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CONFERENCE HIGHLIGHTS

IEEE INFOCOM 2023 Conference Highlights

by Min Song and Nariman Farvardin, Stevens Institute of Technology, USA

General Chairs, INFOCOM 2023

IEEE International Conference on Computer Communications (INFOCOM) has always been a premier conference in computer communications and networking. It draws researchers from across the globe to present and exchange innovative contributions and breakthrough ideas. This year, the organizing committee and the technical program committee worked hard to provide a rich technical program consisting of 63 technical paper sessions, 20 workshops, a student poster session, a demo session, a keynote speech, panels, and an interview with the INFOCOM achievement award winner.

After being held virtually for the past three years due to the COVID-19 pandemic, INFOCOM 2023 offered both in-person and remote participation for about 800 participants from 39 countries. INFOCOM 2023 also marks the first time that the conference has been held on a university campus at Stevens Institute of Technology Hoboken, New Jersey, USA, on May 17–20, 2023.

There were quite a few challenges in organizing INFOCOM 2023. First and foremost was the hybrid mode. Except for the workshops that were offered exclusively online, all programs were hosted on the Stevens campus and streamed live to all remote attendees via Zoom. “The hybrid mode, together with the ever-changing travel restrictions around the world, made hosting INFOCOM2023 much more challenging than any other edition of INFOCOM,” said Larry Xue, Chair of the IEEE INFOCOM Steering Committee.

Another big challenge was partially due to the change of the conference venue. INFOCOM 2023 was initially scheduled years ago to be held in Tokyo, Japan. In June 2022, faced with the uncertainty of the COVID-19 pandemic and related travel restrictions, the INFOCOM Steering Committee decided to move it to the U.S. and reached out to Stevens Institute of Technology for hosting it in a hybrid mode. By that time, we projected to have around 250 in-person attendees. No one would have expected that this number would eventually reach 517, with the number of remote attendees being around 300.

As a technological research university located on the banks of the Hudson River, Stevens Institute of Technology was fully committed to providing all participants with a stimulating and exceptional conference experience, with stunning views of and easy access to New York City. Stevens President Nariman Farvardin welcomed conference attendees at the opening of the conference, promising to give them an intellectually and culturally stimulating experience. He thanked the participants for visiting Stevens, the organizing committee for their work, and “his boss,” Chairman of the Electrical and Computer Engineering Department Dr. Min Song for his detailed planning and preparation.

The Stevens INFOCOM team, together with the organizing committee, worked hard for several months to plan and organize the event. Based on the ever-increasing number of attendees, the



Stevens President Nariman Farvardin gave open remark.



Coffee break, Babbio Center.



Attendees enjoy the moment before the cruise dinner.

Stevens team managed to explore all the spaces and resources at the newly established University Complex Center to offer a

high-quality conference experience for all attendees. The Stevens Division of Information Technology provided reliable network connections and livestreamed the programs to about 300 remote attendees via Zoom. In particular, the Division of IT purchased nine new computers with wired network connections for each session room and set up a dedicated wireless network for the conference attendees. More than 10 Stevens staff members from the Divisions of IT, Facilities, Campus Police, University Events, and the Department of Electrical and Computer Engineering provided full on-site service for the conference. Twenty student volunteers from Stevens Institute of Technology, under the guidance of the organizing committee, worked tirelessly since early May 2023 to download all the presentation slides (for in-person paper presenters) and videos (for remote paper presenters). The student team checked each and every slide and video before the conference to ensure smooth and timely session operations for both in-person and remote attendees. The entire Stevens INFOCOM team also conducted comprehensive testing and rehearsal on May 15, 2023 – two days before the conference.

Finding a parking space in Hoboken has sometimes been a challenge. To address this issue, Stevens offered free daily and overnight parking for conference attendees. About 30 in-person attendees benefited from this free service from Stevens.

