Communications Software Technical Committee

The GC'23 Meeting

December 6, 2023 at 2.00 pm (MYT)

Housekeeping

- Thank you for being here!

- Please provide your name, affiliation(s) and contact email in the link below
  - https://forms.gle/GNgftzMPJoQoRAqf8

- [If you're yet to subscribe to the mailing list, we'll use the contact you provide through the chat to add you to the mailing list.]

- To avoid reverb and accidentals, we ask that you kindly your mics on *mute* unless you're interested in speaking

- Motions, seconds, approvals can be expressed by speaking or "thumbs up", but we ask that you also note them through the chat.

Agenda

- Approval of agenda

- Welcoming remarks, and overview of CommSoft

- Approval of ICC'23 minutes

- Website considerations

- Update on e-Letter

- Update on Standards

- Update on ComSoc Student Competition

- Update TC P&P Revisions

- Awards Subcommittee

- Technical Achievement Award 2023

- Updates on SIGs

- Updates on sponsored symposia and conferences

- Other business (if any)

Welcoming Remarks

- CommSoft TC mission
  - " … mission of this committee is to advance the state of the art in communications software and its various aspects and applications. It serves as the major forum for discussion among communications software professionals in both the communications and computer industries."

- Presence
  - https://commsoft.committees.comsoc.org/

- Members
  - 436 on the mailing list
  - 56 active members (as of ICC'23)
    - **Drop from 59 after GC'23**
    - **Please encourage membership and engagement**
    - **Work to involve industrial reps and expand diversity**
    - **Also, consider working with your local ComSoc Chapter**

CommSoft Team

- Executives for current term (2023-2024)
  - **Chair** Abd-Elhamid M. Taha
  - **Vice Chair** Hassine Moungla
  - **Secretary** Moayad Aloqaily
- Special Interests Group Coordinator
  - Marwane Ayaida
- Newsletter EiCs
  - Aiman Erbad
  - Moayad Aloqaily
- Standards Liaison
  - Mohannad Alharthi
- Student Competition Program
  - Hyunbum Kim
- Website Administrators
  - Safa Otoum
  - Ouns Bouachir

Approval of Minutes

Location	Date and Time	Files
ICC 2023 (via Zoom)	May 11, 2023, 12:00-13:00 (EDT)	presentation | minutes
Globecom 2022 (via Zoom)	Nov 29, 2022, 14:00- 15:30 (EST)	presentation | minutes
ICC 2022 (via Zoom)	May 5, 2022, 9:00-10:00 (EST)	presentation | minutes
Globecom 2021 (via Zoom)	Nov 23, 2021, 10:00-11:00 (EST)	presentation | minutes

- Minutes posted on TC website shortly after meeting
- Access to prior meetings minutes and presentations is also possible through the website

Website Considerations

- Website Administrators
  - Safa Otoum
  - Ouns Bouachir

- Website maintained and with all TC news and updates posted (minutes, agendas, symposium information, …)

- Open for suggestion on usability and ease of access

Updates on e-Letter (<mark>On-hold for GC'23</mark>)

Moayad Aloqaily and Aiman Erbad

- We've been successfully generating an e-Letter twice a year

- This time, however, we're putting the e-Letter on hold due to low number of submissions

- Your engagement and contributions are necessary to the e-Letter's success!

TC P&P Review

- Feedback for the revisions have been sought from the TC members at large on September 9, 2023. Only supportive notes received.

- The revisions were then offered to the active members on October 8th for approval, and the revisions were approved.

- Considerations
  - Alignment with most recent ComSoc bylaws and P&P
  - Review of the definition of "active member," emphasizing engagement and contribution as well as attendance
  - Recognizing positions for
    - Industry Liaison
    - WICE Rep
  - Policies for SIG creation, evaluation, and retirement
  - Review of awards

- To be presented to ComSoc TCB in January for Approval

Awards Subcommittee (2023-2024)

- The following members have kindly agreed to serve on the TC's Awards Subcommittee for 2023-2024.
    - Jalel Ben-Othman (as chair)
    - Cheng Li (member)
    - Melike Erol-Kantarci (member)
    - Adlen Ksentini (member)
    - Hassine Moungla (member)

- Approved by TCB on October 25, 2023.

Technical Achievement Award 2023

- Coll for Nominations emailed to TC on Nov 20, 2023
- <mark>Deadline: December 15, 2023</mark>
- **Eligibility Criteria for Nominees**
  - Demonstrated significant and enduring contributions to communications software.
  - Active participation in TC activities.
  - Current membership in the IEEE Communications Society.

