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# Agents and Artificial Intelligence

4th International Conference, ICAART 2012  
Vilamoura, Portugal, February 6-8, 2012  
Revised Selected Papers



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Volume Editors

Joaquim Filipe  
INSTICC and IPS  
Estefanilha, Setúbal, Portugal  
E-mail: joaquim.filipe@estsetubal.ips.pt

Ana Fred  
IST - Technical University of Lisbon  
Lisbon, Portugal  
E-mail: afred@lx.it.pt

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# Preface

The present book includes extended and revised versions of a set of selected papers from the 5th International Conference on Agents and Artificial Intelligence (ICAART 2012), held in Vilamoura, Portugal, during February 6–8, 2012, which was organized by the Institute for Systems and Technologies of Information, Control and Communication (INSTICC). ICAART 2012 was held in cooperation with the Portuguese Association for Artificial Intelligence (APPIA), the Spanish Association for Artificial Intelligence (AEPIA), and the Association for the Advancement of Artificial Intelligence (AAAI). INSTICC is member of the Workflow Management Coalition (WfMC), Foundation for Intelligent Physical Agents (FIPA) and the Object Management Group (OMG).

The purpose of the International Conference on Agents and Artificial Intelligence (ICAART) is to bring together researchers, engineers, and practitioners interested in the theory and applications in these areas. The conference was organized in two simultaneous tracks: Artificial Intelligence and Agents, covering both applications and current research work within the area of agents, multi-agent systems and software platforms, distributed problem solving and distributed AI in general, including Web applications, on one hand, and within the area of non-distributed AI, including the more traditional areas such as knowledge representation, planning, learning, scheduling, perception and also not so traditional areas such as reactive AI systems, evolutionary computing and other aspects of Computational Intelligence and many other areas related to intelligent systems, on the other hand.

ICAART 2012 received 292 paper submissions from 52 countries in all continents. In all, 42 papers were published and presented as full papers, 71 papers reflecting work-in-progress or position papers were accepted for short presentation, and another 36 contributions were accepted for poster presentation. Finally, we selected only 28 paper to be included in this book, representing 9.6% of submitted papers.

We would like to highlight that ICAART 2012 also included four plenary keynote lectures, given by internationally distinguished researchers, namely – Anthony G. Cohn (University of Leeds), Frank Dignum (Utrecht University), Luís Paulo Reis (University of Minho/ LIACC), and Wolfgang Wahlster (German Research Center for AI). We would like to express our appreciation to all of them and in particular to those who took the time to contribute with a paper to this book.

We must thank the authors, whose research and development efforts are recorded here. We also thank the keynote speakers for their invaluable contribution and for taking the time to synthesize and prepare their talks. Finally,

special thanks to all the members of the INSTICC team, whose collaboration was fundamental for the success of this conference.

December 2012

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## Invited Speakers

Luís Paulo Reis  
Anthony G. Cohn  
Wolfgang Wahlster  
Frank Dignum

University of Minho / LIACC, Portugal  
University of Leeds, UK  
German Research Center for AI, Germany  
Utrecht University, The Netherlands

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