

# Preface

Smart Education and Smart E-Learning (SEEL) is an emerging and rapidly growing area that represents an integration of (1) smart and intelligent systems, smart objects and smart environments, (2) smart technologies, various branches of computer science and computer engineering, (3) state-of-the-art smart educational software and/or hardware systems, agents, and tools, and (4) innovative pedagogy and advanced technology-based teaching strategies and learning methodologies. 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 the best practices in smart education and smart 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), (2) infrastructure, main characteristics, and features of smart universities and smart classrooms, (3) university-wide smart software, hardware, security, communication, collaboration, and management systems, (4) SmE analytics and economics, (5) main components and techniques of smart pedagogy, (6) Smart e-Learning (SeL) concepts, strategies, and approaches, (7) SeL environments, (8) smart e-learner modeling, (9) assessment and quality assurance in SeL, (10) social, cultural, and ethical dimensions and challenges of SmE and SeL, (11) applications of various innovative technologies—ambient intelligence, Internet-of-Things, smart agents, sensors, wireless sensor networks, context awareness technology, smart gamification, smart multimedia—and smart software/hardware systems in universities and classrooms, (12) mobility, security, access, and control issues in smart learning environments and numerous other topics. We hope that active and open discussion of those topics within SEEL 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, economic, technical, organizational, and financial feasibility and effectiveness of SEEL.

The inaugural international KES conference on Smart Technology-based Education and Training (STET) was held at Chania, Crete, Greece, during June 18–20, 2014. This book contains the contributions presented at the 2nd international KES conference on *Smart Education and Smart e-Learning*, which took place in Sorrento, Italy, during June 17–19, 2015. The book chapters, a total of 45 peer-reviewed chapters, are grouped into several parts, including: Part 1—Smart Education, Part 2—Smart Educational Technology, Part 3—Smart e-Learning, Part 4—Smart Professional Training and Teachers' Education, and Part 5—Smart Teaching- and Training-related Topics.

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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 the SEEL area.

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