



IEEE Communications Society (ComSoc) Internet of Things, Ad Hoc and Sensor Networks Technical Committee (IoT-AHSN TC)

IoT-AHSN TC Meeting at IEEE ICC 2023

Chair: Jiajia Liu

Vice Chair: Sharief Oteafy

Secretary: Shuai Han

Wednesday May 4, 2023, 9:00 am - 10:30am EST Virtual Meeting

Zoom Meeting ID: 98722133264 passcode: 277840

- Welcome and introduction
- Approval of the agenda and the minutes of the last IoT-AHSN TC meeting
- IoT-AHSN Exceptional Service and Contribution Award
- Introduction to the IoT-AHSN TC
- IoT-AHSN TC Newsletters
- Standard Liaison Report
- Agenda Industry Seminar series
 - Update on IoT-AHSN TC activities in conferences/symposia
 - Update on IoT SIG activities
 - Other businesses
 - Next IoT-AHSN TC meeting
 - Meeting adjournment

Minutes of IoT-AHSN TC meeting post GC'22 (posted on IoT-AHSN TC website)

- Welcome and introduction
- Approval of the agenda and the minutes of the last IoT-AHSN TC meeting
- IoT-AHSN TC 2022 Technical Achievements Award
- Introduction to the IoT-AHSN TC
- IoT-AHSN TC Newsletters
- Standard Liaison Report
- Industry Seminar series
- Update on IoT-AHSN TC activities in conferences/symposia
- Update on IoT SIG activities
- Other businesses
- Next IoT-AHSN TC meeting
- Meeting adjournment

IoT-AHSN Committee Awards

IoT-AHSN Exceptional Service and Contribution Award

This award has been established by the IoT-AHSN TC to recognize members who provided exceptional services to the committee.

2023 IoT-AHSN Exceptional Service and Contribution Award



Prof. Cheng Li

Memorial University of Newfoundland, Canada

For his to exceptional services to the committee

Purpose

The IoT-AHSN TC will serve as ComSoc's focal point in the areas of the Internet of Things (IoT), ad hoc and sensor networks, and wireless networking technologies, stimulating and organizing leading-edge IoT, ad hoc and sensor networks, and wireless networking symposia, workshops, sessions and tutorials at ComSoc conferences. It will also serve as a proactive facilitator in the dissemination of evolving IoT, ad hoc and sensor networking, and wireless networking standards.

Area of interest

Areas of interest include systems and algorithmic aspects of sensor and ad hoc networks, networking protocols and architecture, embedded systems, middle-ware and information management, novel applications, flow control and admission control algorithms, network security, reliability, and management.

Website

The website of the TC:

https://ahsn.committees.comsoc.org



Mailing List

The mailing list of the TC: ahsn@COMSOC.ORG



Membership of IoT-AHSN TC

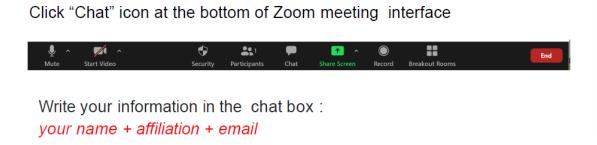
- Open to all ComSoc members
- Need to subscribe to IoT-AHSN TC mailing list
- Note: signing presence doesn't make you a member
- Currently 687+ subscribers(increase steadily)

Active Membership of IoT-AHSN TC

- Need to attend at least 2 of 5 prior IoT-AHSN TC meetings.
- It is important to register your name and email address when you attend.

Mailing List

- Please add your name to the subscription at ahsn@COMSOC.ORG
- This is important to verify your ComSoc Membership



Reminder to take 1 min register in the chat wind



Another option: register in the google forms:

https://docs.google.com/forms/d/e/1FAIpQLSf_sPL27TsYWVGSak_ZQrJUmraJD4 2QpjfTwiPjCJw4cFfriA/viewform?usp=pp_url

TC Officers (2022-2023)



- TC Chair: Jiajia Liu, liujiajia@nwpu.edu.cn
- TC Vice Chair: Sharief Oteafy, soteafy@depaul.edu
- TC Secretary: Shuai Han, hanshuai@hit.edu.cn

IoT-AHSN TC Newsletter







- Newsletter Editor-In Chief:
 - Qiang Ye (Dalhousie University, Canada) <u>qye@cs.dal.ca</u>
 Appointed as EiC of the IoT-AHSN Newsletter for the 2021-2023 term.
- Newsletter Co-Editors:
 - Moez Esseghir (University of Technology of Troyes, France)
 - Lu Lv (Xidian University, China)

