


 <p>IFIP IOT</p>	<p>4th IFIP International Internet of Things (IoT) Conference 4 – 5 November 2021</p>	
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The fourth IFIP Internet of Things (IoT) conference, which took place in a virtual mode on 4th and 5th November 2021, addressed both technology and applications. The topics presented reflected the variety of aspects with respect to IoT, aspects covered by IFIP's Domain Committee on IoT who organizes this annual event. With an overall 240 actual unique logins out of 280 registered participants from 34 countries and an average of 50-60 logins per session, the event was very successful.

The IoT Technical Program Committee for this edition consisted of 53 members from 18 countries who considered 36 submitted abstracts with 33 full papers. In total, 15 papers were selected for presentation resulting in an acceptance rate of 45%. The peer-reviewed papers covered a wide array of topics that were clustered in five thematic sessions: *Modernizing agricultural practice using IoT*, *Cyber-physical IoT systems in wildfire context*, *IoT for smart health*, *Security and Methods*.

The conference featured two keynote speakers. The first keynote was given by professor Schahram Dustdar from the TU Wien in Austria on "Edge Intelligence - Engineering the Fabric of IoT, Systems, and People". The second keynote on "Secure IoT by Design" was given by professor Saraju P. Mohanty from the University of North Texas, USA.

Two panel sessions were held, one on IoT applications and another on IoT research. The panel members presented their views and discussed about main engineering challenges in IoT development and current IoT research challenges. Further, they presented promising approaches to face such challenges and forecast futuristic application scenarios. The panel also discussed emerging technologies that are likely to have an impact in the next 5-10 years.

The conference instituted a best paper award in this edition. Four papers highly ranked by the reviewers were nominated for the award. The papers and presentations were judged by an independent jury consisting of three judges. The paper authored by S. Abdullah, P. Appari, S. R. Patri and S. Katkooi, entitled "Smart Agriculture using Flapping Wing Micro Aerial Vehicles (FWMAVs)", has been awarded the best paper award 2021.

We thank all authors and presenters, panel members, session chairs, organizers of special sessions, Program Committee members and external reviewers for their hard work and contributions and look forward to their continued involvement. Our sponsors deserve a big thank you: Vrije Universiteit Amsterdam, University of South Florida, and University of Twente.

The post-conference proceedings will be available early 2022 in the edited volume AICT 641 Internet of Things – Technology and Applications.

The sessions, including the keynotes, have been recorded and are available via the website of the IFIP Domain Committee IoT: <http://ifip-iotconference.org/index.html>.

IFIP Announces 12 New Fellows

Congratulations to IFIP's newest Fellows, who were announced during the final IFIP Jubilee event on 21 December 2021.

IFIP Vice President and Chair of Fellows Selection Committee, Jan Gulliksen, made the announcements, recognising each for their outstanding technical contributions to the field of information processing.

The new Fellows include:



Jean Vanderdonckt, Belgium, for fundamental and applied contributions to model-based user interface development, model-driven engineering of interactive applications and user interface description languages



Ling X Li, USA, for her active involvement in IFIP WG8.9, where her leadership led to high quality research, conferences and journal publications, which contributed significantly to educating ICT professionals



Gerrit van der Veer, Netherlands, for his pioneering work in HCI, developing and teaching new paradigms for the human side of HCI and in promoting international collaboration between HCI scientists and practitioners

- **Guy Pujolle**, France, for his remarkable pioneering contribution to the development of computer networks, their evolution, their applications, security and to the teaching of the domain;



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Andreas Holzinger, Austria, for his achievements in interactive machine learning with the human-in-the-loop, towards xAI and multimodal causability, advocating a synergistic approach to put the human-in-control of AI

Jacques Sakarovitch, France, for his extraordinary contribution to the methodological research and teaching of theoretical computer science, particularly, automata theory, and for his work in cofounding TC1



Fredi Tröltzsch, Germany, for his outstanding contribution to the theory of optimisation, computations of optimal control for distributed parameter systems with applications to industry, engineering and medical sciences;

Jan Pries-Heje, Denmark, for his extensive work in leading research and teaching in the field of information systems, for which he has built a global reputation. Within TC8, his leadership promoted the joint definition of action strategies and nurtured the cohesion of the working groups



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Paola Inverardi, Italy, for her significant contributions to software engineering and architecture and for her role as educator and rector of the University of L'Aquila, which she helped to reconstruct after an earthquake



Sushil Jajodia, USA, for his unparalleled technical contributions to cybersecurity with over 500 papers and over 50,000 citations, resulting in seminal papers, patents and a commercial system



Ricardo Augusto Da Luz Reis, Brazil, for his leadership in the field of microelectronics education in Latin America, his research in applied VLSI-SoC design methods and his contribution to building the open scientific community

Pierangela Samarati, Italy, for pioneering and outstanding contributions to research and information sharing in information security, data protection and privacy.



