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Tareq Ahram · Redha Taiar
Editors

Human Interaction, Emerging Technologies and Future Systems V

Proceedings of the 5th International Virtual Conference on Human Interaction and Emerging Technologies, IHIET 2021, August 27–29, 2021 and the 6th IHIET: Future Systems (IHIET-FS 2021), October 28–30, 2021, France

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Preface

This book, entitled *Human Interaction, Emerging Technologies and Future Systems V*, aims to provide a global forum for presenting and discussing novel human interaction, emerging technologies and engineering approaches, tools, methodologies, techniques, and solutions for integrating people, concepts, trends, and applications in all areas of human interaction endeavor. Such applications include, but are not limited to, health care and medicine, sports medicine, transportation, optimization and urban planning for infrastructure development, manufacturing, social development, a new generation of service systems, as well as safety, risk assessment, and cybersecurity in both civilian and military contexts.

Rapid progress in developments in cognitive computing, modeling, and simulation, as well as smart sensor technology, will have a profound effect on the principles of human interaction and emerging technologies at both the individual and societal levels in the near future.

The book gathers selected papers presented at the 5th International Conference on Human Interaction and Emerging Technologies (IHIET 2021) and the 6th International Conference on Human Interaction & Emerging Technologies: Future Systems (IHIET-FS 2021), both conferences focusing on human-centered design and human interaction approaches which utilize and expand on the current knowledge of design and emerging technologies supported by engineering, artificial intelligence and computing, data analytics, wearable technologies, and next-generation systems.

This book also presents many innovative studies with a particular emphasis on emerging technologies and their applications, in addition to the consideration of user experience in the design of human interfaces for virtual, augmented, and mixed reality applications. Reflecting on the above-outlined perspective, the papers contained in this volume are organized into eight sections:

Section 1: Human–computer Interaction
Section 2: Human-centered Design
Section 3: Emerging Technologies and Applications
Section 4: Augmented, Virtual, and Mixed Reality Simulation

Section 5: Artificial Intelligence and Computing
Section 6: Wearable Technologies and Affective Computing
Section 7: Healthcare and Medical Applications
Section 8: Human Technology and Future of Work

Our appreciation also goes to the members of the scientific program advisory board who have reviewed the accepted papers that are presented in this volume.

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We hope that this book, which presents the current state of the art in human interaction and emerging technologies, will be a valuable source of both theoretical and applied knowledge enabling the human-centered designs and applications of a variety of products, services, and systems for their safe, effective, and pleasurable use by people around the world.

August 2021

Tareq Ahram
Redha Taiar

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