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IFIP was founded in 1960 under the auspices of UNESCO, following the first World Computer Congress held in Paris the previous year. A federation for societies working in information processing, IFIP's aim is two-fold: to support information processing in the countries of its members and to encourage technology transfer to developing nations. As its mission statement clearly states:

IFIP is the global non-profit federation of societies of ICT professionals that aims at achieving a worldwide professional and socially responsible development and application of information and communication technologies.

IFIP is a non-profit-making organization, run almost solely by 2500 volunteers. It operates through a number of technical committees and working groups, which organize events and publications. IFIP's events range from large international open conferences to working conferences and local seminars.

The flagship event is the IFIP World Computer Congress, at which both invited and contributed papers are presented. Contributed papers are rigorously refereed and the rejection rate is high.

As with the Congress, participation in the open conferences is open to all and papers may be invited or submitted. Again, submitted papers are stringently refereed.

The working conferences are structured differently. They are usually run by a working group and attendance is generally smaller and occasionally by invitation only. Their purpose is to create an atmosphere conducive to innovation and development. Refereeing is also rigorous and papers are subjected to extensive group discussion.

Publications arising from IFIP events vary. The papers presented at the IFIP World Computer Congress and at open conferences are published as conference proceedings, while the results of the working conferences are often published as collections of selected and edited papers.

IFIP distinguishes three types of institutional membership: Country Representative Members, Members at Large, and Associate Members. The type of organization that can apply for membership is a wide variety and includes national or international societies of individual computer scientists/ICT professionals, associations or federations of such societies, government institutions/government related organizations, national or international research institutes or consortia, universities, academies of sciences, companies, national or international associations or federations of companies.

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Jun Sasaki · Yuko Murayama ·
Dimitar Velev · Plamena Zlateva (Eds.)


Information Technology in Disaster Risk Reduction

6th IFIP WG 5.15 International Conference, ITDRR 2021
Morioka, Japan, October 25–27, 2021
Revised Selected Papers

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Preface

It has been ten years since the Great East Japan Earthquake and Tsunami struck a large coastal area of the northern part of the main island of Japan, including the coast of the Iwate prefecture, on the afternoon of Friday, March 11, 2011. This anniversary provided the incentive for us to have our IFIP WG 5.15 annual conference, the 6th International Conference on Information Technology in Disaster Risk Reduction (ITDRR 2021), in Morioka, Iwate, Japan.

The experience of the crisis response ten years ago was, indeed, the motivation for us to look into the research domain of Information Technology in Disaster Risk Reduction (ITDRR). When we introduced the research domain at the IFIP General Assembly in 2014 in Vienna, the idea was highly applauded by Acad. Blagovest Hristov Sendov (February 8, 1932 – January 19, 2020) who was IFIP President from 1989 to 1992 and an Honorary Member. The idea of using IT for disaster response and management was new to him. Previously, traditional research topics for IT and disaster were limited to technical aspects of networking, simulation, and risk evaluation and management. We set up a Domain Committee on ITDRR within IFIP in 2016, which was later transformed into a working group within Technical Committee 5, WG 5.15, in 2020.

Due to the recent global environmental changes, we have observed an increasing number of natural disasters, such as floods, tornadoes, wildfires, and earthquakes. Given current trends there are unfortunately more to come in the future.

The Sixth IFIP WG 5.15 Conference on Information Technology in Disaster Risk Reduction (ITDRR 2021), was held during October 25–27, 2021, at the Aiina Campus of Iwate Prefectural University, Morioka, Japan. Due to the COVID-19 pandemic, ITDRR 2021 was held in hybrid format.

The conference focused on various ICT aspects and the challenges of disaster risk reduction. The main topics included areas such as information analysis for situation awareness, evacuation, rescue, COVID-19 issues, risk assessment, and disaster management.

ITDRR 2021 invited experts, researchers, practitioners, academics, and all others who were interested in disseminating their work. The conference established an environment that fostered the discussion and exchange of ideas among different academic, research, business, and public communities.

The Program Committee received 18 paper submissions, out of which 11 research papers were finally accepted. The volume editors would like to express their special gratitude to the members of the Program Committee, and to the many reviewers of the papers, for their dedication in helping produce this volume.

For this conference, we started two awards: the Best Paper Award and the Best Student Paper Award. The following winners were selected based on the review results:

- The ITDRR 2021 Best Paper Award — Keisuke Utsu, Natsumi Yagi, Airi Fukushima, Yuma Takemori, Atsushi Okazaki, and Osamu Uchida: Analysis of Quote Retweets for COVID-19 State of Emergency Related Tweets Posted from Prefectural Governors' Accounts in Japan.
- The ITDRR 2021 Best Student Paper Award — Shono Fujita and Michinori Hatayama: Development of Automatic Method to Calculate Damage Rate of Roof by dividing Roof Image into Sections by Image Segmentation.

We hope that these awards encourage the winners and future candidates in deploying their research and inspire new submissions to our future conferences.

December 2021

Jun Sasaki
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