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Preface

This volume contains the papers presented at the 12th Annual Conference on Algorithmic Learning Theory (ALT 2001), which was held in Washington DC, USA, during November 25–28, 2001. The main objective of the conference is to provide an inter-disciplinary forum for the discussion of theoretical foundations of machine learning, as well as their relevance to practical applications. The conference was co-located with the Fourth International Conference on Discovery Science (DS 2001).

The volume includes 21 contributed papers. These papers were selected by the program committee from 42 submissions based on clarity, significance, originality, and relevance to theory and practice of machine learning.

Additionally, the volume contains the invited talks of ALT 2001 presented by Dana Angluin of Yale University, USA, Paul R. Cohen of the University of Massachusetts at Amherst, USA, and the joint invited talk for ALT 2001 and DS 2001 presented by Setsuo Arikawa of Kyushu University, Japan. Furthermore, this volume includes abstracts of the invited talks for DS 2001 presented by Lindley Darden and Ben Shneiderman both of the University of Maryland at College Park, USA. The complete versions of these papers are published in the DS 2001 proceedings (Lecture Notes in Artificial Intelligence Vol. 2226).

ALT has been awarding the *E Mark Gold Award* for the most outstanding paper by a student author since 1999. This year the award was given to *Ke Yang* for his paper "On Learning Correlated Boolean Functions Using Statistical Queries."

This conference was the 12th in a series of annual conferences established in 1990. Continuation of the ALT series is supervised by its steering committee consisting of Naoki Abe (IBM Thomas J. Watson Research Center, Yorktown, USA), Peter Bartlett (Australian National Univ.), Klaus P. Jantke (DFKI, Germany), Roni Khardon (Tufts University, USA), Phil Long (National Univ. of Singapore), Heikki Mannila (Nokia Research Center, USA), Akira Maruoka (Tohoku Univ., Sendai, Japan), Luc De Raedt (Albert-Ludwigs-Univ., Freiburg, Germany), Takeshi Shinohara (Kyushu Inst. of Technology, Japan), Osamu Watanabe (Tokyo Inst. of Technology, Japan), Arun Sharma (co-chair, Univ. of New South Wales, Australia), and Thomas Zeugmann (chair, Med. Univ. of Lübeck, Germany).

We would like to thank all individuals and institutions who contributed to the success of the conference: the authors for submitting papers, the invited speakers for accepting our invitation and lending us their insight into recent developments in their research areas, the sponsors, and Springer-Verlag.

We are particularly grateful to the program committee for their work in reviewing papers and participating in on-line discussions. We are also grateful to the external referees whose reviews made a considerable contribution to this process. The program committee consisted of:

Hiroki Arimura (Kyushu Univ., Japan)
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We are grateful to DS 2001 chairs Masahiko Sato (Kyoto Univ., Japan), Klaus P. Jantke (DFKI, Germany), and Ayumi Shinohara (Kyushu Univ., Japan) for their effort in coordinating with ALT 2001 and to Carl Smith of the University of Maryland at College Park for his work as the local arrangements chair for both conferences.

Finally, we would like to thank the National Science Foundation, the Office of Naval Research, Agilent Technologies, Avaya Labs, and the University of Maryland for their generous financial support for the conference.

September 2001

Naoki Abe
Roni Khardon
Thomas Zeugmann

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