Thought Leadership from Global Industry Council



This Thought Leadership paper “Coping with the Monster that has risen up against its creator” was authored by the IFIP IP3 Global Industry Council, a forum where ICT Leaders from around the globe consider aspects which affect the ICT profession, and all organizations who deploy digital technologies. It is a call to the UN and its agencies to consider new approaches when working with government and global business to implement and measure the SDGs with some urgency. Several large companies already account for their efforts in their sustainability reports, but this must become the norm. Start-ups should also be encouraged to think about sustainability from inception, and investors have a role to play in promoting and supporting this.

Introduction

It is a fact that technologies develop exponentially. Without doubt, the number of new technologies developed within the last decade is much higher than the number of technologies developed within the last century. However, the evolution rate of nature and humankind and is much slower. The consequence of this is that a gap has developed between the two that, and not surprisingly, this gap is also growing exponentially. This fact is part of our contemporary lives, but the time has come to seriously consider the manifestations resulting from this, because the rate of technological growth has now escalated to levels that are so high that they threaten humanity.

On the one hand, we human beings are happy to exploit these technologies to raise our standard of living and improve our wellbeing. On the other, the sheer number of products and their accompanying environmental impact, whether from the manufacturing processes or the mountains of waste they generate, are having an adverse and seemingly irreversible impact on the environment.

We can already see the frightening results. Many areas of the environment have already been damaged beyond belief, and if appropriate measures are not taken, this negative impact may spiral out of control.

One change that already seems to be in a cyclic spiral is that of climate change. Other environmental disasters that are in progress include escalating pollution, the mounting destruction of a multitude of ecosystems and natural habitats, an increasingly rapid extinction of flora and fauna, disruptions in the water cycle, and more.

The overall objective of this paper is to elaborate, analyze, and propose a new and practical approach and rationale for a Private Hi-tech Sector Initiative and provide appropriate arguments and realistic validations to show how this approach will prove more effective and more efficient than past attempts.

Download the paper [here](#). The paper is a call to action. We are aware that some member societies, and TCs and working groups are studying sustainability issues. Further investigations and collaborations are required to put thought into action. How can you help? Contact mderoche@ipthree.org to get involved. To quote a tagline from a South African company “Together we can do more”.

IP3 plans for 2022

IP3 held its annual planning session virtually in November 2022. We agreed on the following action items:

- IFIP Ethics Code – make the code more accessible and work to get the code embedded in skills frameworks.
- Provide guidance on navigating skill/knowledge landscapes, focusing on Cybersecurity & Data Science. This will be a collaborative effort between IP3 and TCs/WGs. We do not intend to reinvent any frameworks but rather help potential business or individual users traverse the often-confusing landscape.
- Investigate revenue generating opportunities
- Marketing – extend the reach of our marketing efforts and get more out of published assets.

The above is in addition to our “business as usual” which includes:

- Re-accreditations – ACS, IPSJ
- Digital Skills Project - ongoing
- Continue to develop partnerships

We encourage you to read our 2020/21 Annual Report to find out what we were up to between July 2020 and June 2021 - [download here](#).



Smart and Sustainable Collaborative Networks 4.0

22nd IFIP/SOCOLNET Working Conference on Virtual Enterprises

The 22nd edition of the PRO-VE conference, sponsored by WG 5.5 and which took place on 22-24 November 2021, organized by Ecole des Mines Saint Etienne, France, addressed Smart and Sustainable Collaborative Networks 4.0. In the recent years, the PRO-VE Conference introduced the notion of Collaborative networks 4.0 as new generation of collaborative networks in the era of applied Artificial Intelligence and Digital Transformation. Meanwhile, the world has been confronted with one of the major sanitary and economic crises, emphasizing that disruptive situations, at different scales, tend to be more and more frequent as well as strongly impacting. Smart and digital technologies support agility, scalability, resilience, and adaptability characterizing collaborative networks 4.0. These properties have become critical features for most of the sectors of our modern societies, including industry and services sectors. Collaborative networks 4.0 can contribute to build a more resilient and sustainable world.

