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Series Editors

Gerhard Goos
GMD Forschungsstelle
Universität Karlsruhe
Vincenz-Priessnitz-Straße 1
W-7500 Karlsruhe, FRG

Juris Hartmanis
Department of Computer Science
Cornell University
Upson Hall
Ithaca, NY 14853, USA

Volume Editors

Stéphane Kaplan
Laboratoire de Recherche en Informatique, Université Paris-11
Centre d'Orsay, Bâtiment 490, F-91405 Orsay Cedex, France

Mitsuhiro Okada
Department of Computer Science, Concordia University
1455 de Maisonneuve Ouest, Montreal, Quebec H3G 1M8, Canada

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In Memoriam

Dr. Stéphane Kaplan

As this volume was going to press, we heard the very tragic news of the untimely passing of Stéphane Kaplan, co-editor of this volume. The death of this brilliant young scientist is a great loss to the theoretical computer science community.

Beyond other distinguished work in such domains as classical term rewriting, abstract datatypes, software development, and database theory, Stéphane played a most important role in the domain of this volume, conditional and typed rewriting systems. He introduced the notion of simplifying conditional rewriting systems, which has become a new research paradigm and already resulted in very rich research activities in the field. His pioneering work on negative conditions in conditional rewriting and on infinite terms have propelled further research by his colleagues.

His work exhibits the powerful potential of the use of extended framework of the traditional term rewriting theory, which gave birth to the spirit of the CTRS workshop series. Indeed it was he who conceived of the CTRS workshops and served as co-organizer of both the first and second meetings.

For me, his death represents not only the loss of an excellent research colleague but also of a close friend. His intelligent and friendly style of talking always pleased and delighted me. Many scenes of delightful conversation with Stéphane still remain clear in my mind.

July 1991

Mitsuhiro Okada
Co-editor and
Co-organizer of CTRS 90

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Preface

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.

The first CTRS workshop (focused on conditional rewriting systems) was held in July 1987 at Université de Paris XI in Orsay, France, and was very successful. (The proceedings of the first workshop are available as Vol. 308 of the Springer Lecture Notes in Computer Science.) To further research in these and related areas, the Second International Workshop was held June 11–14, 1990 at Concordia University in Montréal, Canada. Topics included the theory of conditional and typed rewriting and its application to programming languages, automated deduction, and other related extensions of rewriting techniques, such as graph rewriting, combinator based languages, and their application to parallel architectures, parallel computation models, and compilation techniques.

In particular, the second CTRS workshop contributed to discussion and evaluation of new directions of research. Through the presentation sessions and informal discussion sessions, several important directions for extensions of rewriting techniques were stressed, which are reflected in the organization of the chapters in this volume.

The program committee received 54 submissions in time; 26 papers were accepted as regular papers, and 11 others were also presented as short communication papers. 7 invited keynote lectures (by J. W. Klop and R. de Vrijer, H. Aida and J. Meseguer, L. Bachmair and H. Ganzinger, J. Hsiang, V. Breazu-Tannen and J. Gallier, A. R. Meyer, and J. L. Rémy) were also given. After the workshop, the program committee reevaluated the short paper presentations for inclusion in this volume. This volume contains 26 regular papers, 7 short papers, and 4 invited papers.

The workshop was co-sponsored by the Natural Science and Engineering Research Council of Canada, Centre de recherche informatique de Montréal and Concordia University. The third CTRS workshop is scheduled for 1992 in Nancy, France.

Concordia University
June 1991

Mitsuhiro Okada
Co-editor

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