- **Nomination Package**
  - A one-page narrative outlining the nominee's meeting of the above criteria.
  - Any relevant supporting documentation.
  - Optional: Indication of support from other TC members.

- **Nomination Process**
  - Submit your nominations by December 15th directly to the TC's Awards Subcommittee. Please send a single email with the nomination package, ensuring to copy all subcommittee members.
    - Jalel Ben-Othman: jalel.ben-othman@univ-paris13.fr
    - Cheng Li: cheng_li_5@sfu.ca
    - Melike Kontarci: melike.erolkantarci@uottawa.ca
    - Aadlen Ksentini: adlen.ksentini@eurecom.fr
    - Hassine Moungla: hassine.moungla@parisdescartes.fr

Standards Liaison Update

Mohannad Alharthi (Liaison with ComSoc Standardizations Board)

Standards Liaison

➢ Reports to the TC on COM/SDB standardization activities, particularly those of interest to the TC area.

➢ Informs the COM/SDB about TC activities of interest.

ComSoc Standards Development Board (COM/SDB)
https://comsdb.standards.comsoc.org

➢ Supports standardization activities pertaining to all ComSoc technical fields

➢ Holds monthly meetings to follow up on working group activity

Participation

➢ COM/SDB is soliciting participation from TC members with activities suitable for standardization.

➢ Reach out to any working group of interest to contribute
https://comsdb.standards.comsoc.org/working-groups/

Standards Liaison Update

Mohannad Alharthi (Liaison with ComSoc Standardizations Board)

Sample of active SCs and projects (presented reports in recent COM/SDB meetings):

➢ MobiNet-SC

  ➢ **P1954**: Self-Organizing Sepctrum-Agile Unmanned Aerial Vehicles Communications

  ➢ **P1920.2**: Vehicle-to-Vehicle Communications for Unmanned Aircraft Systems

➢ NetSoft-SC

  ➢ **P1916.1**: Standard for Software Defined Networking and Network Function Virtualization Performance

➢ EdgeCloud-SC

  ➢ **P1912**: Standard for Privacy and Security Framework for Consumer Wireless Devices

  ➢ **P1935**: Standard for Edge/Fog Manageability and Orchestration

ComSoc Student Competition Update

- Liaison: **Hyunbum Kim**
  - Proctored and served as ambassador, selection committee

- **IEEE ComSoc Student Competition**
  - Led by Prof. Stefano Bregni
  - 73 projects were submitted (The submission number is new record!)
  - Those submissions were evaluated by selection committee
  - https://www.comsoc.org/membership/ieee-comsoc-student-competition

IEEE ComSoc Student Competition

IEEE COMSOC STUDENT COMPETITION
Communications Technology Changing the World

Student COMPETITION

First Prize: US $2000 | Second Prize: US $1000

The Student Competition 2023 is here! Dedicated to the future leaders in communications and networking, IEEE ComSoc holds this annual student competition with the goal of encouraging communications engineering students to expand their knowledge, test and showcase new skills, and inspire innovation. The winning student (or student team) can earn up to US$2,000. The team leader or individual that wins first prize will be invited to receive the prize at IEEE GLOBECOM 2023.

Updates on Special Interest Groups

Marwane Ayaida (SIGs Coordinator)

- The VP on Technical Committee confirmed the need that each TC has SIGs

- More precisely, TCB P&Ps states "Special Interest Groups (SIGs) help the TC foster the scientific and technological development in topical emerging technologies within the scope of the TC. SIGs may be created to promote activities in well-established technologies."

- Moving forward, we need more evidence for SIGs engaging TC members and focused contributions to the TC's and SIG's scopes of interest.
    - "What's in it CommSoft TC and its members?"
    - "Is it relevant to the SIG's scope?"
    - "Has the SIG's membership increased?"

- As a first step, we'll be listing SIG membership on the TC's website.

- As we proceed, we'll be looking forward to activities engaging SIG membership as well as general TC membership

- Starting next meeting, SIGs activity/engagement will be up for review by TC members

CommSoft TC SIGs

Marwane Ayaida (SIGs Coordinator)

- Special Interest Group on "ML and AI for Networking"
  - Lead : Dr. Melike Erol-Kantarci (Melike.erolkantarci@uottawa.ca)

- Special Interest Group on "Security in Communications Software"
  - Lead : Dr. Safa Otoum (Safa.Otoum@zu.ac.ae)

- Special Interest Group on "Big Data and Communication software"
  - Lead : Dr. Hassine Moungla (hassine.moungla@parisdescartes.fr)

- Special Interest Group on "Blockchains and Applications"
  - Lead : Dr. Moayad Aloqaily (maloqaily@xanalytics.ca)

