

2023 IFIP Networking Conference (IFIP Networking)

General Chairs Welcome Message

On behalf of the organizing committee, we are pleased to welcome you to the International Federation for Information Processing (IFIP) Conference on Networking 2023 (IFIP Networking 2023).

Networking is the flagship conference of the IFIP Technical Committee on Communication Systems (TC6). This 22nd edition of the series was held in Barcelona, Spain on June 12-15, 2023, hosted by Universitat Politècnica de Catalunya (UPC-BarcelonaTech). We would like to thank the technical co-sponsor IEEE ComSoc, the Golden Patron Huawei and Silver Patrons Cisco and i2CAT Foundation to provide financial support for the event.

After two years in remote mode only (2020 and 2021) and past year in hybrid format (2022), we were all pleased to return to normality and be able to celebrate this edition in-person. The main objectives of Networking 2023 was therefore to bring together again academic and industrial experts of the networking community to discuss the most recent advances in networking, to highlight key issues, identify trends, and develop a vision of the future Internet from a design, deployment and operation standpoints.

A summary of this edition in numbers:

- 4 co-events: the main conference, held June 13-15, three workshops on June 12, the IFIP TC6 50th Anniversary on June 12 and the PhD Symposium on June 13.
- 3 keynote speakers in the main conference, 4 invited talks in the workshops, 2 invited talks in the PhD Symposium and 4 invited talks in the IFIP 50th anniversary.
- 5 Student Travel Grants
- 1 Best Paper Award among the papers submitted to the main conference
- 1 Best Poster Award among the posters presented in the PhD Symposium

The Networking 2023 conference was a success thanks to the efforts of many researchers who enthusiastically collaborated over the past year. Our warm thanks go to all conference chairs.

Specially to the Technical Program Chairs, Prof. Mun Choon Chan of the National University of Singapore (Republic of Singapore), Dr. Xavier Gelabert of Huawei (Sweden) and associate professor Violet R. Syrotiuk of Arizona State University (USA) for their extraordinary work on setting up the conference program through a meticulous double-blind review.

To the Workshop Chairs, Dr. Eusebi Calle, Dr. Lluís Fàbrega and Dr. Pere Vila from Universitat de Girona (Spain) for attracting several workshop proposals and setting up three complementary workshops.

To the Publicity Chairs, Dr. Mirosław Klinkowski of the National Institute of Telecommunications (Poland) and Prof. Salvatore Spadaro of Universitat Politècnica de Catalunya (Spain) to disseminate the event to their innumerable friends and colleagues.

To the Student Travel Grant (STG) Chairs Dr. Walter Cerroni of University of Bologna (Italy) and Dr. Michael McGarry of University of Texas (USA). Thanks to their rigorous work, two students were awarded with the IFIP STG and three students with the National Science Foundation (NSF) STG.

To the Publication Chair Dr. Jordi Paillissé of Universitat Politècnica de Catalunya (Spain) for managing all papers and their respective signed copyrights in the correct format and preparing them for the submission to the IFIP and IEEE digital libraries.

To the Local Chairs, Prof. Josep Solé Pareta and Dr. Jordi Perelló, both from Universitat Politècnica de Catalunya (Spain), for their priceless effort of organizing and coordinating all local providers.

To the Steering Committee Prof. Silvia Giordano of SUPSI (Switzerland), Dr. Robert Bestak of the Czech Technical University in Prague (Czech Republic), Prof. Henning Schulzrinne of Columbia University (USA), Prof. Burkhard Stiller of University of Zurich (Switzerland), and Dr. Joerg Widmer of IMDEA Networks (Spain) for choosing us as general chairs of the conference.

To all staff volunteers Maika Sanchez Miranda, Fatima Yolanda Rodriguez Galan, Abhijit Das, Axel Wassington, Ethungshan Shitiri, Hamid Latif Martinez and Pau Escofet for their service during the conference.

And finally, a big thank to our Web Chair Albert López Brescó of Universitat Politècnica de Catalunya (Spain) for all-round technical and non-technical support provided for the success of this event.

General Chairs



Davide Careglio
Universitat Politècnica de Catalunya



Jordi Domingo
Universitat Politècnica de Catalunya

2023 IFIP Networking Conference (IFIP Networking)

Technical Program Chairs Welcome Message

It is our great pleasure to welcome you to participate in the 22nd Annual IFIP Networking Conference (Networking 2023).

For this edition, a total of 225 papers were initially registered and 192 were successfully submitted within the conference deadline. Among them, 52 papers were finally selected, giving an acceptance rate of 27.1%. We wish to thank the authors of all submitted papers for choosing Networking 2023 as the venue to present their excellent research results.

