from both academia and industry. Developing a software technology on a

mathematical basis p- duces software that is: (a) correct, and the correctness can be proved mathem- ically, (b) safe, so that it can be used in the implementation of critical systems, (c) portable, i. e. , independent of computing platforms and language generations, (d) evolutionary, i. e. , it is self-adaptable and evolves with the problem domain. All previous AMAST conferences, which were held in Iowa City (1989, 1991), Twente (1993), Montreal (1995), Munich (1996), Sydney (1997), Manaus (1999), and Iowa City (2000), made contributions to the AMAST goals by reporting and disseminating academic and industrial achievements within the AMAST area of interest. During these meetings, AMAST attracted an international following among researchers and practitioners interested in software technology, progr- ming methodology, and their algebraic, and logical foundations.

Algebraic Methodology and Software Technology - V.S. Alagar 1995-05-21
This volume constitutes the proceedings of the 4th International Conference on Algebraic Methodology and Software Technology, held in Montreal, Canada in July 1995. It includes full papers or extended abstracts of the invited talks, refereed selected contributions, and research prototype tools. The invited speakers are David Gries, Jeanette Wing, Dan Craigen, Ted Ralston, Ewa Orlowska, Krzysztof Apt, Joseph Goguen, and Rohit Parikh. The 29 refereed papers presented were selected from some 100 submissions; they are organized in sections on algebraic and logical foundations, concurrent and reactive systems, software technology, logic programming and databases.

Computer Science Logic - Mogens Nielsen 1998-05-20
This book constitutes the strictly refereed post-workshop proceedings of the 11th International Workshop on Computer Science Logic, CSL '97, held as the 1997 Annual Conference of the European Association on Computer Science Logic, EACSL, in Aarhus, Denmark, in August 1997. The volume presents 26 revised full papers selected after two rounds of refereeing from initially 92 submissions; also included are four invited papers. The book addresses all current aspects of computer science logics and its applications and thus presents the state of

the art in the area.

Joachim Lambek: The Interplay of Mathematics, Logic, and Linguistics -

Claudia Casadio 2021-04-21
This book is dedicated to the life and work of the mathematician Joachim Lambek (1922–2014). The editors gather together noted experts to discuss the state of the art of various of Lambek's works in logic, category theory, and linguistics and to celebrate his contributions to those areas over the course of his multifaceted career. After early work in combinatorics and elementary number theory, Lambek became a distinguished algebraist (notably in ring theory). In the 1960s, he began to work in category theory, categorical algebra, logic, proof theory, and foundations of computability. In a parallel development, beginning in the late 1950s and for the rest of his career, Lambek also worked extensively in mathematical linguistics and computational approaches to natural languages. He and his collaborators perfected production and type grammars for numerous natural languages. Lambek grammars form an early noncommutative precursor to Girard's linear logic. In a surprising development (2000), he introduced a novel and deeper algebraic framework (which he called pregroup grammars) for analyzing natural language, along with algebraic, higher category, and proof-theoretic semantics. This book is of interest to mathematicians, logicians, linguists, and computer scientists.

Mathematical Foundations of Computer Science 1996 - Symposium on Mathematical Foundations of Computer Science (1972-) 199 1996-08-07
This book constitutes the refereed proceedings of the 21st International Symposium on Mathematical Foundations of Computer Science, MFCS '96, held in Crakow, Poland in September 1996. The volume presents 35 revised full papers selected from a total of 95 submissions together with 8 invited papers and 2 abstracts of invited talks. The papers included cover issues from the whole area of theoretical computer science, with a certain emphasis on mathematical and logical foundations. The 10 invited presentations are of particular value.

Multi-Agent Systems and Applications -

European Agent Systems Summer School 2001-06-20

This book presents selected tutorial lectures given at the summer school on Multi-Agent Systems and Their Applications held in Prague, Czech Republic, in July 2001 under the sponsorship of ECCAI and Agent Link. The 20 lectures by leading researchers in the field presented in the book give a competent state-of-the-art account of research and development in the field of multi-agent systems and advanced applications. The book offers parts on foundations of MAS; social behaviour, meta-reasoning, and learning; and applications.