- Special Interest Group on "Performances Evaluation"
  - Lead : Prof. Abdellatif Kobbane (abdellatif.kobbane@um5.ac.ma)

- Special Interest Group on "Communication software for Vehicular AdHoc Networks"
  - Lead : Prof. Hacene Fouchal (Hacene.Fouchal@univ-reims.fr)

- Special Interest Group on "NFV and SDN technologies"
  - Lead : Prof. Sudip Misra (smisra.editor@gmail.com)

ML and AI for Networking

Melike Erol-Kantarci (Lead)

- Special Jury Recognition in **AI Awards North America 2023**! 🏆 These awards recognize and celebrate the outstanding contributions of women in the field of Artificial Intelligence across Canada, USA, and Mexico.

- Dr. Erol-Kantarci, her students and collaborators won two Best Paper Awards from IEEE ICC'23, one in Communication Software & Multimedia Symposium and another one from Next generation Networking and Internet Symposium

- Featured in IEEE ComSoc collection of videos celebrating the achievements of female members highlighting the incredible talent and technical achievements of these women from the ComSoc community

https://www.youtube.com/watch?v=bsatW_IuXKI

ML and AI for Networking

Melike Erol-Kantarci (Lead)

- Keynote on "Paving the AI-Native Way in B5G and 6G," IEEE International Black Sea Conference on Communications and Networking (BlackSeaCom), Istanbul, Turkey, July 7th 2023.

- Panelist for "Getting RIS off the ground with AI and ML" Industry panel by Sparring Partners, October 2023.

- Special Issue on "Data Sets for Machine Learning in Wireless Communications and Networks" (IEEE Communications Magazine 2023)

- Special Issue on "Open RAN: a New Paradigm for Open, Virtualized, Programmable, and Intelligent Cellular Networks" (IEEE JSAC 2023)

- General co- chair of IEEE International Conference on Machine Learning for Communication and Networking (ICMLCN) 2024

- Track chair, IEEE ICC, Selected Areas in Communications (SAC) - Machine Learning for Communications and Networking 2024

- Track chair, IEEE CCNC, AI/ML in Communications and Networking 2022, 2023, 2024

Talks, special issues and symposium attracted large number of participants from the TC.

Security in Communications Software

Safa Otoum (Lead)

- **Best paper award:**

Dr. Safa Otoum and her contributor Mehdi Letafati won the best paper award from IEEE International Conference on Intelligent Metaverse Technologies & Applications (iMeta 2023) in Estonia for the research on ``Global Differential Privacy for Distributed Metaverse in Healthcare Systems".

- **Keynotes and Panels:**

Panelist at Kuwait Fintech, "The Role of AI and Blockchain in Advancing Financial Services and Applications" for exploring the applications and emerging challenges of AI in Kuwait's banking sector.

Keynote on "Blockchain- supported Federated Learning for Trustworthy 5G/6G Networks.)", in IEEE 5G/6G Blockchain Cybersecurity Digital Trust Summit, Rabat, 2023.

- **Upcoming events:**

Demo Co-Chair, IEEE International Conference on Blockchain and Cryptocurrency, 27–31 May 2024, Dublin, Ireland

Local Chair, 20th EAI International Conference on Security and Privacy in Communication Networks, October 24-26, 2024, Dubai, UAE

SIG on Big Data and Communication software

Hassine Moungla (Lead)

List of Invited Seminar Talks in 2023 hosted at Université Paris Cité / Data Intelligence Institute of Paris

o *"Testing System Intelligence", :* **Prof. Joseph Sifakis (Verimag, CNRS), Turing Award winner,** *Dec 6 4pm (France Time Zone)*

   https://u-paris.zoom.us/j/86541881086?pwd=RTBzcjhwaFFhMFlxdk5YU0RsTzdvQT09

o *"Big Multidimensional Data Analytics",* **Prof Alfredo Cuzzocrea** *, December 1, 2023.*

o *"6G Challenges",* **Prof. Abdella Battou, NIST, USA***, 18 November 2023 at 2pm, hybrid*

List of Distinguish Lecturer Program (DLP) connects senior IEEE ComSoc members Talks in 2023

o *"***Prof. Soumaya Cherkaoui***, Polytechnique Montréal, Canada at Université Paris Cité, France. Title : "Navigating Conundrums and Grasping Opportunities in 6G Security in the Age of Machine Learning and Quantum Technology".* **Date : Monday, 20 November 2023 at 15h00***.*

SIG on Big Data and Communication software

Hassine Moungla (Lead)

Conferences

- The 44rd IEEE International Conference on Distributed Computing Systems (ICDCS 2024), July 2024 in Jersey City, New Jersey, USA.