Aiming to create a stimulating conference experience for in-person attendees, the conference hosted a number of local events that took advantage of the unique location of the conference venue and provided high-quality food service for all in-person attendees. These include a chartered cruise dinner around Manhattan on May 17 and a banquet dinner on May 18. Moreover, INFOCOM 2023 attracted five patrons. Their contribution undoubtedly helped INFOCOM 2023 offer a high-quality, inclusive, and diverse experience for all attendees and ensured that INFOCOM 2023 remained a top-ranked conference in networking.

“I have heard only positive feedback from the conference participants. Every day, there were participants expressing their sincere appreciation of the INFOCOM2023 organizing committee for a great edition of INFOCOM,” said Larry Xue.

CONFERENCE REPORT

IEEE International Conference on High Performance Switching and Routing (IEEE HPSR 2023)

by Eirini Eleni Tsiropoulou, HPSR 2023 General Chair, and Dimitrios Koutsonikolas, Carla Fabiana Chiasserini, Gang Li, HPSR 2023 Technical Program Co-Chairs

The 24th edition of the IEEE International Conference on High Performance Switching and Routing was organized in Albuquerque, NM, USA, June 5–7, 2023. The International Conference was held in Sheraton Albuquerque airport hotel, Albuquerque, NM, USA, hosting more than 47 participants in person and few more participants that attended the program online due to some travel restrictions. The 24th edition of IEEE HPSR was the first one in the history of the conference to be in person after the pandemic. This first in-person edition of IEEE HPSR 2023 after the pandemic had its own challenges in terms of attracting submissions and participants to travel at Albuquerque, New Mexico, while also some of the participants had visa issues. However, at the end, IEEE HPSR 2023 was a very successful event with more than 47 participants in person and accommodating the needs of some online participants. This was a good first step for more attendees in the future in-person editions of the conference. Also, the venue of IEEE HPSR 2023 was strategically selected to be close to the Sunport International Airport at Albuquerque, and at the same time next to downtown for people who wanted to see the city.

Dr. Dimitrios Koutsonikolas, Dr. Carla Fabiana Chiasserini, and Dr. Gang Li, TPC Co-Chairs, along with the support of the rest of the Organizing Committee members, put together a 3-day technical program that brought together experts from industry, academia, and research to share their vision as well as their achieved advances in the continuing evolution of high performance switching and routing. The 24th edition of the IEEE International Conference on High Performance Switching and Routing focused on the topic of *Artificial Intelligent Next Generation (NextG) Integrated Communications and Computing Systems*.

The first day of the conference started with the welcome message from Dr. Eirini Eleni Tsiropoulou, General Chair, and the opening remarks were presented on the second day of the conference by Dr. Dimitrios Koutsonikolas, TPC Co-Chair.

Two keynote talks were delivered by Dr. Shivendra S. Panwar and Dr. Ian F. Akyildiz on the second and the third day of the conference, respectively, focusing on the topics of next generation wireless networks and the Internet of Space Things.



Welcome message by Dr. Eirini Eleni Tsiropoulou, General Chair.



Best paper award for the paper “Do Switches Still Need to Deliver Packets in Sequence?” by Ufuk Usubutun, Fraida Fund, Shivendra Panwar, New York University & Tandon School of Engineering, USA.

Specifically, Dr. Panwar delivered a talk titled “Latency is the new Bandwidth” and Dr. Akyildiz analyzed the topic: “A New CubeSat Design with Reconfigurable Multi-band Radios for Dynamic Spectrum Access in Internet of Space Things.”

Five tutorials were delivered in the 3-day duration of the conference covering a wide range of interesting topics ranging from distributed 5G network architectures to high performance com-

puting, to network softwarization. *Dr. Chiara Boldrini, Tutorial Chair*, organized the review process of the submitted tutorials. The tutorials attracted great interest from the participants, creating a vibrant environment for research discussions. Additionally, an online workshop was held on the first day of the conference focusing on a wide variety of topics related to high performance switching and routing and the online session was moderated by *Dr. Anna Maria Vegni and Dr. Aris Leivadreas, Workshop Co-Chairs*.