Category Theory - Aurelio Carboni 2006-11-14
With one exception, these papers are original and fully refereed research articles on various applications of Category Theory to Algebraic Topology, Logic and Computer Science. The exception is an outstanding and lengthy survey paper by Joyal/Street (80 pp) on a growing subject: it gives an account of classical Tannaka duality in such a way as to be accessible to the general mathematical reader, and to provide a key for entry to more recent developments and quantum groups. No expertise in either representation theory or category theory is assumed. Topics such as the Fourier cotransform, Tannaka duality for homogeneous spaces, braided tensor categories, Yang-Baxter operators, Knot invariants and quantum groups are introduced and studies. From the Contents: P.J. Freyd: Algebraically complete categories.- J.M.E. Hyland: First steps in synthetic domain theory.- G. Janelidze, W. Tholen: How algebraic is the change-of-base functor?.- A. Joyal, R. Street: An introduction to Tannaka duality and quantum groups.- A. Joyal, M. Tierney: Strong stacks andclassifying spaces.- A. Kock: Algebras for the partial map classifier monad.- F.W. Lawvere: Intrinsic co-Heyting boundaries and the Leibniz rule in certain toposes.- S.H. Schanuel: Negative sets have Euler characteristic and dimension.-

Computer Science Logic - Dirk van Dalen 1997-06-18
The related fields of fractal image encoding and fractal image analysis have blossomed in recent years. This book, originating from a NATO Advanced Study Institute held in 1995, presents work by leading researchers. It is developing the subjects at an introductory level, but it also has some recent and exciting results in both fields.

The book contains a thorough discussion of fractal image compression and decompression, including both continuous and discrete formulations, vector space and hierarchical methods, and algorithmic optimizations. The book also discusses multifractal approaches to image analysis, segmentation, and recognition, including medical applications.

Logical Environments - Gerard Huet 1993-09-16
Proceedings of the second International Workshop on Logical Frameworks. The contributions are concerned with the application of logical reasoning and proof theory in computer science.

Foundations of Algebraic Specification and Formal Software Development - Donald Sannella 2012-01-05
This book provides foundations for software specification and formal software development from the perspective of work on algebraic specification, concentrating on developing basic concepts and studying their fundamental properties. These foundations are built on a solid mathematical basis, using elements of universal algebra, category theory and logic, and this mathematical toolbox provides a convenient language for precisely formulating the concepts involved in software specification and development. Once formally defined, these notions become subject to mathematical investigation, and this interplay between mathematics and software engineering yields results that are mathematically interesting, conceptually revealing, and practically useful. The theory presented by the authors has its origins in work on algebraic specifications that started in the early 1970s, and their treatment is comprehensive. This book contains five kinds of material: the requisite mathematical foundations; traditional algebraic specifications; elements of the theory of institutions; formal specification and development; and proof methods. While the book is self-contained, mathematical maturity and familiarity with the problems of software engineering is required; and in the examples that directly relate to programming, the authors assume acquaintance with the concepts of functional programming. The book will be of value to researchers and advanced graduate students in the areas of

programming and theoretical computer science.
Axiomatic Domain Theory in Categories of Partial Maps - Marcelo P. Fiore 2004-03-25
First systematic account of axiomatic categorical domain theory and functional programming.

Conditional Term Rewriting Systems - Michael Rusinowitch 1993-01-29
This volume contains the papers preesented at the Third International Workshop on Conditional Term Rewriting Systems, held in Pont- - Mousson, France, July 8-10, 1992. Topics covered include conditional rewriting and its applications to programming languages, specification languages, automated deduction, constrained rewriting, typed rewriting, higher-order rewriting, and graph rewriting. The volume contains 40 papers, including four invited talks: Algebraic semantics of rewriting terms and types, by K. Meinke; Generic induction proofs, by P. Padawitz; Conditional term rewriting and first-order theorem proving, by D. Plaisted; and Decidability of finiteness properties (abstract), by L. Pacholski. The first CTRS workshop was held at the University of Paris in 1987 and the second at Concordia University, Montreal, in 1990. Their proceddings are published as Lecture Notes in Computer Science Volumes 308 and 516 respectively.

Handbook of Proof Theory - S.R. Buss 1998-07-09
This volume contains articles covering a broad spectrum of proof theory, with an emphasis on its mathematical aspects. The articles should not only be interesting to specialists of proof theory, but should also be accessible to a diverse audience, including logicians, mathematicians, computer scientists and philosophers. Many of the central topics of proof theory have been included in a self-contained expository of articles, covered in great detail and depth. The chapters are arranged so that the two introductory articles come first; these are then followed by articles from core classical areas of proof theory; the handbook concludes with articles that deal with topics closely related to computer science.

Algebra, Meaning, and Computation - Kokichi Futatsugi 2006-06-22
This volume - honoring the computer science pioneer Joseph Goguen on his 65th Birthday - includes 32 refereed papers by leading

researchers in areas spanned by Goguen's work. The papers address a variety of topics from meaning, meta-logic, specification and composition, behavior and formal languages, as well as models, deduction, and computation, by key members of the research community in computer science and other fields connected with Joseph Goguen's work.

Handbook of Logic in Computer Science: Volume 5. Algebraic and Logical Structures - S. Abramsky 2001-01-25

This handbook volume covers fundamental topics of semantics in logic and computation. The chapters (some monographic in length), were written following years of co-ordination and follow a thematic point of view. The volume brings the reader up to front line research, and is indispensable to any serious worker in the areas.