- The 20th International Wireless Communications and Mobile Computing Conference,27–31 May 2024 | Ayia Napa | Adams Beach Hotel, Cyprus

- IEEE ICC 2024 and IEEE GC 2023, Track Chair.

- The Special Session in "Advances in the internet of biological and medical things", Within the IEEE 9th World Forum on Internet of Things, on the 12–27 October 2023 // Aveiro, Portugal,

Journals Open Call

- *IEEE Transactions on Cognitive Communications and Networking - CFP Symbiotic Communication: When Backscatter Communications Meet Cognitive Radio in the Era of IoT – Paper Submission:* **1 February 2024**

- *IEEE JSAC, Special Issue: Advances in Internet Routing and Addressing, 2024-2025 – Paper Submission:* **31 May 2024**

- **IEEE Networking letter and TNSM SI in discussion.**

Blockchains and Applications

Moayad Aloqaily (Lead)

Keynotes and Panels

- Keynote on "Towards AI-assisted blockchain for Metaverse and Industry 5.0", CIND-ML, 2023.

- Panel on "Metaverse Advancements: Pioneering the Future in the UAE", GITEX Future Blockchain Summit - Dubai Harbour, 2023.

- Panel on "Security of LLMs", IEEE Cyberscience Congress – ADNEC, 2023.

- Panel on "Applying AI Research to Blockchain Business Models", Cardano Summit – Grand Hyatt Conventional Center, Dubai, 2023.

- Panel on "The Role of AI and Blockchain in Advancing Financial Services and Applications", 2023.

Conferences and Congress

- The fifth International Conference On Blockchain Computing and Applications (BCCA 2023), 2023.

- Track chair, IEEE GC, WC Symposium, 2023.

- Kuwait Fintech and Blockchain Summit, 2023

Special Issues:

- IEEE JSAC, Special Issue: **Zero Trust for Next-Generation Networking,** 2024-2025.

Performance Evaluation

Abdellatif Kobbane (Lead)

The 10th International
Conference on Wireless Networks and Mobile Communications
26 to 28 October 2023.//Turkey Istanbul Technical University

▸ **Keynotes Speakers**

- **Prof. Mohsen Guizani,** Mohamed Bin Zayed University of Artificial Intelligence (MBZUAI), Abu Dhabi, UAE.

- **Prof. Dr. Hüseyin Arslan,** Istanbul Medipol University, Turkey

- **Prof. Jaime Lloret Mauri,** Polytechnic University of Valencia, Spain

▸ **Virtual Seminars @ WinCOMM 22:**
  – Prof. Taskim Kavzoglu, Gebze Technical University
  – Ibraheem Shayea, Istanbul Technical University
  – Prof. Cheng Li, Memorial University
  – Prof. Zouheir Rezki, University of California Santa Cruz

Performance Evaluation

Abdellatif Kobbane (Lead)

- **Project:** PHC- MAGHREB (France, Morocco, Tunisia)

- ANGEL: Agriculture Numérique et "diGital twin" face aux changEments climatiques pour une sécurité aLimentaire

- **Invited talk**

- *Talk Title: Resources Management in SDN-Mobile Slicing, at University of Polytechnic Hauts-de-France, France september 20, 2023.*

- **Upcoming**

- Winter school on Mean-Field- Type Game theory, at ENSIAS, Mohammed V University, Morocco from 10 to 17 January, 2024

- WINCOM 2024, Conference at Leets University, 23-25 July, 2024

▸ Significant publications:

  – Filali, A., Nour, B., Cherkaoui, S., Kobbane, A., Communication and Computation O-RAN Resource Slicing for URLLC Services Using Deep Reinforcement Learning, IEEE Communications Standards Magazine, 2023, 7(1), pp. 66–73

  – Assila, B., Kobbane, A., Ben-Othman, J., Improving caching resource management: A pricing economic approach using Cournot, Bertrand, and Stackelberg game models, International Journal of Communication Systems, 2023, 36(1), e4358

Vehicular AdHoc Networks activities

Hacene Fouchal (Lead)

- IET Wireless Sensor Systems (coming soon)
  Special Issue on Connected, Cooperative and Automated vehiclles and **Deadline: May 15, 2024**

- **Open Call for Papers on Connected and Automated Vehicles**

On IEEE Vehicular Technology Magazine at **https://www.ieeevtc.org/vtmagazine/cfp-cav.php**

- Connected, Cooperative and Automated Mobility partnership

Dedicated association for advanced mobility https://www.ccam.eu/

- **Special issues on https://ieee-itss.org/pub/t-its/special-issues/ are pending :**

Due to many Special Issues (SI) in progress and a backlog of papers for publications, the IEEE Transactions on ITS is not accepting any new Special Issues proposals indefinitely until further notice (no earlier than December 2023.)

