

Advances in Intelligent Systems and Computing

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Series editor

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Preface

Education is one of the pillars of our societies, as it shapes many of their social values and characteristics. Knowledge-based societies offer significant opportunities for novel ICT-based solutions in the area of Technology Enhanced Learning (TEL). Intelligent or smart systems, rooted in Artificial Intelligence (AI), have become increasingly relevant for education and a pillar of the TEL field. New smart solutions can be stand-alone or interconnected to others. They target not only cognitive processes but also social, motivational, and emotional factors. They can cater for different users and be personalized for them, e.g., “fragile users,” as for example children, elderly people, and people with special needs.

Nowadays, it is crucial noting that learning takes place outside as well as inside of classrooms (ecological environments), and new smart learning ecosystems have developed in diverse contexts. FabLabs, makerspaces, and other fabrication spaces have in particular emerged as novel smart environments for learning, thanks to educators striving to place learners at the center of an experience- and interaction-based educational process, in the tradition of pioneers such as Montessori and Papert, and more recent experiences about the ecological learning contexts.

The 8th edition of this conference expands the topics of the previous editions in order to provide its participants with an open forum for discussing intelligent systems and smart environments for TEL, stand-alone solutions, or interconnected ones, as well as their roots in novel learning theories, methodologies for their design or evaluation, also fostering entrepreneurship and increasing business start-up ideas. The conference intends to bring together researchers, educators, entrepreneurs, and developers from industry to discuss the latest scientific research, technical advances, and methodologies.

This volume presents all papers that were accepted at MIS4TEL 2018. All underwent a peer review selection: Each paper was assessed by three different reviewers, from an international panel composed of about 100 members of 20 countries. The program of MIS4TEL counted 24 contributions in the main track. This edition of MIS4TEL also included two dedicated workshops: the first focusing on *Social and Personal Computing for Web-Supported Learning Communities* with

four accepted papers and the second regarding *TEL in nursing education program* with six accepted contributions. All authors come from diverse countries, such as Austria, Brazil, Colombia, Cyprus, Czech Republic, Denmark, Germany, Italy, Mexico, Norway, Portugal, Romania, Serbia, Spain, Switzerland, and USA. The quality of papers was on average good, with an acceptance rate of approximately 70%, and a total number of submissions that consistently increased with respect to the previous editions.

The MIS4TEL series has grown across years in quality and visibility at international level. As we are keen on re-stating every year, that would not have been possible without the interest of MIS4TEL authors in the conference as well as the help of the Program Committee who assisted the editors in the review process for giving constructive feedback to all authors. Therefore, we would like to thank, once more, all the contributing authors, reviewers, and sponsors (IBM, Indra, and IEEE SMC Spain), as well as the Organizing Committee for their hard and highly valuable work. The work of all such people crucially contributed to the success of MIS4TEL 2018 and to shape the future and practice of TEL research.

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Organization of Workshop on Social and Personal Computing for Web-Supported Learning Communities (SPeL)

The workshop follows the previous SPeL 2008, SPeL 2009, SPeL 2010, SPeL 2011, DULP & SPeL 2012, SPeL 2013, SPeL 2014, SPeL 2015, SPeL 2016, and SPeL 2017 workshops, held in conjunction with the SAINT 2008 conference, WI/IAT 2009 conference, DEXA 2010 conference, ICWL 2011 conference, ICALT 2012 conference, ICSTCC 2013 conference, ICWL 2014 conference, ICSLE 2015 conference, ICWL & SETE 2016 conferences, and ICWL & SETE 2017 conferences, respectively. The general topic of the workshop is the social and personal computing for Web-supported learning communities.

Web-based learning is moving from centralized, institution-based systems to a decentralized and informal creation and sharing of knowledge. Social software (e.g., blogs, Wikis, social bookmarking systems, media sharing services) is increasingly being used for e-learning purposes, helping to create novel learning experiences and knowledge. In the world of the pervasive Internet, learners are also evolving: The so-called digital natives want to be in constant communication with their peers; they expect an individualized instruction and a personalized learning environment, which automatically adapt to their individual needs. The challenge in this context is to provide intelligent and adaptive support for collaborative learning, taking into consideration the individual differences between learners.

This workshop deals with current research on the interplay between collaboration and personalization issues for supporting intelligent learning environments. Its aim is to provide a forum for discussing new trends and initiatives in this area, including research about the planning, development, application, and evaluation of intelligent learning environments, where people can learn together in a personalized way through social interaction with other learners.

The workshop is targeted at academic researchers, developers, educationists, and practitioners interested in innovative uses of social media and adaptation techniques for the advancement of intelligent learning environments. The proposed field is interdisciplinary and very dynamic, taking into account the recent advent of Web 2.0 and ubiquitous personalization, and it is hoped to attract a large audience.

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Organization of Workshop on TEL in Nursing Education

In the field of nursing, learning outcomes involve nurses both as learners and as educators.

As learners, they are involved in basic and post-basic academic programs, whereas they act as educators when they are engaged in health educational programs aiming to enhance community health-literacy levels.

According to some evidence, the quality of learning outcomes in basic and post-basic nursing academic programs could be potentially improved by technology-based systems like simulation and blended learning models. However, little is known about the use of technology to enhance community health-literacy levels.

This workshop aims to share the best available knowledge about the application of technology-based systems into basic and post-basic nursing academic programs and into health educational programs aiming to enhance community health-literacy levels.

In order to pursue this intent, workshop topics have been grouped into the following three main discussion aims.

First, topics on education in nursing academic programs aim to discuss the effects of simulation and other technology-based systems on learning quality, including ethical and legal aspects.

Secondly, topics on community health educational programs aim to discuss the impact of technology in improving community health-literacy levels.

Finally, the workshop intends to provide a complete overview of technology-based methods as useful tools to improve the learning of the nursing process in clinical settings.

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