

José Neves Manuel Filipe Santos
José Manuel Machado (Eds.)

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BI, CMBSB, IROBOT, MASTA, STCS, and TEMA
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Volume Editors

José Neves
Manuel Filipe Santos
José Manuel Machado
Universidade do Minho
Departamento de Informática
4710-057 Braga, Portugal
E-mail: {jneves, mfs, jmac}@di.uminho.pt

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Preface

The 13th Portuguese Conference on Artificial Intelligence, EPIA 2007, took place in the old city of Guimarães and was sponsored by the University of Minho and APPIA, the Portuguese Association for Artificial Intelligence. The city of Guimarães is classified as a UNESCO World Cultural Heritage, being located in the North of Portugal, in the Minho Region, approximately 350 Km north of the capital, Lisbon, and about 50 Km from the second largest city, the city of Oporto. Guimarães has its origin in times previous to the foundation of the Portuguese nationality, the place where Portugal was born in the twelfth century. It is proudly referred to as the Cradle of the Nation.

EPIA was firstly held in the city of Oporto, in 1985. Its purpose was to promote the research in artificial intelligence (AI) and the scientific exchange among AI researchers, practitioners, scientists and engineers. The conference is devoted to all areas of artificial intelligence and covers both theoretical and foundational issues as well as applications. As in previous editions, the program was prearranged in terms of workshops dedicated to specific themes of AI, invited lectures, tutorials and sessions, all selected according to the highest standards. The program of the conference included for the first time a Doctoral Symposium.

A total of 11 workshops were considered, following the guidelines of the Organizing and Advisory Committees. The list includes workshops held in the previous edition, such as GAIW, BAOSW07, IROBOT07, MASTA07, TEMA07, and ALEA, rearrangements of previous ones, such as CMBSB, and novel ones such as AIASTS, AmITA, BI07 and STCS.

In this edition a total of 210 contributions were received from 29 countries, namely, Australia, Belgium, Brazil, Canada, China, Czech Republic, Denmark, France, Germany, Greece, Hungary, India, Iran, Italy, Jamaica, Lithuania, Mexico, Netherlands, Pakistan, Portugal, Romania, Russia, Spain, South Africa, UK, USA and Venezuela. Each paper was refereed by three independent reviewers in a double-blind process. From the submitted contributions, 58 were selected for publication in this volume as full papers. The acceptance rate was 27.6%, ensuring the high quality and diversity of topics and perspectives. Geographically, the contributions are distributed as follows: Belgium (1); Brazil (2); Czech Republic (1); Spain (1); China (2); France (1); Germany (4); Lithuania (1); Portugal (41); Romania (1); UK (2); and South Africa(1).

In addition to APPIA, the main sponsor of the conference, our special thanks are due to the American Association for Artificial Intelligence (AAAI); the Association for Computing Machinery (ACM); the European Coordinating Committee for Artificial Intelligence (ECCAI); and the Institute of Electrical and Electronics Engineers, Inc. (IEEE-SMC). We wish to thank the members of all committees, specifically the Advisory Committee, the Program Committee and the Local Organization. We would also like to thank all the Chairs of the

Workshops, the authors, the referees and the organizers of the previous edition for their contribution and efforts which made EPIA 2007 possible. The final thanks go to Springer for their assistance in producing this book.

The present volume includes the full papers organized in chapters, and serialised in the form of workshops.

December 2007

José Neves
Manuel Santos
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In Collaboration with

IEEE - Institute of Electrical and Electronics Engineers, Inc.

ECCAI - European Coordinating Committee for Artificial Intelligence

AAAI - Association for the Advancement of Artificial Intelligence

ACM - Association for Computing Machinery

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