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Preface

This volume contains papers presented at the Eighteenth Annual Conference on Learning Theory (previously known as the Conference on Computational Learning Theory) held in Bertinoro, Italy from June 27 to 30, 2005.

The technical program contained 45 papers selected from 120 submissions, 3 open problems selected from among 5 contributed, and 2 invited lectures. The invited lectures were given by Sergiu Hart on "Uncoupled Dynamics and Nash Equilibrium", and by Satinder Singh on "Rethinking State, Action, and Reward in Reinforcement Learning". These papers were not included in this volume.

The Mark Fulk Award is presented annually for the best paper co-authored by a student. The student selected this year was Hadi Salmasian for the paper titled "The Spectral Method for General Mixture Models" co-authored with Ravindran Kannan and Santosh Vempala.

The number of papers submitted to COLT this year was exceptionally high. In addition to the classical COLT topics, we found an increase in the number of submissions related to novel classification scenarios such as ranking. This increase reflects a healthy shift towards more structured classification problems, which are becoming increasingly relevant to practitioners. The large number of quality submissions placed a heavy burden on the program committee of the conference: Shai Ben David (University of Waterloo), Avrim Blum (Carnegie Mellon University), Peter Bartlett (University of California, Berkeley), Nader Bshouty (Technion), Ran El-Yaniv (Technion), Yoav Freund (Columbia University), Ralf Herbrich (Microsoft Research, Cambridge), Marcus Hutter (IDSIA, Switzerland), Tony Jebara (Columbia University), Balazs Kegl (University of Montreal), Vladimir Koltchinskii (University New Mexico), Phil Long (Columbia University), Gábor Lugosi (Pompeu Fabra University), Shie Mannor (McGill University), Shahar Mendelson (Australian National University), Massimiliano Pontil (University College London), Daniel Reidenbach (University of Kaiserslautern), Dan Roth (University Illinois Urbana-Champaign), Michael Schmitt (Ruhr University Bochum), Rocco Servedio (Columbia University), Hans Ulrich Simon (Ruhr University Bochum), Volodya Vovk (Royal Holloway), Manfred Warmuth (University of California, Santa Cruz), Tong Zhang (IBM Research, Yorktown). We take this opportunity to thank all reviewers for the excellent job performed over a relatively short period of time. Some of them were even willing to review additional papers beyond those initially assigned. Their efforts have led to the selection of an exceptional set of papers, which ensured an outstanding conference. We would like to have mentioned the sub-reviewers who assisted the program committee in reaching their assessments, but unfortunately space constraints do not permit us to include this long list of names and we must simply ask them to accept our thanks anonymously.

We are particularly grateful to Nicolò Cesa-Bianchi and Claudio Gentile, the conference local chairs. Together they handled the conference publicity and all the local arrangements to ensure a successful event. We would also like to thank Microsoft for providing the software used in the program committee deliberations and Dori Peleg for creating the conference web site. Jyrki Kivinen assisted the organization of the conference in his role as head of the COLT Steering Committee.

This work was also supported in part by the IST Programme of the European Community, under the PASCAL Network of Excellence, IST-2002-506778.

Finally, we would like to thank the Machine Learning Journal, Google Inc., the Bertinoro International Center for Informatics, and the Università degli Studi di Milano for their sponsorship of the conference.

April, 2005

Peter Auer,
Ron Meir
Program Co-chairs COLT 2005

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