Five technical sessions were organized focusing on the topics of Programmable Control and Data Plane, Switching and Routing, Wireless Networks, Machine Learning & Networks, and Terrestrial and Aerial Mobile Networks. Five papers were presented at each of the five technical sessions followed by questions and the answers, engaging the participants in lively discussions. IEEE HPSR 2023 received 42 submissions in the main conference out of which 18 papers were accepted for publication and will be presented in the IEEE proceedings. Also, 7 invited papers were received by prominent researchers in the field of high performance switching and routing. All the papers went through a rigorous review process receiving at least three reviews per paper. The best paper award was assigned based on the weighted score of the reviews, the overall paper quality, and the received comments by all the reviewers. The paper "Do Switches Still Need to Deliver Packets in Sequence?," co-authored by *Ufuk Usubutun, Fraida Fund, Shivendra Panwar*, New York University & Tandon School of Engineering, USA, received the best paper award, which was announced during the gala dinner on the second day of the conference.

Several social events took place in the 3-day HPSR conference. In the evening of the first day, a welcome reception was held, welcoming all the participants to the conference. During the welcome reception, the posters and demos were presented

attracting the interest of the participants and engaging them in fruitful discussions. *Dr. Xiang Sun, Posters & Demos Chair*, organized the posters and demos submission and review process. The gala dinner of the conference was organized in the evening of the second day, where the best paper award was also announced, and the participants had the opportunity to taste the unique cuisine of New Mexico. Refreshments were offered to the participants during all the days of the conference, including food, beverage, and coffee breaks.

The EDAS submission system and the preparation of the IEEE proceedings were prepared by *Dr. Pantelis Frangoudis, and Dr. Andrea Morichetta, Publication Co-chairs*, and the publicity of the conference was supported by *Dr. Suzan Bayhan, Dr. Sumitro Bhaumik, and Dr. Zhu Wang, Publicity Co-chairs*. *Dr. Symeon Papavassiliou, Panel Chair*, supported the conference by identifying potential keynote speakers. The website of the IEEE HPSR 2023 was handled by *Md Sadman Siraj, and Panagiotis Charatsaris, Web Co-chairs*, and IEEE continuously supported the conference with *Shirley P. Cisneros, ComSoc Project Manager*, and *Bruce Worthman, Financial Chair*. The Organizing Committee would like also to thank the volunteers that supported the local arrangements during the 3-day conference, *Aisha B Rahman, Md Sadman Siraj, Arianna Santamaria, Jenilee Jao, and Adedamola Adesokan, volunteers of IEEE HPSR 2023*.

The Organizing Committee received very encouraging comments from the participants regarding the technical program of the conference, as well as of its excellent organization. The Organizing Committee would like to thank all the Technical Program Committee members, the authors, the keynote speakers, and all the participants for making IEEE HPSR 2023 a remarkable experience. Extended versions of selected papers will be fast-tracked to: Computer Networks (Impact factor 5.493).

WORKSHOP REPORT

IEEE ComSoc Lebanon Chapter 2023 Workshop: Getting into the Raspberry Pi

by Jacques Demerjian, IEEE ComSoc Lebanon Chapter Chair

IEEE ComSoc Lebanon Chapter and IEEE Antonine University Student Branch have organized a free technical workshop entitled "Getting into the Raspberry Pi" as part of the IEEE ComSoc Lebanon Chapter 2023 Workshop Series.

The full day workshop was held on Saturday June 24, 2023 at the Antonine University (<https://ua.edu.lb>) who hosted the workshop, in collaboration with Coder-Maker (<http://www.codemaker.org/>) who delivered the technical workshop.

The purpose of this technical workshop was to get into Raspberry Pi, learn how to use it as a full fledged maker from software to hardware and to create a space where students representing different universities can meet to discuss issues, identify problems, brainstorm ideas, make decisions and develop solutions by using Raspberry Pi.

