

# **Advances in Intelligent Systems and Computing**

**Volume 930**

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Álvaro Rocha · Hojjat Adeli ·  
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# New Knowledge in Information Systems and Technologies

Volume 1



Springer

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# Preface

This book contains a selection of papers accepted for presentation and discussion at The 2019 World Conference on Information Systems and Technologies (WorldCIST'19). This Conference had the support of IEEE SMC (IEEE Systems, Man, and Cybernetics Society), AISTI (Iberian Association for Information Systems and Technologies/Associação Ibérica de Sistemas e Tecnologias de Informação), GIIM (Global Institute for IT Management), and University of Vigo. It took place at La Toja, Galicia, Spain, April 16–19, 2019.

The World Conference on Information Systems and Technologies (WorldCIST) is a global forum for researchers and practitioners to present and discuss recent results and innovations, current trends, professional experiences and challenges of modern Information Systems and Technologies research, technological development and applications. One of its main aims is to strengthen the drive toward a holistic symbiosis between academy, society, and industry. WorldCIST'19 built on the successes of WorldCIST'13 held at Olhão, Algarve, Portugal; WorldCIST'14 held at Funchal, Madeira, Portugal; WorldCIST'15 held at São Miguel, Azores, Portugal; WorldCIST'16 held at Recife, Pernambuco, Brazil; WorldCIST'17 held at Porto Santo, Madeira, Portugal; and WorldCIST'18 took place at Naples, Italy.

The Program Committee of WorldCIST'19 was composed of a multidisciplinary group of more than 200 experts and those who are intimately concerned with Information Systems and Technologies. They have had the responsibility for evaluating, in a ‘blind review’ process, the papers received for each of the main themes proposed for the Conference: (A) Information and Knowledge Management; (B) Organizational Models and Information Systems; (C) Software and Systems Modeling; (D) Software Systems, Architectures, Applications and Tools; (E) Multimedia Systems and Applications; (F) Computer Networks, Mobility and Pervasive Systems; (G) Intelligent and Decision Support Systems; (H) Big Data Analytics and Applications; (I) Human–Computer Interaction; (J) Ethics, Computers and Security; (K) Health Informatics; (L) Information Technologies in Education; (M) Information Technologies in Radiocommunications; and (N) Technologies for Biomedical Applications.

The Conference also included workshop sessions taking place in parallel with the conference ones. Workshop sessions covered themes such as: (i) Air Quality and Open Data: Challenges for Data Science, HCI and AI; (ii) Digital Transformation; (iii) Empirical Studies in the Domain of Social Network Computing; (iv) Health Technology Innovation: Emerging Trends and Future Challenges; (v) Healthcare Information Systems Interoperability, Security and Efficiency; (vi) New Pedagogical Approaches with Technologies; (vii) Pervasive Information Systems.

WorldCIST'19 received about 400 contributions from 61 countries around the world. The papers accepted for presentation and discussion at the Conference are published by Springer (this book) in three volumes and will be submitted for indexing by ISI, Ei Compendex, Scopus, DBLP, and/or Google Scholar, among others. Extended versions of selected best papers will be published in special or regular issues of relevant journals, mainly SCI/SSCI and Scopus/Ei Compendex indexed journals.

We acknowledge all of those that contributed to the staging of WorldCIST'19 (authors, committees, workshop organizers, and sponsors). We deeply appreciate their involvement and support that was crucial for the success of WorldCIST'19.

April 2019

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