IoT-AHSN TC Newsletter- Current Newsletter

• Version 17 is now posted on our web page:

https://ahsn.committees.comsoc.org/newsletter/

- 2 articles published in Vol. 1, No. 17
- 1. Yijie Xun, Yuwei Yang, "Side Channel Analysis: A New Perspective for Vehicle Intrusion Detection System"
- 2. Yixin Fan, Changle Li, Wenwei Yue, " Dependent Application Offloading for Internet of Vehicles"

IoT-AHSN TC Newsletter- Call for Contribution

- Theme of issue: Internet of Underwater Things
- The topics of interest include, but are not limited to:
 - Data Collection in Internet of Underwater Things
 - Energy Efficiency in Internet of Underwater Things
 - Task Offloading in Internet of Underwater Things
 - Resource Allocation in Internet of Underwater Things
 - Localization in Internet of Underwater Things
 - Security in Internet of Underwater Things
 - Privacy Preservation in Internet of Underwater Things
- Deadline: 05/31/2023
- To be published by Dec. 2023

Contact: Qiang Ye, Moez Esseghir, or Lu Lv



Standard Liaison: Rodolfo Coutinho
Concordia University
(Canada)

(2022-2023)

rodolfo.coutinho@concordia.ca

- Representing IoT-AHSN in the following meetings/activities:
 - IEEE ComSoc Standardization Program Development Board (SPDB)
 - IEEE ComSoc Standard Development Board (SBD)
 - Follow the activities/advancements of current IEEE working groups that are working on the areas related to those covered by our committee

- WG on VR and AR (2048)
 - 12 projects in development (some since 2017)
 - IEEE P2048.1: Device taxonomy and definitions
 - Reduce the confusion in many VR/AR devices that have similar or misleading product names but significantly different functions or performance
 - Classify VR/AR devices into categories and levels
 - IEEE P2048.2: Immersive video taxonomy and quality metrics
 - There have been many variants of immersive video (360 degree, 180 degree, stereoscopic ...)
 - Classify immersive video into different categories and levels
 - IEEE P2048.3: Immersive video file and stream formats
 - There have been many variants of immersive video
 - Define the immersive video file and stream formats that support all the variants and facilitate the development of cross-platform content and services
 - Defines the integration of video coding standards into immersive video

https://sagroups.ieee.org/2048wg/

- WG on VR and AR (2048)
 - IEEE P2048.4: Person identity
 - Specifies the requirements and methods for verifying a person's identity in virtual reality
 - IEEE P2048.5: Environment safety
 - Specifies recommendations for workstation and content consumption environment for VR, AR, MR and all related devices where a digital overlay might interact with the physical world, potentially impacting users' perception
 - IEEE P2048.6: Immersive user interface
 - Specifies the requirements and methods for enabling the immersive user interface in Virtual Reality (VR) applications, and the functions and interactions provided by the immersive user interface. Most of the Virtual Reality (VR) applications are supposed to provide fully immersive experiences, which could be spoiled by non-immersive user interfaces such as the ones enabled by conventional keyboards, mice, and touchscreens
 - IEEE P2048.7: Map for virtual objects in the real world
 - Specifies the requirements, systems, methods, testing and verification for AR and MR applications to create and use a map for virtual objects in the real world

- WG on VR and AR (2048)
 - IEEE P2048.8: Interoperability between virtual objects and the real world
 - Specifies the requirements, systems, methods, testing and verification for the interoperability between virtual objects and the real world in AR and MR applications
 - IEEE P2048.9: Immersive audio taxonomy and quality metrics
 - Specifies the taxonomy and quality metrics for immersive audio
 - IEEE P2048.10: Immersive audio file and stream formats
 - Specifies the formats of immersive audio files and streams, and the functions and interactions enabled by the formats
 - IEEE P2048.11: In-vehicle AR
 - Defines an overarching framework for AR systems that assist drivers and/or passengers in vehicles
 - IEEE P2048.12: Content ratings and descriptors
 - Defines the content ratings and descriptors for VR, AR and MR

- WG on Standard for Metaverse: Terminology, Definitions, and Taxonomy (2048)
 - https://sagroups.ieee.org/2048/
 - Kick-off meeting: Jan 31, 2023
 - P2048.101: Standard for AR on Mobile Devices
 - Specifies the general technical framework, components, integration, and main business processes of augmented reality systems applied to mobile devices, and defines its technical requirements, including functional requirements, performance requirements, safety requirements and corresponding test methods.