The conference was organized in a hybrid mode. Over three days, more than 140 participants from 19 different countries (80 on site and 60 remotely) attended twenty sessions of scientific conferences face-to-face and remote, on the role of collaborative networks in the industry and society of the future. Additionally, an industrial workshop was devoted to the reconfigurability of production systems with contributions from Thales Group, Tetrapack, elm Leblanc-Bosch France, among others.

The program included 75 papers selected by the International Program Committee, three invited keynote talks and a panel on “Crossed views: New collaboration forms among academics and industrialists to pave the road for boosting a more sustainable industry”. Further details on <http://www.pro-ve.org>



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The proceedings were published by Springer, under the IFIP AICT series (n° 629).

Being the first time that the conference was organized in a hybrid mode, there was a natural concern about the potential difficulties of combining both onsite and remote participation. But the experience with this edition was highly positive and very rewarding to all participants. Considering the current evolution of the COVID-19 pandemic, this experience gave us extra confidence that it will be possible to continue running the conference in a hybrid mode.

Next edition is planned to be held in Lisbon, Portugal, on 21-23 Sep 2022, under the main theme of “Collaborative Networks in Digitalization and Society 5.0”.

WG.10.4

IFIP Working Group 10.4:



Intelligent Vehicle Dependability and Security (IVDS) Project Presentation at the Association for the Advancement of Artificial Intelligence (AAAI) Fall Symposium, Nov 4-6, 2021

Working Group 10.4 (Dependable Computing and Fault Tolerance) is pleased to share this note about a presentation by the IVDS Project Team Leader, Dr. Jaynarayan Lala, at the [Association for the Advancement of Artificial Intelligence \(AAAI\) Fall Symposium](#).

The vision of the IVDS project is the realization of highly dependable and secure operation of intelligent vehicles (IVs), verified and validated with respect to strict dependability (particularly safety) and security requirements by rigorous state-of-the-art methods. Types of vehicle intelligence assumed in the vision are mainly those associated with SAE Driving Automation Levels 3-5, per SAE Int'l Recommended Practice J3016.

The Cognitive Systems for Anticipatory Thinking track of the AAAI Fall Symposium was held virtually Nov 5-6, 2021. Autonomous vehicles must sense the environment around them and have a situational understanding to safely navigate vehicles in all kinds of conditions. AI and Machine Learning algorithms are being developed and deployed to perform these functions which are analogous to human perception and cognition. A key issue is how to quantitatively measure the success of perception and cognition algorithms and to compare them to accidents caused by human drivers. Dr. Lala's presentation focused on the quantitative measures for the false negative and false positive rates of ML perception algorithms. He also described the minimum benchmarks that the ML algorithms must achieve to be no worse than a human driver. These ideas were developed under the auspices of the IVDS project and benefited from many discussions with the team.

<https://www.anticipatorythinking.ai/events/cogsat-2021>

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Latin American Computer Merit Award 2021

This year Dr. Gabriela Marín-Raventós, IFIP Vicepresident, received the 2021 Latin American Computer Merit Award from the Latin American Center for Computer Studies (CLEI). The ceremony took place on Oct 28th at the facilities of the Technological Institute of Costa Rica, in the context of the XLVII Latin American Conference on Informatics (CLEI2021).

Before presenting the award, Professor Marín gave the keynote entitled "Towards a Research Agenda for Latin America", in which she raised the great challenges of this region and proposed the fields of information technology on which we should focus research efforts to help address these challenges.

As part of IFIP 60th anniversary events, Dr. Kai Rannenber, IFIP Vicepresident, gave a keynote on "Security and Privacy in the IoT Age" during CLEI 2021.



There are some photos of the award event <https://citic.ucr.ac.cr/noticias/dra-gabriela-marin-recibio-premio-al-merito-informatico-america-latina>

Sharon Singh – Receives Coveted Teaching Awards!

Sharon Singh is the National Representative for Australia in IFIP TC3, and IFIP TC3's Secretary.

We are absolutely delighted and proud to announce that Sharon has received not one, but two coveted awards for her outstanding teaching!

The first of these is a Peter Doherty Excellence in Science, Technology, Engineering and Mathematics (STEM) Education – Outstanding Teacher of STEM award. This award recognises teachers in the State of Queensland who demonstrate outstanding and innovative contributions to STEM education. This year is the 18th year of these awards, named after Professor Peter Doherty, a Brisbane-born Nobel Prize-winning scientist.



On receiving this award, Sharon said:

"I am honoured and grateful to receive a 2021 Peter Doherty Excellence in Science, Technology, Engineering and Mathematics (STEM) Education state award. Despite the complexities and challenges of STEM education, this recognition and support, strongly affirm all educators in Science, Technology, Engineering and Mathematics championing STEM education in schools, facilitating students into STEM subjects, and eventually into STEM careers. I am very humbled with this recognition by the Queensland Government, Australia, through this prestigious award named after a Brisbane-born Nobel Prize-winning scientist I have admired for many years".

