Preface

The effects of disasters are very serious and it may take a very long time to recover from the destruction caused. The ensuing damage can be severe and offering relief may lead to expenses in the range of billions of euros. The occurrence of natural disasters has increased in the past few years and it is expected that their frequency will continue in the coming years.

Owing to the multidisciplinary nature of work in the field of disaster risk reduction, people from various backgrounds are included in this field of research and activity. Their backgrounds are likely to include industry, diverse geographical and global settings, not-for-profit organizations, agriculture, marine life, welfare, risk management, safety engineering, and social networking services.

At present, at global and national levels, a wide range of scientific and applied research activity is conducted in the area of disaster risk reduction concerning individual types of disasters. Modern information and communication technologies (ICT) can facilitate significantly the decision-making processes from the point of view of disaster risk reduction.

Following the increasing number of disasters worldwide and the growing potential of both ICT and ICT expertise, at its General Assembly held during October 8–9, 2015 at the Daejeon Convention Center, Daejeon, Korea, the IFIP established the Domain Committee on Information Technology in Disaster Risk Reduction in order to:

- Promote disaster risk reduction within the ICT community
- Provide an additional opportunity for IFIP members to work with other specialized bodies such as the UN, UNISDR, ICSU, ITU, and ISCRAM
- Coordinate the efforts of member societies as well as different Technical Committees and Working Groups of IFIP in the disaster-related field

The disaster support offered by the Domain Committee is based on the following major pillars:

- Information acquisition and provision
- Shelter information management for local governments
- Disaster information systems
- State-of-the-art ICT (such as the Internet of Things, mobile computing, big data, and cloud computing).

IFIP's Domain Committee on Information Technology in Disaster Risk Reduction organized the First IFIP Conference on Information Technology in Disaster Risk Reduction (ITDRR 2016), during November 16–18, 2016, at the University of National and World Economy, Sofia, Bulgaria.

ITDRR 2016 provided an international forum for researchers and practitioners to present their latest R&D findings and innovations. The conference was especially focused on various ICT aspects and the challenges of coping with disaster risk

reduction. The main topics included areas such as big data, cloud computing, the Internet of Things and natural disasters, mobile computing, emergency management, disaster information processing, disaster risk assessment and management, and disaster management simulation.

ITDRR 2016 invited experts, researchers, academicians and all others who were interested in disseminating their work to attend the conference. The conference established an academic environment that fostered the dialogue and exchange of ideas among different levels of academic, research, business, and public communities.

The Program Committee received 52 paper submissions, out of which 20 research papers were finally accepted. We are particularly grateful therefore to the members of the Program Committee, and the many reviewers of papers, for their dedication in helping to produce this volume.

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