

Smart Innovation, Systems and Technologies

Volume 59

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Smart Education and e-Learning 2016

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Preface

Smart Education and e-Learning (SEEL) are emerging and rapidly growing areas that represent an integration of smart objects and systems, smart technologies, smart environments, smart features or smartness levels, smart pedagogy, smart learning and teaching analytics, various branches of computer science and computer engineering, state-of-the-art smart educational software and/or hardware systems. This is the main reason that in June 2013, a group of enthusiastic and visionary scholars from all over the world arrived with the idea to organize a new professional event that would provide an excellent opportunity for faculty, scholars, Ph.D. students, administrators, and practitioners to meet well-known experts and discuss innovative ideas, findings and outcomes of research projects, and best practices in smart education and e-learning.

The main research, design and development topics in SEEL area include, but are not limited to, (1) conceptual frameworks for Smart Education (SmE) and Smart e-Learning (SeL), (2) infrastructure, main characteristics and features of Smart Universities (SmU) and Smart Classrooms (SmC), (3) SmU-wide software, hardware, security, safety, communication, collaboration and management systems, (4) SmE analytics, (5) innovative learning and teaching strategies as components of smart pedagogy, (6) SeL strategies, approaches and environments, (7) smart learner modelling, (8) assessment and quality assurance in SmE and SeL, (9) social, cultural and ethical dimensions and challenges of SmE and SeL, (10) applications of various innovative technologies—Internet of Things, cloud computing, Ambient Intelligence (AmI), smart agents, sensors, wireless sensor networks, context-awareness technology, etc.—and smart software/hardware systems in universities and classrooms, and numerous other topics. We hope that active and open discussion of those topics within SEEL professional research and academic communities will help us to (a) organize mutually beneficial partnerships, stimulate national and international research, design and development projects in SEEL area, (b) propose innovative pedagogy, teaching and learning strategies, standards and policies in SEEL, (c) identify tangible and intangible benefits of SEEL.

The inaugural international KES conference on Smart Technology-based Education and Training (STET) has been held at Chania, Crete, Greece, during 18–20 June 2014. The 2nd international KES conference on Smart Education and e-Learning took place in Sorrento, Italy, during 17–19 June 2015. This book contains the contributions presented at the 3rd international KES conference on Smart Education and e-Learning, which took place in Puerto de la Cruz, Tenerife, Spain, during 15–17 June 2016. Book chapters, a total of 56 peer-reviewed chapters, are grouped into several parts, as follows: Part I—Smart University: Conceptual Modelling, Part II—Smart Education: Research and Case Studies, Part III—Smart e-Learning, Part IV—Smart Education: Software and Hardware Systems, and Part V—Smart Technology as a Resource to Improve Education and Professional Training.

We would like to thank scholars who dedicated a lot of efforts and time to make SEEL international conference a great success: Dr. Luis Anido (Spain), Dr. Elena Barbera (Spain), Dr. Claudio da Rocha Brito (Brazil), Dr. Dumitru Burdescu (Romania), Dr. Nunzio Casalino (Italy), Prof. Melany Ciampi (Brazil), Mr. Marc Fleetham (UK), Dr. Ekaterina Prasolova-Førland (Norway), Dr. Mikhail Fominykh (Norway), Dr. Brian Garner (Australia), Prof. Natalya Gerova (Russia), Dr. Jean-Pierre Gerval (France), Dr. Karsten Henke (Germany), Dr. Alexander Ivanikov (Russia), Dr. Marina Lapenok (Russia), Dr. Aleksandra Klasnja-Milicevic (Serbia), Prof. Andrew Nafalski (Australia), Dr. Enn Õunapuu (Estonia), Dr. Elvira Popescu (Romania), Dr. Valeri Pougatchev (Jamaica), Prof. Jerzy Rutkowski (Poland), Dr. Danguole Rutkauskiene (Lithuania), Prof. Adriana Burlea Schiopoiu (Romania), Prof. Masanori Takagi (Japan), Dr. Gara Miranda Valladares (Spain), Dr. Heinz-Dietrich Wuttke (Germany), and Dr. Larisa Zaiceva (Latvia).

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It is our sincere hope that this book will serve as a useful source of valuable data and information, and provide a baseline of further progress and inspiration for research projects and advanced developments in SEEL area.

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