Industry Seminar Series



Industry Liaison: Anwar Haque Western University (Canada) (2023-2024) ahaque32@uwo.ca

Industry Seminar Series

Activities

Industry invited seminars

- **Talk Title:** The Explosion into Industry 4.0 Private Wireless and Connected Industries
 - Dr. Clifford Liem, Cloud & Network Services, Nokia

Update on IoT-AHSN TC Activities

1. Endorsement of Conferences for ComSoc Technical Co-Sponsorship

- Conference should:
 - be relevant to TC committee activities
 - Have at least three TC members involved in the TPC
 - Enjoy a good reputation among the community

• When the conference is endorsed, report on submissions, review process, etc., shall be sent to the TC for follow up

Update on IoT-AHSN TC Activities

1. Endorsement of Conferences for ComSoc Technical Co-Sponsorship

For 2023 the TC endorsed

- CCCI 2023
- ICCSN2023
- IWCMC 2023

CCCI 2023

General Chair

- Mohammad S. Obaidat, Univ. of Jordan, Jordan
- Zhaolong Ning, Chongqing Univ. of Posts and Telecommunications, China

Assistant General Chair

- Yu Guo, Univ. of Science and Technology Beijing, China

Technical Program Committee

- Jalel Ben Othman, CentraleSupélec & Univ. of Sorbonne Paris Nord, France
- Stefano Giordano, Univ. of Pisa, Italy
- Pascal Lorenz, Univ. of Haute Alsace, France
- Joel Rodrigues, Senac Fac of Ceará, Brazil

Papers statistics

For this year the forecast is around 120 papers

Submission Deadline: July 17, 2023

ICCSN 2023

General Chair

- Xingwei Wang, Northeastern University, China
- Jalel Ben-Othman, University of Paris 13, France

General Co-Chair

- Yuanguo Bi, Northeastern University, China
- Xiushuang Yi, Northeastern University, China

Technical Program Committee Chairs

- Yong Cui, Tsinghua University, China
- Guangjie Han, Hohai University, China
- Jie Jia, Northeastern University, China
- Jiajia Liu, Northwestern Polytechnical University, China
- Nobuo Funabiki, Okayama University, Japan

Papers statistics

For this year the forecast is around 200 papers

Submission Deadline: May 30, 2023

IWCMC 2023

General Chair

Dr. Bo Rong, Communications Research Centre, Canada

General Co-Chair

- Dr. Mohamed Essaaidi, ENSIAS, Morocco
- Dr. Jiajia Liu, Northwestern Polytechnical University, China

Executive Chairs

- Dr. Xiao Wang, University of Alabama, USA
- Dr. Bechir Hamdaoui, Oregon State University, USA

Executive Vice Chairs:

- Dr. Shuai Han, Harbin Institute of Technology, China
- Dr. Abdellatif Kobbane, Mohammed V University in Rabat, Morocco

Technical Program Committee Chairs

- Dr. Mohamed Adel Serhani, UAE University, UAE
- Dr. Jalel Ben-Othman, University of Paris 13, France

Papers statistics

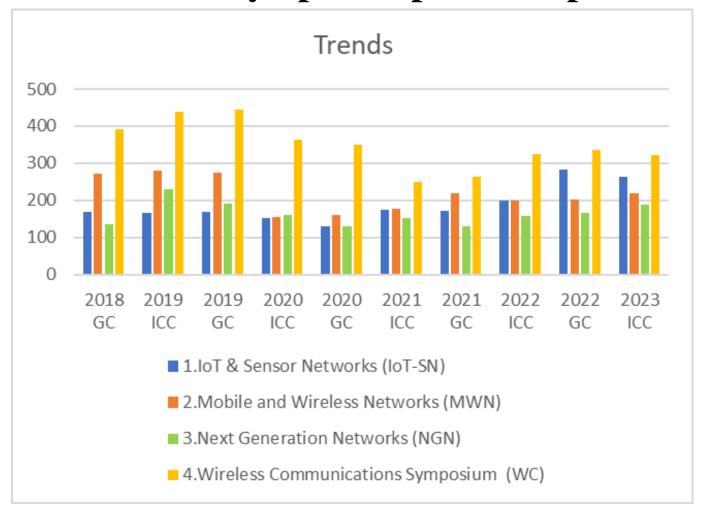
- Accepted papers: 303
- Acceptance rate: 39%

