The 12th edition of the **International Conference on ICT, Society and Human Beings** (ICT 2019) (part of the IADIS Multi Conference on Computer Science and Information Systems 2019) was held in Porto, Portugal, during **17-19 July, 2019**.

This conference was organized by the International Association for Development of the Information Society (IADIS) and co-organized by ISEP – Instituto Superior de Engenharia do Porto.

The effects of ICT on human beings as well as the interaction between ICT, individuals, and society were all within the center of this conference. Both analyses of interactions and effects were important. Changes in behaviour, perspectives, values, competencies, human and psychological aspects and feelings were all of interest. Reflections on past, present, and future challenges – especially planning for handling the latter were encouraged. In general, all types of research strategies were encouraged, and especially cross-disciplinary and multi-disciplinary studies. The main topics for submissions were: Globalization and ICT; Life environment and ICT; Life role and ICT; ICT and effects on humans; Perspectives on ICT; Desirable goals and ICT and Actions for reaching the Good Information Society.

This edition was published jointly with: 16th International Conference Web Based Communities and Social Media 2019 (WBC 2019) and 5th International Conference on Connected Smart Cities (CSC 2019). These conferences received 244 submissions from more than 36 countries. Each submission was anonymously reviewed by an average of four independent reviewers, to ensure that accepted submissions were of a high standard. Consequently, only 42 full papers were approved which meant an acceptance rate of 17%. A few more papers were accepted under other categories.

Extended versions of the best papers were selected to be published in:

- the IADIS International Journal on WWW/Internet (IJWI). ISSN: 1645-7641
- IADIS International Journal on Computer Science and Information Systems (ISSN: 1646-3692)
- International Journal of Web Based Communities™ (IJWBC - ISSN: 1477 – 8394)
In addition to the presentation of the papers, these events also included two keynote presentations by Prof. Jaime Villate, Faculty of Engineering, University of Porto, Portugal and Prof. Frederico Custódio, Director of the Intelligence and Explorative Research Group at CEiiA, Portugal.

Keynote Presentation:

**HOW TO USE E-LEARNING FOR TESTING AND ASSESSING LARGE CLASSES**

by Professor Jaime Villate Faculty of Engineering, University of Porto, Portugal

Keynote Presentation:

**SMART AND SUSTAINABLE LIVING COLAB: A ROADMAP TO ACCELERATE URBAN SUSTAINABILITY**

by Prof. Frederico Custódio, Director of the Intelligence and Explorative Research Group at CEiiA, Portugal

The ICT 2019 Conference was published in hard copy by IADIS Press.


**Volume Editors:** Piet Kommers and Guo Chao Peng

**Computer Science and Information Systems Series Editors:** Piet Kommers and Pedro Isaías

**Program Committee Members:**

Alrence Halibas, Gulf College, Oman
Ana Isabel Paraguay, CIDACS/FIOCRUZ-BA, Brazil
Cecile K. M. Cruzen, Open University of the Netherlands, Netherlands
Christophe Trefois, Université du Luxembourg, Luxembourg
Daniel Pimienta, Funredes, Dominican Republic
Eila Jarvenpaa, Aalto University, Finland
Elspeth Mckay, Rmit University, Australia
Elvis Mazzoni, University of Bologna, Italy
Fabio Cassano, Università Degli Studi di Bari, Italy
Farshad Badie, Aalborg University, Denmark
Francisco Garcia, University of Murcia, Spain
Gordon Huang, University of Regina, Canada
Jan Kubicek, Technical University of Ostrava, Czech Republic
Jan Meyer (Pr.M), Faculty Member, GSB&GL, NWU, South Africa
John Sören Pettersson, Karlstad University, Sweden
Jorge Franco, Universidade Presbiteriana Mackenzie, Brazil
Kai Kimppa, University of Turku, Finland

Krzysztof Hauke, Wroclaw University of Economics, Poland
Lech Zacher, Kozminski Business School, Poland
Manuela Repetto, INDIRE, Italy
Marco Lazzari, University of Bergamo, Italy
Margaret Tan, A*STAR IHPC, Singapore
Monica Banzato, University of Ca’ Foscari - Venice, Italy
Nestor Garay-Vitoria, Universidad del País Vasco/Euskal Herriko Uniberts, Spain
Nicola Doering, Ilmenau University of Technology, Germany
Patrick Rau, Tsinghua University, China
Pertti Jarvinen, University of Tampere, Finland
Pertti Saariluoma, University of Jyvaskyla, Finland
Przemyslaw Falkowski-Gilski, Gdansk University of Technology, Poland
Robert Pintér, Corvinus University of Budapest, Hungary
Sarai Lastra, Universidad Ana G. Méndez, Recinto de Gurabo, Puerto Rico
Stina Giesecke, Aalto University, Finland
Vincenzo D Andrea, University of Trento, Italy
Virve Siirak, Tallinn University of Technology, Estonia