Sharon also received a finalist award in the Queensland College of Teachers (QCT) Schoolzine Merline Muldoon Memorial TEACHX Awards for Innovation in Teaching. Sharon's innovative teaching focuses on contemporary areas of computing and technology education, including artificial intelligence (AI), machine learning, cybersecurity, robotics, and emerging technologies. As a result, students studying in St John's Anglican College, Brisbane can gain from Sharon's devotion and willingness to explore these important and emerging fields.

We continue to recognise the critical need to support teachers in developing computing and technology education practices – and Sharon is a shining example that we hope others will follow!

To all IT- and Information professionals: 3 latest KNVI-books free for all IFIP members

In the 1980s, we argued that computer scientists should be aware of the legal framework of their diligent work, while lawyers should gain knowledge of electronic data processing. Today it goes without saying that, in addition to technical knowledge, organizational science and business administration, digital law is increasingly making its mark on both the design and deployment of digital products, services and processes. From software law to privacy law, from digital security regulations to incident reporting obligations. Or take the legislation for doing business in the Digital Single Market of the European Union. In addition, new criteria are constantly emerging. Calls for transparency, such as the review of algorithms, are more frequent and louder, especially in regards with online platforms and E-government applications, as well as the social embedding of IT. And artificial intelligence should only be used "human-centric".

This special series is based on the necessity that digitization requires a broad approach and at the same time follows the line that law is not in place for lawyers, but focuses on that part of society that tries to regulate it. In other words: both valuable and accessible information for professionals, executives and politicians.

The latest publication — “Multidisciplinary Aspects of COVID-19 Apps” — offers insights into the State of IT and the Digital Society in response to the dilemmas, choices and controversies that arise which occur at contact tracing applications. The new book became available at the end of 2021, while the earlier published books of the series are still available. We happily offer these books to all IFIP members, free of charge. All authors participate in the public interest which also applies to the co-editors-in-chief. Thanks to everyone who makes the series possible, both authors, editors and publisher deLex.

(see also: <https://www.knvi.nl/nieuws/394799/Multidisciplinary-Aspects>)

IFIP TC3 WCCE 2022



Call for Papers

Submission deadline: Feb. 28th, 2022

Towards a Collaborative Society through Creative Learning.



WCCE 2022 is the latest 'four-yearly' conference of IFIP's Technical Committee on Education (TC3) and will be run as a **hybrid conference** with participation possible onsite in Hiroshima as well as online via the Internet. WCCE 2022 will enable **researchers, policy makers and practitioners** to take an active role and be involved in discussions considering both concerns and approaches for the future of technology for empowering teaching, training and professional development with ICT, to share knowledge and ideas about the rapidly emerging practices of Computer Science Education (CSE), and the important roles that CSE has in educating creators of the future.

The **Call for Papers** for this conference is available now on the **WCCE 2022 website** (<https://wcce2022.org>). WCCE 2022 welcomes short or full standard academic research papers as well as a number of **presentation-oriented submission formats** (abstracts for demonstrations, posters, workshops, panel sessions and national sessions). Additionally, proposals for symposia, which are a collection of related presentations on a central theme of the conference, can be submitted. The **submission deadline** is **February 28th 2022** and the submission system will open later this year.

Post-conference publication will include both a **post-conference book** (planned to be published by Springer in the AICT series) and a **special issue of a journal of the Japanese Computer Society**.

Further details can be found on the **conference website**. If you would like to stay informed, please consider subscribing to the **WCCE 2022 newsletter** (at udue.de/wcce2022).

INNOVATION ARABIA 15
إبداعات عربية
ANNUAL SUMMIT 2022

CALL FOR ABSTRACT

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IA 15 Virtual Conference 1
Towards an Inclusive and Sustainable Digital Future
23 November 2021

IA 15 Virtual Conference 2
Learning for Skills
8 December 2021

IA 15 Virtual Conference 3
Innovation Systems for Sustainability
25 January 2022

IA 15 Summit
22 February 2022

INNOVATION ARABIA 15
إبداعات عربية
ANNUAL SUMMIT 2022

INNOVATION EVERYWHERE

CALL FOR ABSTRACT

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In its Fifteenth edition, **Innovation Arabia (IA 15)**, the Middle East's pioneering conference and exhibition will be held under the patronage of His Highness Sheikh Hamdan Bin Mohammed Bin Rashid Al Maktoum, Crown Prince of Dubai, and President of Hamdan Bin Mohammed Smart University (HBMSU). The conference coincides with EXPO 2020 and contributes to Dubai as the hub for connecting minds and creating the Future. As an application of its theme "Innovation Everywhere: Innovation Acceleration and Future Paradigms for Economic Growth and Sustainability" IA15 comprises three virtual conferences and a summit dedicated to showcasing the identified distinguished innovations.

