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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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Luis M. Camarinha-Matos · Luis Ribeiro · Leon Strous (Eds.)

# Internet of Things

# IoT through a Multi-disciplinary Perspective

5th IFIP International Cross-Domain Conference, IFIPIoT 2022 Amsterdam, The Netherlands, October 27–28, 2022 Proceedings



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## Preface

The fifth IFIP Internet of Things (IoT) conference (IFIPIoT 2022), that took place in Amsterdam, the Netherlands, during October 27–28, 2022, had an overall theme of "IoT through a multi-disciplinary perspective". As in the previous editions of this annual event, the topics presented reflected the variety of aspects with respect to IoT, aspects covered by IFIP's Domain Committee on IoT which organizes this conference.

The Technical Program Committee for this edition consisted of 46 members from 15 countries who considered 36 submissions. Each paper was refereed by at least three reviewers with more than half of the papers having four or more reviews. The single-blind review principle was applied. Committee members had to indicate in the review system for each assignment whether they had a conflict of interest. Where conflicts of interest where disclosed or identified the conflicted committee member did not take any decision regarding the revision, acceptance, or management of the respective manuscripts.

In total, 20 full papers were selected for presentation resulting in an acceptance rate of 56%. The papers were selected on the basis of originality, quality, and relevance to the topic. As expected, the peer-reviewed papers covered a wide array of topics that were clustered into the following themes:

- IoT for Smart Villages
- · Security and Safety
- Smart Home
- Development, Engineering, Machine Learning
- Applications

The conference featured two keynote speakers. The first keynote was given by Michael Beigl of the Karlsruhe Institute of Technology (KIT) in Germany on "Wearable computing". The second keynote on "The Internet of Secure Things" was given by Sandro Etalle from the Eindhoven University of Technology in the Netherlands.

There was also a panel session addressing the relationship between AI and IoT. What is, can be, should be the impact of AI on the Internet of Things? What do we need to enhance the security, reliability, efficiency of IoT?

We thank the authors and presenters, the panel members, the session chairs, the organizers of special sessions, the Program Committee, and the external reviewers for their hard work and contributions and look forward to their continued involvement.

We feel that all contributions make this book a rich volume in the IFIP AICT series and we trust that the reader will be inspired by it.

August 2022

Luis M. Camarinha-Matos Luis Ribeiro Leon Strous

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