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IFIP – The International Federation for Information Processing

IFIP was founded in 1960 under the auspices of UNESCO, following the First World Computer Congress held in Paris the previous year. An umbrella organization for societies working in information processing, IFIP's aim is two-fold: to support information processing within its member countries and to encourage technology transfer to developing nations. As its mission statement clearly states,

IFIP's mission is to be the leading, truly international, apolitical organization which encourages and assists in the development, exploitation and application of information technology for the benefit of all people.

IFIP is a non-profitmaking organization, run almost solely by 2500 volunteers. It operates through a number of technical committees, which organize events and publications. IFIP's events range from an international congress to local seminars, but the most important are:

- The IFIP World Computer Congress, held every second year;
- Open conferences;
- Working conferences.

The flagship event is the IFIP World Computer Congress, at which both invited and contributed papers are presented. Contributed papers are rigorously refereed and the rejection rate is high.

As with the Congress, participation in the open conferences is open to all and papers may be invited or submitted. Again, submitted papers are stringently refereed.

The working conferences are structured differently. They are usually run by a working group and attendance is small and by invitation only. Their purpose is to create an atmosphere conducive to innovation and development. Refereeing is also rigorous and papers are subjected to extensive group discussion.

Publications arising from IFIP events vary. The papers presented at the IFIP World Computer Congress and at open conferences are published as conference proceedings, while the results of the working conferences are often published as collections of selected and edited papers.

Any national society whose primary activity is about information processing may apply to become a full member of IFIP, although full membership is restricted to one society per country. Full members are entitled to vote at the annual General Assembly. National societies preferring a less committed involvement may apply for associate or corresponding membership. Associate members enjoy the same benefits as full members, but without voting rights. Corresponding members are not represented in IFIP bodies. Affiliated membership is open to non-national societies, and individual and honorary membership schemes are also offered.

More information about this series at <http://www.springer.com/series/6102>

Richard Chbeir · Yannis Manolopoulos
Ilias Maglogiannis · Reda Alhajj (Eds.)

Artificial Intelligence Applications and Innovations

11th IFIP WG 12.5 International Conference, AIAI 2015
Bayonne, France, September 14–17, 2015
Proceedings

Editors

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Piraeus
Greece

Yannis Manolopoulos
Aristotle University of Thessaloniki
Thessaloniki
Greece

Reda Alhadj
University of Calgary
Calgary, AB
Canada

ISSN 1868-4238

ISSN 1868-422X (electronic)

IFIP Advances in Information and Communication Technology

ISBN 978-3-319-23867-8

ISBN 978-3-319-23868-5 (eBook)

DOI 10.1007/978-3-319-23868-5

Library of Congress Control Number: 2015950043

Springer Cham Heidelberg New York Dordrecht London

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Printed on acid-free paper

Springer International Publishing AG Switzerland is part of Springer Science+Business Media
(www.springer.com)

Preface

The International Federation for Information Processing (IFIP) was founded in 1960 under the auspices of UNESCO, following the first historical World Computer Congress held in Paris in 1959. The first AIAI conference (Artificial Intelligence Applications and Innovations) was organized in Toulouse, France, in 2004 by the IFIP. Since then, it has always been technically supported by the Working Group 12.5 “Artificial Intelligence Applications.” After 10 years of continuous presence, it has become a well-known and recognized mature event, offering AI scientists from all over the globe the chance to present their research achievements. The 11th AIAI was held in Bayonne/Biarritz, for a second time in France, during September 14–17, 2015. Previous events took place in Rhodes (2014), Paphos (2013), Chalkidiki (2012), Corfu (2011), Larnaca (2010), Thessaloniki (2009), Athens (2007), Athens (2006), Beijing (2005), and Toulouse (2004).

The 11th AIAI involved a lot of people including 107 PC members and 14 external reviewers (See Figure 1), all of whom were selected for their strong expertise and special interest in their respective research areas.

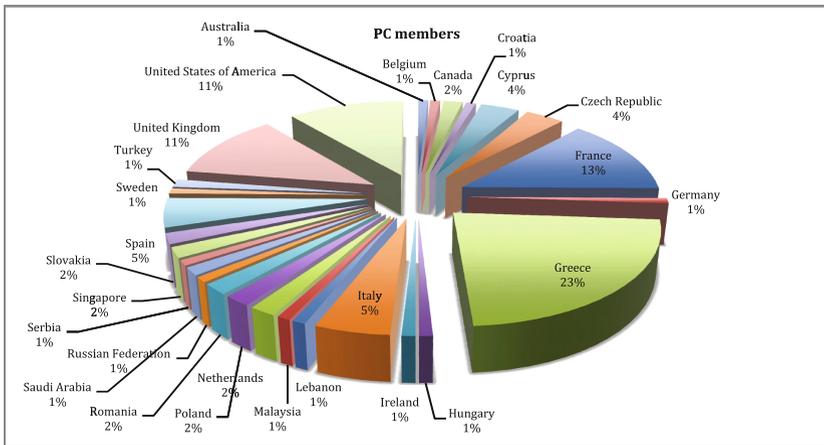


Fig. 1. Countries of PC Members of AIAI 2015.

