

Luis Antunes
H. Sofia Pinto (Eds.)

LNAI 7026

Progress in Artificial Intelligence

15th Portuguese Conference on Artificial Intelligence, EPIA 2011
Lisbon, Portugal, October 2011
Proceedings



Springer

Lecture Notes in Artificial Intelligence 7026

Subseries of Lecture Notes in Computer Science

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ISSN 0302-9743 e-ISSN 1611-3349
ISBN 978-3-642-24768-2 e-ISBN 978-3-642-24769-9
DOI 10.1007/978-3-642-24769-9
Springer Heidelberg Dordrecht London New York

Library of Congress Control Number: 2011938667

CR Subject Classification (1998): I.2, J.4, H.3, H.5.2, I.5, I.4, F.4.1, K.4

LNCS Sublibrary: SL 7 – Artificial Intelligence

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Typesetting: Camera-ready by author, data conversion by Scientific Publishing Services, Chennai, India

Printed on acid-free paper

Springer is part of Springer Science+Business Media (www.springer.com)

Preface

The Portuguese Conference on Artificial Intelligence (EPIA) was first established in 1985, and since 1989 it has occurred biannually and is run as an international conference. It aims to promote research in artificial intelligence and has been a lively scientific event for the exchange of ideas for more than 20 years. Research in artificial intelligence is deeply grounded in Portugal and its importance is visible not only by the sheer number of researchers holding a PhD (over 100), but also by the success of numerous important conferences organized in Portugal. EPIA has been organized all over the country, raising considerable success and interest in the several local scientific communities, while never ceasing to attract researchers and practitioners from the whole country and a considerable participation of foreign scientists.

The 15th Portuguese Conference on Artificial Intelligence, EPIA 2011, took place in Lisbon at the Faculdade de Ciências da Universidade de Lisboa (FCUL) and was co-organized by LabMag/FCUL, INESC-ID, IST, and ISEL.

As in previous recent editions, EPIA 2011 was organized as a set of selected and dedicated tracks. The tracks considered in this edition were:

- Affective Computing
- Ambient Intelligence Environments
- Artificial Intelligence Methodologies for Games
- Artificial Intelligence in Transportation Systems
- Artificial Life and Evolutionary Algorithms
- Computational Logic with Applications
- General Artificial Intelligence
- Intelligent Robotics
- Knowledge Discovery and Business Intelligence
- Multi-Agent Systems: Theory and Applications
- Social Simulation and Modeling
- Text Mining and Applications
- The Doctoral Symposium on Artificial Intelligence

In this edition, a total of 203 contributions were received from 32 countries. All papers were reviewed in a double-blind process by at least three different reviewers. In some cases, contributions were reviewed by up to five reviewers. This book groups together a set of 50 selected papers that were accepted for the 15th Portuguese Conference on Artificial Intelligence, EPIA 2011, covering a wide range of topics and perspectives. This corresponds to a 25% acceptance rate, ensuring the high quality of the event. Geographically, accepted papers came from Portugal, Spain, Brazil, France, Italy, Luxembourg, Mexico, and Poland (ordered by acceptance rate). However, the authors of accepted papers included researchers from institutions from Canada, Denmark, France, Iran, Sweden, and the United Kingdom.

We wish to thank the members of all committees involved in the event, in particular the Advisory Board, the Program Committee and the Organizing Committee. We would also like to thank all the Track Chairs, the reviewers and above all the authors, without whom this event would not be possible. We would also like to acknowledge and thank the use of EasyChair, which greatly eased the management of the submissions, reviews and materials.

August 2011

Luis Antunes
H. Sofia Pinto

Organization

The 15th Portuguese Conference on Artificial Intelligence (EPIA 2011) was co-organized by the *Laboratório de Modelação de Agentes (LabMAg)/Faculdade de Ciências da Universidade de Lisboa (FC/UL)*; *Instituto de Engenharia de Sistemas e Computadores (INESC-ID)/Instituto Superior Técnico da Universidade Técnica de Lisboa (IST/UTL)*; *Instituto Superior de Engenharia de Lisboa (ISEL)*.

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