The three conferences will have distinguished keynote speeches, panel discussions, scientific presentations sessions, webinars, social activities, and entrepreneurial pitches. The Summit will be held on 22 February 2022, where selected keynote speeches and awards ceremonies will occur. IA15 addresses contemporary issues in service quality, education for skills, and sustainability, and helps spread a culture of innovation throughout the world. IA 15 will provide a platform for passionate communities aspiring to a new level of success for innovation. Join us in celebrating innovation everywhere, starting from November 2021 until February 2022.

We invite you to submit communications to us on these topics:

Innovation for Quality of Digital Services
Learning for Skills
Innovation Systems for Sustainability

We welcome scholars, students, young entrepreneurs and practitioners from all disciplinary backgrounds to submit abstracts of applied research, case studies, showcases and e-posters for presentation at the conference sessions: <https://abstracts.index.ae/IA-2022>

Please refer to the [guidelines of abstract submission](#) for more details.

Tel: +971 4 520 8888 | Mob: +971 55 726 0135 | Email: registration@innovationarabia.ae innovationarabia.ae

Some of forthcoming IFIP events. For a full list of events, please look at <http://www.ifip.org>

Eighteenth Annual IFIP WG 11.9 International Conference on Digital Forensics http://ifip119.org/	ICDF 2022	03/01-04/01 2022 Virtual	IFIP WG11.9 / TC11
6th International Conference on Computer, Communication and Signal Processing (ICCCSP 2022) https://www.icccsp.com/2022/	ICCCSP 2022	24/02-25/02 2022 Chennai, IN	IFIP TC5
European Conference on Service-Oriented and Cloud Computing https://esocc-conf.eu/	ESOCC	22/03-24/03 2022 Lutherstadt Wittenberg, DE	IFIP WG2.14 / IFIP TC2
5th International Conference on Computational Intelligence in Data Science http://www.iccids.in/	ICCIDS 2022	24/03-26/03 2022 Chennai, IN	SSN Trust
Wireless On-demand Network systems and Services Conference http://2022.wons-conference.org/	WONS	30/03-01/04 2022 Oppdal, NO	IFIP WG6.3 / IFIP TC6
International Workshop on Coalgebraic Methods in Computer Science https://www.coalg.org/cmcs22/	CMCS	02/04-03/04 2022 Munich, DE	IFIP WG1.3 / IFIP TC1
International Conference on Optical Network Design and Modelling ondm2022.tele.pw.edu.pl	ONDM	16/05-19/05 2022 Warsaw, PL	IEEE Photonics Society (TBC) / IEEE Communication Society (TBC)
IFIP Networking 2022 Conference https://networking.ifip.org/	IFIP Networking 2022	13/06-16/06 2022 Catania, IT	IFIP TC6
15th World Conference on Information Security Education https://www.ifiptc11.org/wg118-events/wise15	WISE15	13/06-17/06 2022 Copenhagen, DK	IFIP WG11.8 / IFIP TC11
International Conference on ICT Systems Security and Privacy Protection https://ifipsec2022.compute.dtu.dk/	IFIP SEC	13/06-17/06 2022 Copenhagen, DK	IFIP TC11
Artificial Intelligence Applications and Innovations https://ifipaiai.org/	AIAI	17/06-20/06 2022 Crete, Xersonisos, GR	Democritus University of Thrace, School of Engineering, Lab of Mathematics and Informatics (ISCE) Greece
IFIP WG8.6 Working Conference 2022 <a href="https://ivi.ie/ifip
david.wastell@nottingham.ac.uk">https://ivi.ie/ifip
david.wastell@nottingham.ac.uk	IFIP86-2022	20/06-21/06 2022 Maynooth, IE	IFIP WG8.6 / IFIP TC8
Annual Privacy Forum 2022 https://privacyforum.eu/	APF 2022	23/06-24/06 2022 Warsaw, PL	IFIP TC11
IEEE/IFIP International Conference on Dependable Systems and Networks www.dsn.org	DSN	27/06-30/06 2022 Baltimore, US	IEEE

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