The following wide areas were included in the call for papers: Theoretical Advances, Knowledge Engineering, Multimedia, Graphics & AI, Signal Processing Techniques and Knowledge Extraction, AI Applications, and Trends in Computing. In the 11th AIAI conference, 81 papers were submitted and we are really gratified by the international diversity of this conference: authors of submitted work hail from no less than 24 countries (See Figure 2).

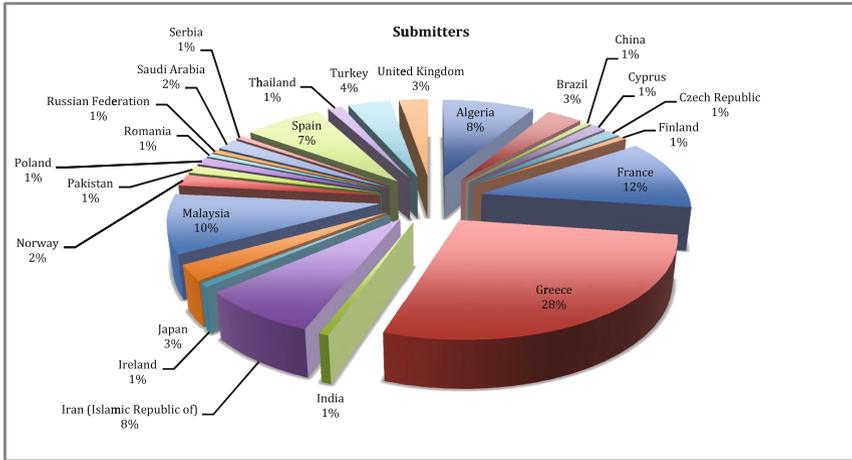


Fig. 2. Countries of Submitted Papers.

All papers went through a peer-review process by at least four independent academic reviewers. Where needed, a fifth reviewer was consulted to resolve any potential conflicts. The conference Program Committee had a very challenging task of choosing high-quality submissions. Out of all submissions, 35 papers were selected and accepted, based on the referee recommendations, for oral presentation and inclusion in the conference proceedings (See Figure 3), thus reaching an acceptance rate of around 43 %.

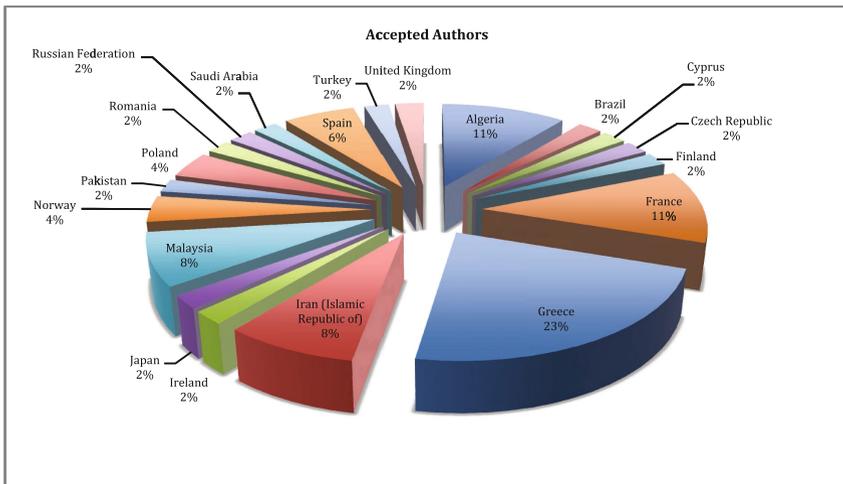


Fig. 3. Countries of Accepted Papers in AIAI 2015.

>Following a long-standing tradition, this Springer volume belongs to the IFIP AICT series and it contains the accepted papers that were presented orally at the AIAI 2015 conference. The diverse nature of the papers presented demonstrates the vitality of AI computing methods and proves the wide range of AI applications.

Three distinguished keynote speakers were invited to present a lecture at the 11th AIAI conference:

1. Prof. Hiroshi Isikawa of the Tokyo Metropolitan University, Japan
2. Prof. Ernesto Damiani of the Università degli Studi di Milano, Italy
3. Prof. Panos Kalnis of King Abdullah University of Science and Technology, Saudi Arabia.

We would like to thank our invited speakers as well as our Honorary Chair and Advisory Committee, the Program Committee and Local Organizing Committee members and, finally, our external reviewers as well. They have all contributed to reaching this point. We are very grateful to several institutions and corporations for their sponsorship and assistance: University of Pau and Adour Countries, IUT de Bayonne et Pays Basque, ACM SIGAPP.fr, and LIUPPA. Finally, we hope that you will find these proceedings to be a valuable resource in your professional, research, and educational activities (whether you are a student, academic, researcher, or a practicing professional), and you will be highly motivated and stimulated for further research in the domain of AI in general.

July 2015

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Yannis Manolopoulos
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