Following the process consolidated during the last few editions, the review was double blind. A rigorous review process was conducted by 149 highly qualified program committee members: 80 located in Europe, 38 in North America, 27 in Asia, and 4 from other continents. A total of 553 reviews were received. All papers were reviewed by at least 2 independent reviewers (90% by at least 3 reviewers); all accepted papers received at least 3 reviews. As TPC chairs, we first walked through all submissions and directly rejected 2 papers that did not comply with the double-blind review process. Then, we selected reviewers based on bidding and assigned at least 4 reviewers for each paper. After collecting a sufficient number of reviews, we walked through all reviews and selected the papers with conflicting reviews. For these cases, one of the reviewers was selected as a meta-reviewer, meaning s/he had to raise a discussion session with the other reviewers to agree on a final score. Finally, we held a meeting to decide final accepted papers with consensus by fully considering the reviews and discussion results. We would like to extend our thanks to the program committee members and to additional reviewers that contributed their valuable time and expertise to provide professional reviews, discussions, and very useful feedback to authors on a narrow time schedule.

Among the 52 accepted and presented papers, five have been selected as candidates for the best paper award and carefully reviewed by the TPC chairs. The TPC chairs attended the presentation of each candidate best paper to make a final decision based on the quality of the paper and of the presentation. At the end of the process, the paper “Web Privacy by Design: Evaluating Cross-Layer Interactions of QUIC, DNS and H/3” authored by Jayasree Sengupta, Mike Kosek, Justus Fries, Pratyush Dikshit, and Vaibhav Bajpai was selected for the best paper award of IFIP Networking 2023.

The final program consisted of 14 sessions with 3 or 4 papers each spanning 2 and a half days. A keynote presentation was scheduled at the beginning of each day of the conference. In this regard, we would like to thank the keynote speakers, Dr. Ian F. Akyildiz of ITU and Truva Inc. (USA), Dr. Yuanwei Liu of Queen Mary University of London (UK), and Dr. Paola Grosso of University of Amsterdam (Netherlands).

The conference was a highly stimulating event fostering interesting discussions as well as useful interaction between researchers, and provides an excellent forum for exchanging and developing new ideas in the field of networking.

We are looking forward to a successful IFIP Networking 2024.

Technical Program Chairs



Mun Choon Chan
National University of
Singapore



Xavier Gelabert
Huawei



Violet R. Syrotiuk
Arizona State University

2023 IFIP Networking Conference (IFIP Networking) Workshop Chairs Welcome Message

IFIP Networking 2023, hosted by the Universitat Politècnica de Catalunya, Barcelona (Spain), solicited half-day or full-day workshops to be held on 12 June 2023. A total of 5 proposals were submitted and 3 were finally accepted based on the technical issues addressed and the consistency of the program.

The workshop “Security for IoT Networks and Devices in 6G (Sec4IoT)” was a half-day event. The main motivation for Sec4IoT 2023 workshop was to bring together researchers and practitioners working on novel security solutions for IoT networks and devices and disseminate current research issues and advances. Sec4IoT 2023 workshop welcomed submissions focused on the design and development of novel security solutions for IoT networks and devices in the future 6G communication platform. Five papers were accepted and presented during the workshop. We would like to thank Dr. José Ribeiro of Evotel Informatica, Prof. Raed Abd-Alhameed of University of Bradford (UK) for proposing, organising, and chairing this workshop.

The workshop “Impact of IT/OT Convergence on the Resilience of Critical Infrastructures (IOCRCI)” was also a half-day event. The IOCRCI workshop offered a timely venue for researchers and industry partners to present and discuss their latest results on the impact of IT/OT Convergence on the Resilience of Critical Infrastructures. We aimed to get a clear understanding of the research challenges for this theme, including insight in the state-of-the-art, availability of data sets and testbeds, positioning papers, experimental and operational experience and situational awareness around the subject. The workshop was a continuation of a series of workshops, jointly organized by Delft University of Technology and University of

Girona, on the theme “Robustness of Complex Networks”. Three papers were accepted and presented during the workshop. We would like to thank Prof. Robert Kooij of Delft University of Technology (the Netherlands), Dr. Erik Meeuwissen of TNO (the Netherlands) and Prof. Jose Marzo of University of Girona (Spain) for proposing, organising, and chairing this workshop.

The workshop “3rd International Workshop on Time-Sensitive and Deterministic Networking (TENSOR) 2023” was a full-day event. Time-sensitive deterministic communications constitute an emerging topic with significant interest from industry and various application domains, such as industrial networks, automotive communications, mobile and wireless networks, as well as service provider networks. Time-sensitive deterministic communications are expected to provide a solid underpinning that will support modern applications connectivity in multiple and distinct use cases and operational environments. The goal of this workshop was to bring together researchers from academia and industry in order to investigate challenging aspects in the area of time-sensitive deterministic communications, as well as identify future research directions for ultra-low latency communications. Open issues and key innovations were discussed for both network performance and network management related aspects of deterministic communications. This was the third edition of TENSOR, after two successful previous editions also co-located to the IFIP Networking conference. Five papers were accepted and presented during the workshop. We would like to thank Dr. Luis M. Contreras of Telefónica (Spain) and Prof. Panagiotis Papadimitriou of University of Macedonia (Greece).

General Workshop Chairs



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