NFV and SDN technologies

Sudip Misra (Lead)

Sponsored Symposia and Conferences

- CSSMA
  - GC'23 (Kuala Lumpur)
    - Hassine Moungla
  - ICC'24 (Denver)
    - Eric Renault
  - GC'24 (Cape Town)
    - Khalil Ibrahimi
  - ICC'25
    - Selection Pending
- Stats

CSSMA@ …	ICC 17	GC 17	ICC 18	GC 18	ICC 19	GC 19	ICC 20	GC 20	ICC21	GC21
Submissions	68	91	84	104	82	121	87	71	70	99
CSSMA@ …	ICC 22	GC 22	ICC 23	GC 23	ICC 24					
Submissions	55	?	58	141	49					

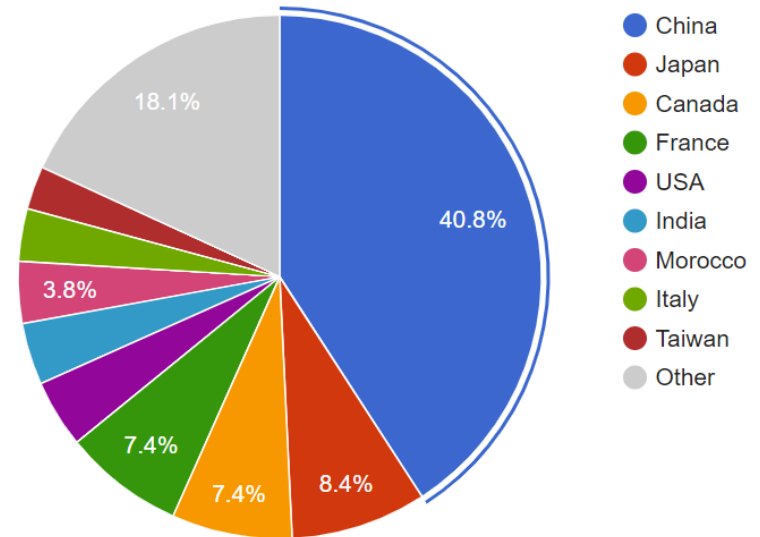## CSM @GC'23 Final Stats – Hassine Moungla Sym. Chair

Conference	Accepted	Rejected	Withdrawn	Total under review, accepted and rejected	Total (incl. withdrawn)	Acceptance ratio (%, including revisions)
IEEE GC'23 - CSM Symposium	55	84	22	141	163	39

Author Types

Highest submission rate for CSM

Autor type	Pending	Accepted	Rejected	Withdrawn
Student	0	41	55	13
Industry	1	3	7	1
Academia	1	11	22	8

Author distribution by country

- China 40.8%
- Japan 8.4%
- Canada 7.4%
- France 7.4%
- USA
- India
- Morocco 3.8%
- Italy
- Taiwan
- Other 18.1%

SoftCom: International Conference on Software, Telecommunications and Computer Networks

- Scope
  - Agile Software Development, Communication Protocols, Telecommunications Services, Network Management, IoT, Mobile and Wireless Communications, Cloud Computing, 5G, AdHoc and Sensor networks, and more.

- Softcom'23
  - September 21-23, 2023, Split, Croatia
  - 31st Instance! *"… marked a triumph of innovation and collaboration in telecommunications and computer networks. Esteemed academics and industry leaders united for insightful sessions and keynotes, addressing cutting-edge topics like Green Networking, IoT, and Robotics. The event also featured interactive workshops and a dynamic business forum, all in the picturesque Adriatic setting. This conference not only celebrated technological advancements but also fostered a vibrant community eager to shape the future of ICT."*

- Softcom'24
  - September 26-28, 2024, Split, Croatia
  - Deadline: May 1, 2024

- Calling on support for program committee members, and for submissions.

Other Business

- How can we support you?
    - Applications for sponsoring conferences or SI proposals.
    - Application for membership applications
    - ComSoc Distinguished Lecture Program (DLP) applications
    - Highlighting your work
    - Hosting webinars

- We rely on your support in …
    - Reaching out to industrial ComSoc members
    - Increasing TC's diversity
    - Publicizing the TC
    - Supporting our flagship symposium
    - Engaging your local chapter

Thank you!

See you at the ICC'24 Meeting