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Preface

The proceedings of ECML/PKDD 2004 are published in two separate, albeit intertwined, volumes: the Proceedings of the 15th European Conference on Machine Learning (LNAI 3201) and the Proceedings of the 8th European Conferences on Principles and Practice of Knowledge Discovery in Databases (LNAI 3202). The two conferences were co-located in Pisa, Tuscany, Italy during September 20–24, 2004.

It was the fourth time in a row that ECML and PKDD were co-located. After the successful co-locations in Freiburg (2001), Helsinki (2002), and Cavtat-Dubrovnik (2003), it became clear that researchers strongly supported the organization of a major scientific event about machine learning and data mining in Europe.

We are happy to provide some statistics about the conferences. 581 different papers were submitted to ECML/PKDD (about a 75% increase over 2003); 280 were submitted to ECML 2004 only, 194 were submitted to PKDD 2004 only, and 107 were submitted to both. Around half of the authors for submitted papers are from outside Europe, which is a clear indicator of the increasing attractiveness of ECML/PKDD.

The Program Committee members were deeply involved in what turned out to be a highly competitive selection process. We assigned each paper to 3 reviewers, deciding on the appropriate PC for papers submitted to both ECML and PKDD. As a result, ECML PC members reviewed 312 papers and PKDD PC members reviewed 269 papers. We accepted for publication regular papers (45 for ECML 2004 and 39 for PKDD 2004) and short papers that were associated with poster presentations (6 for ECML 2004 and 9 for PKDD 2004). The global acceptance rate was 14.5% for regular papers (17% if we include the short papers).

The scientific program of ECML/PKDD 2004 also included 5 invited talks, a wide workshop and tutorial program (10 workshops plus a Discovery Challenge workshop, and seven tutorials) and a demo session.

We wish to express our gratitude to:

- the authors of the submitted papers;
- the program committee members and the additional referees for their exceptional contribution to a tough but crucial selection process;
- the invited speakers: Dimitris Achlioptas (Microsoft Research, Redmond), Rakesh Agrawal (IBM Almaden Research Center), Soumen Chakrabarti (Indian Institute of Technology, Bombay), Pedro Domingos (University of Washington, Seattle), and David J. Hand (Imperial College, London);
- the workshop chairs Donato Malerba and Mohammed J. Zaki;
- the tutorial chairs Katharina Morik and Franco Turini;
- the discovery challenge chairs Petr Berka and Bruno Crémilleux;

- the publicity chair Salvatore Ruggieri;
- the demonstration chairs Rosa Meo, Elena Baralis, and Codrina Lauth;
- the members of the ECML/PKDD Steering Committee Peter Flach, Luc De Raedt, Arno Siebes, Nada Lavrač, Dragan Gamberger, Ljupčo Todorovski, Hendrik Blockeel, Tapio Elomaa, Heikki Mannila, and Hannu T.T. Toivonen;
- the members of the Award Committee, Michael May and Foster Provost;
- the workshops organizers and the tutorialists;
- the extremely efficient Organization Committee members, Maurizio Atzori, Miriam Baglioni, Sergio Barsocchi, Jérémy Besson, Francesco Bonchi, Stefano Ferilli, Tiziana Mazzone, Mirco Nanni, Ruggero Pensa, Simone Puntoni, Chiara Renso, Salvatore Rinzivillo, as well as all the other members of the KDD Lab in Pisa, Laura Balbarini and Cristina Rosamilia of L&B Studio, Elena Perini and Elena Tonsini of the University of Pisa;
- the great Web masters Mirco Nanni, Chiara Renso and Salvatore Rinzivillo;
- the directors of the two research institutions in Pisa that jointly made this event possible, Piero Maestrini (ISTI-CNR) and Ugo Montanari (Dipartimento di Informatica);
- the administration staff of the two research institutions in Pisa, in particular Massimiliano Farnesi (ISTI-CNR), Paola Fabiani and Letizia Petrellese (Dipartimento di Informatica);
- Richard van de Stadt (www.borbala.com) for his efficient support to the management of the whole submission and evaluation process by means of the CyberChairPRO software;
- Alfred Hofmann of Springer for co-operation in publishing the proceedings.

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There is no doubt that the impressive scientific activities in machine learning and data mining world-wide were well demonstrated in Pisa. We had an exciting week in Tuscany, enhancing further co-operations between the many researchers who are pushing knowledge discovery into becoming a mature scientific discipline.

July 2004

Jean-François Boulicaut,
Floriana Esposito,
Fosca Giannotti,
and Dino Pedreschi

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Symbolic Data Analysis
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Radial Basis Functions: An Algebraic Approach (with Data Mining Applications)
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Statistical Approaches Used in Machine Learning
Bruno Apolloni, Dario Malchiodi

Rule-Based Data Mining Methods for Classification Problems in the Biomedical Domain
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Symbolic and Spatial Data Analysis: Mining Complex Data Structures
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Third International Workshop on Knowledge Discovery in Inductive Databases (KDID 2004)
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