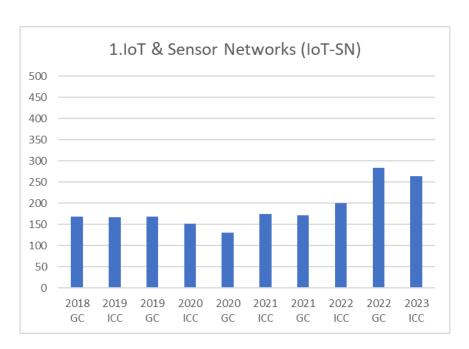
Update on IoT-AHSN TC Activities

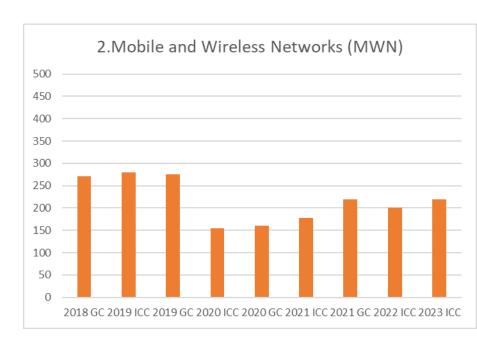
- 2. GC/ICC Technical Symposia Sponsorship
- **□** IoT & Sensor Networks (IoT-SN)
- **☐** Mobile and Wireless Networks (MWN)
- **□** Next-Generation Networking & Internet(NGNI)
- **□** Wireless Communications Symposium(WC)
 - ICC 2023: Rome, Italy
 - GC 2023: Kuala Lumpur, Malaysia
 - ICC 2024: Denver, USA
 - GC 2024: Cape Town, South Africa
 - ICC 2025: Montreal, Canada
 - GC 2025: Taipei

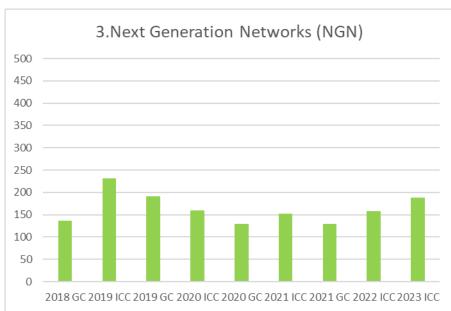
Update on IoT-AHSN TC Activities

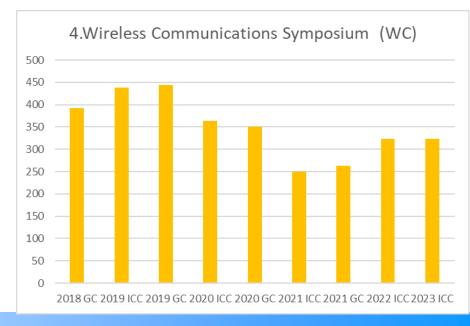
2. GC/ICC Technical Symposia Sponsorship











IoT & Sensor Networks (IoT-AHSN) IEEE ICC 2023

Co-Chairs

- Lyes Khoukhi, Normandie University, France
- Shuai Han, Harbin Institute of Technology, PRC
- R Venkatesha Prasad, Delft University of Technology, Netherlands
- Wendi Heinzelman, University of Rochester, USA

- ♦ Total number of submissions = 262
- Total number of accepted papers = 103
- Acceptance ratio = 39.3
- ◆ TPC members = 260

Mobile and Wireless Networks (MWN) IEEE ICC 2023

Co-Chairs

- Chin-Tser Huang, Univ. of South Carolina, USA
- Nizar Zorba, Qatar University, Qatar
- Chun-Hung Liu, Mississippi State University, USA
- Carla Fabiana Chiasserini, Politecnico di Torino, Italy

- ♦ Total number of submissions = 221
- Total number of accepted papers = 89
- Acceptance ratio = 40
- ◆ TPC members = 230

Next-Generation Networking & Internet(NGNI) IEEE ICC 2023

Co-Chairs

- Zuqing Zhu, University of Science and Technology of China, PRC
- Mubashir H. Rehmani, Munster Technological University (MTU), Ireland
- Periklis Chatzimisios, International Hellenic University, Greece

- Total number of submissions = 188
- Total number of accepted papers = 73
- Acceptance ratio = 38.8
- ♦ TPC members = 289

Wireless Communications Symposium(WC) IEEE ICC 2023

Co-Chairs

- Daniel Benevides da Costa, Technology Innovation Institute (TII), Abu Dhabi, UAE
- Sharief Oteafy, DePaul University, USA
- Arsenia Chorti, Ecole Nat. Sup. de l'Electronique et de ses Apps, France
- Li You, Southeast University, PRC
- Mingyue Ji, University of Utah, USA

