

# Preface

This volume contains the papers presented at the 7th International Conference on Discovery Science (DS 2004) held at the University of Padova, Padova, Italy, during 2–5 October 2004.

The main objective of the discovery science (DS) conference series is to provide an open forum for intensive discussions and the exchange of new information among researchers working in the area of discovery science. It has become a good custom over the years that the DS conference is held in parallel with the International Conference on Algorithmic Learning Theory (ALT). This co-location has been valuable for the DS conference in order to enjoy synergy between conferences devoted to the same objective of computational discovery but from different aspects. Continuing the good tradition, DS 2004 was co-located with the 15th ALT conference (ALT 2004) and was followed by the 11th Symposium on String Processing and Information Retrieval (SPIRE 2004). The agglomeration of the three international conferences together with the satellite meetings was called Dialogues 2004, in which we enjoyed fruitful interaction among researchers and practitioners working in various fields of computational discovery. The proceedings of ALT 2004 and SPIRE 2004 were published as volume 3244 of the LNAI series and volume 3246 of the LNCS series, respectively.

The DS conference series has been supervised by the international steering committee chaired by Hiroshi Motoda (Osaka University, Japan). The other members are Alberto Apostolico (University of Padova, Italy and Purdue University, USA), Setsuo Arikawa (Kyushu University, Japan), Achim Hoffmann (UNSW, Australia), Klaus P. Jantke (DFKI, Germany), Masahiko Sato (Kyoto University, Japan), Ayumi Shinohara (Kyushu University, Japan), Carl H. Smith (University of Maryland, College Park, USA), and Thomas Zeugmann (Hokkaido University, Japan).

In response to the call for papers 80 submissions were received. The program committee selected 20 submissions as long papers and 20 submissions as regular papers, of which 19 were submitted for publication. This selection was based on clarity, significance, and originality, as well as relevance to the field of discovery science. This volume consists of two parts. The first part contains the accepted long papers, and the second part contains the accepted regular papers.

We appreciate all individuals and institutions who contributed to the success of the conference: the authors of submitted papers, the invited speakers, the tutorial speakers, the steering committee members, the sponsors, and Springer. We are particularly grateful to the members of the program committee for spending their valuable time reviewing and evaluating the submissions and for participating in online discussions, ensuring that the presentations at the conference were of high technical quality. We are also grateful to the external additional referees for their considerable contribution to this process.

Last but not least, we express our deep gratitude to Alberto Apostolico, Massimo Melucci, Angela Visco, and the Department of Information Engineering of the University of Padova for their local arrangement of Dialogues 2004.

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