The workshop also included a competition among Lebanese universities between teams of two students from different participating universities. The projects covered a broad range of themes, including cybersecurity, automation, Internet of things, biomedical applications, audio and signal processing, among others. The students demonstrated high levels of innovation and creativity to finish their projects within the allocated time.

Every participant has received a Certificate of Completion to confirm that she/he has successfully completed the Getting into the Raspberry Pi workshop, learned to program the Raspberry Pi using Python, and developed and submitted a project.

Prizes were distributed to the winners, where:

- The team composed of Mr. Anthony Saad and Mr. Marc El Jalkh from Holy Spirit University of Kaslik (USEK) achieved first place.



Group photo of the IEEE ComSoc Lebanon Chapter 2023 Workshop "Getting into the Raspberry Pi."



Inter-universities competition between the students teams.

- The team composed of Miss Agapy Abi Hard and Mr. Wisam Boustany from University La Sagesse (ULS) achieved second place.
- The team composed of Mr. Serge Sandakly and Mr. Albert El Murr from the Lebanese University (LU) achieved the third place.

IEEE ComSoc Lebanon Chapter and IEEE Antonine University Student Branch are delighted to have received a large

number of participants to the competition, which reflects the importance accorded to the coding as a teamwork, interpersonal, problem-solving and critical skill, and as a tool supporting innovation. In addition, it was a great opportunity for students and instructors from different backgrounds to share and discuss their knowledge and their ideas to advancing technology for the benefit of humanity.

This successful workshop was achieved thanks to the combined efforts of volunteers composed from Antonine University IEEE Student Branch, Coder-Maker, Antonine University and IEEE ComSoc Lebanon Chapter.



Technical session at the workshop.

CHAPTER REPORT

IEEE ComSoc Awareness Event at University of Bahrain

by Dr. Reham Almesaeed, IEEE ComSoc Bahrain Chapter Secretary

Driven by the immense need to focus on membership engagement initiatives, membership development activities, members virtual educational and networking opportunities offerings, the IEEE ComSoc Bahrain Chapter has set its 2023 strategy on 4 pillars (1) ComSoc Awareness and Member Recruitment Campaign Across Bahrain Program, (2) Industry Engagement and Recruitment Program, (3) Regional IOT-AI Challenge Program (for Member Recruitment and Retentions), and (4) Pre-University TryEngineering/STEM Program (for Students Recruitment).

IEEE ComSoc Bahrain Chapter has kicked-off its "IEEE ComSoc Awareness" program through its participation in the "Professional Societies Awareness Day" that was organized by University of Bahrain, IT College on Monday, 13 March 2023. Dr. Reham Almesaeed, IEEE ComSoc Bahrain Secretary, represented the Chapter in the event. Members of the ComSoc Student Branch (Ali Redha, Farah Alkhunaizi, and Maryam Hamad) have also contributed to the event in raising awareness among IT students. Dr. Reham has made a presentation on the Chapter key facts, goals, and recent chapter activities. Around 70 students attended



Dr. Reham Almesaeed, Secretary, IEEE ComSoc Bahrain Chapter in IEEE ComSoc Awareness Day.

the event, where many showed interests in joining the IEEE Communication Society and were guided by ComSoc Student Branch representatives on how to join the Society.

The ComSoc Chapter has been focusing recently on raising awareness among students as they are potential future members who will serve the IEEE and the Communication Society. The awareness session that was carried at the University of Bahrain, and will continue to other universities in Kingdom of Bahrain in the near future, will play an important role motivating the youth to participate in the volunteer work and familiarize them with the benefits they are expected to gain from joining the IEEE at the education, professional and personal levels. Dr. Reham has also used this opportunity to establish collaboration links between the Chapter and University of Bahrain to organize future seminars and workshops that can be supported by the IEEE Communications Society.

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