

Preface

International Workshops on Qualitative Reasoning (QR) provide an annual international forum for the presentation and discussion of the latest scientific and technical results, both as regards methods for qualitative reasoning about the properties of incompletely specified systems, and as regards their potential application to real-world problems. This volume contains the proceedings of the Eleventh Workshop (QR '97), which follows a sequence of workshops started in Urbana-Champaign in 1987.

QR is a promising research sub-field of Artificial Intelligence (AI). However, as its prime focus is on modelling, it is intrinsically interdisciplinary. Therefore, in our opinion, it should not be constrained to the strict boundaries of AI, but rather it should interact intensively with those disciplines which have traditionally been pre-eminently devoted to modelling methodologies. The evolution of the field to increasingly sophisticated methods and techniques, along with their application to increasingly complex domains, render such interaction inevitable. This year's workshop breaks with the tradition in that it has been organized by an institution whose main focus is quantitative mathematical modelling in the domain of Applied Sciences, namely the Istituto di Analisi Numerica - CNR of Pavia, with the support of SIMAI (Italian Society for Applied and Industrial Mathematics). To establish a basis for fruitful interactions between the qualitative and quantitative modelling communities, we have scheduled, within the workshop program, a tutorial on System Identification. This is the first initiative of its type in QR workshops. We have tried to force the panel discussion in the same direction by inviting panelists from both the qualitative and the quantitative worlds to focus on problem domains for QR.

The high quality of the papers submitted to this workshop attests to the health and vitality of the field. Of the 53 submissions to the workshop this year, 22 papers were accepted for full paper presentations, and 17 papers were accepted for poster or short presentations. The Program Committee had a hard job evaluating the submissions since each one was independently reviewed at least twice within a very tight schedule. We believe that this volume is an important source of information on the currently active areas of research and on the promising new directions in QR. As a whole, it is our impression that the investment in QR workshops is paying dividends, and that the quality of the contributions is steadily increasing. We are confident that this steady increase will continue, and that QR '97 will contribute to the process.

Many people have contributed to the program, and to the organization and preparation of this workshop. I thank the authors, whose technical contributions are presented in these pages. The Program Committee members have my heartfelt gratitude for their efforts in reviewing papers and for their advice on planning matters. I especially thank the invited speakers from other research communities, namely G. De Nicolao, G. Fotia, M. Pagani, F. Suggi Liverani and G.L. Zanetti, for taking the time to tailor their talks to a QR audience.

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