

Dov M. Gabbay Rudolf Kruse
Andreas Nonnengart
Hans Jürgen Ohlbach (Eds.)

Qualitative and Quantitative Practical Reasoning

First International Joint Conference
on Qualitative and Quantitative Practical
Reasoning, ECSQARU-FAPR'97
Bad Honnef, Germany, June 9-12, 1997
Proceedings



Springer

Lecture Notes in Artificial Intelligence

1244

Subseries of Lecture Notes in Computer Science

Edited by J. G. Carbonell and J. Siekmann

Lecture Notes in Computer Science

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Volume Editors

Dov M. Gabbay

Hans Jürgen Ohlbach

Imperial College of Science, Technology and Medicine, Dept. of Computing
180 Queen's Gate, London SW7 2AZ, U.K.

E-mail: (dg/h.ohlbach)@doc.ic.ac.uk

Rudolf Kruse

Otto-von-Guericke-Universität, Fakultät für Informatik

Universitätsplatz 2, D-39106 Magdeburg, Germany

E-mail: kruse@iik.cs.uni-magdeburg.de

Andreas Nonnengart

Max-Planck-Institut für Informatik

Im Stadtwald, D-66123 Saarbrücken, Germany

E-mail: nonnenga@mpi-sb.mpg.de

Cataloging-in-Publication Data applied for

Die Deutsche Bibliothek - CIP-Einheitsaufnahme

Qualitative and quantitative practical reasoning : proceedings /
First International Joint Conference on Qualitative and Quantitative
Practical Reasoning, ECSQARU FAPR '97, Bad Honnef, Germany,
June 9 - 12, 1997. Dov Gabbay ... (ed.). - Berlin ; Heidelberg ; New
York ; Barcelona ; Budapest ; Hong Kong ; London ; Milan ; Paris ;
Santa Clara ; Singapore ; Tokyo : Springer, 1997
(Lecture notes in computer science ; Vol. 1244 : Lecture notes in
artificial intelligence)
ISBN 3-540-63095-3

CR Subject Classification (1991): I.2, F4.1

ISBN 3-540-63095-3 Springer-Verlag Berlin Heidelberg New York

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Printed in Germany

Typesetting: Camera ready by author

SPIN 10550340 06/3142 - 5 4 3 2 1 0 Printed on acid-free paper

Preface

It has become apparent in the last decades that human practical reasoning demands more than traditional deductive logic can offer. From both a philosophical and an engineering perspective the analysis and mechanisation of human practical reasoning requires a subtle understanding of pragmatics, dialectics, and linguistics, even psychology. Philosophers, software engineers, and AI researchers have similar ambitions in this respect; they all try to deepen our understanding of human reasoning and argumentation.

Various aspects of human practical reasoning have resulted in the development of non-monotonic logics, default reasoning, modal logics, belief function theory, Bayesian networks, fuzzy logic, possibility theory, and user modelling approaches, to name a few. These are new and active areas of research with many practical applications and many interesting, as yet unsolved, theoretical problems.

This volume contains the accepted and the invited papers for the ECSQARU/-FAPR '97, the first international joint conference on quantitative and qualitative practical reasoning.

The three predecessors of ECSQARU '97 were sponsored and organized by the consortium of DRUMS (Defeasible Reasoning and Uncertainty Management Systems, ESPRIT III BRA 6156). The goal of this project, which involved 21 European universities and research organizations, was to develop techniques in the fields of belief change, non-monotonic deduction, inconsistency in reasoning, abduction, efficient inference algorithms, and dynamic reasoning with partial models. FAPR '96 was sponsored by MEDLAR, the European project on practical reasoning, which involved 15 major European groups in mechanised deduction in qualitative practical reasoning.

The purpose of the ECSQARU/FAPR is to introduce these communities to each other, compare the current state of research, and make research available to all researchers involved.

This year particular attention was directed to special tutorials and invited sessions which were organised by leading researchers from the “quantitative” and the “qualitative communities” respectively.

We are indebted to the program committee for their effort and thought in organizing the program, to the invited speakers, and to the presenters of the tutorials. Moreover, we gratefully acknowledge the contribution of the many referees who were involved in the reviewing process. Special thanks go to Christine Harms who ensured that the event ran smoothly.

March 1997

Dov M. Gabbay
Rudolf Kruse
Andreas Nonnengart
Hans Jürgen Ohlbach

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