- ♦ Total number of submissions = 324
- Total number of accepted papers = 128
- Acceptance ratio = 39.5
- ♦ TPC members = 276

IoT & Sensor Networks (IoT-AHSN) IEEE GC 2023

Co-Chairs

- Nizar Zorba, Qatar University, Qatar
- Baoxian Zhang, Univ. of Chinese Academy of Sciences, PRC
- Selma Boumerdassi, Conservatoire Nat. Des Arts et Metiers, France
- Krishna Moorthy Sivalingam, Indian Institute of Technology Madras, India

Statistics

- Total number of submissions = TBD
- Total number of accepted papers = TBD
- ♦ Acceptance ratio = TBD
- TPC members = TBD

6 May 2023 (Extended Deadline)

Mobile and Wireless Networks (MWN) IEEE GC 2023

Co-Chairs

- Abdallah Shami, The University of Western Ontario, Canada
- Abdel-Elhamid Taha,,Alfaisal University, Saudi Arabia
- Miao Pan,,University of Houston, USA
- Zehui Xiong, Singapore Univ. of Tech. & Design, Singapore

Statistics

- ♦ Total number of submissions = TBD
- Total number of accepted papers = TBD
- ♦ Acceptance ratio = TBD
- ◆ TPC members = TBD

6 May 2023 (Extended Deadline)

Next-Generation Networking & Internet(NGNI) IEEE GC 2023

Co-Chairs

- Aggeliki Sgora, Ionian University, Greece
- Ahmed Refaey Hussein, University of Guelph, Canada
- Sami Souihi, Paris-Est Créteil Univ. / LiSSi Lab, France

Statistics

- ♦ Total number of submissions = TBD
- ♦ Total number of accepted papers = TBD
- ◆ Acceptance ratio = TBD
- ♦ TPC members = TBD

6 May 2023 (Extended Deadline)

Wireless Communications Symposium(WC) IEEE GC 2023

Co-Chairs

- Valeria Loscri, INRIA Lille, France
- Chris Anderson, US Naval Academy, USA
- Giovanni Geraci, Univ. Pompeu Fabra (UPF), Barcelona
- Moayad Aloqaily, Mohamed Bin Zayed University of Artificial Intelligence (MBZUAI), UAE
- Angela Yingjun Zhang, CUHK, Hong Kong

Statistics

- ♦ Total number of submissions = TBD
- Total number of accepted papers = TBD
- ♦ Acceptance ratio = TBD
- ◆ TPC members = TBD

6 May 2023 (Extended Deadline)

3. Nomination for Symposium Co-Chairs of ICC and GC

- Nominations have been made up to GC 2024 for:
- Let us know if you are interested in participating in the future (contact IoT-AHSN TC officers)

Symposium Recommendation for GC 2024

- **Bomin Mao** (Northwestern Polytechnical University, China)
- Kaikai Chi (Zhejiang University of Technology, China.)
- **Kaigui Bian** (Peking University, China)
- Yang Wang (University of Science and Technology of China)
- Noura Aljeri (Gulf University for Science and Technology, Kuwait)

3. Nomination for Symposium Co-Chairs of ICC and GC

- Let us know if you are interested in participating in the future (contact IoT-AHSN TC officers)
- Nominations have been made up to ICC 2025 for:

Symposium Recommendation for ICC 2025

- **Bomin Mao** (Northwestern Polytechnical University, China)
- Chuan Huang (The Chinese University of Hong Kong, Shenzhen, China)
- **Xu Chen** (Sun Yat-sen University, China)

4. Endorsement of IEEE Fellowship

- No endorsement request made
- Please contact us if you need endorsement

5. Nomination for ComSoc Distinguished Lecturers

- One TC member was nominated and awarded DL
 - Anwer Al-Dulaimi (term 2023-2024)
- Please contact us if you would like to nominate yourself or a colleague.
- More information about DLP can be found at https://www.comsoc.org/membership/distinguished-lecturers/distinguished-lecturers-faq

6. IoT-AHSN Committee Awards

IoT-AHSN Technical Achievement and Recognition Award

The award recognizes members of the IEEE Communications Society (ComSoc) who have made **significant contributions** to technological advancement of IoT-ad hoc and sensor networks.

IoT-AHSN Exceptional Service and Contribution Award

This award has been established by the IoT-AHSN TC to recognize members who provided **exceptional services** to the committee.

IoT-AHSN Committee Awards

Awards Subcommittee (2022-2023)











Subcommittee Chair: Soumaya Cherkaoui (Past TC Chair)

Subcommittee Member: Hossam Hassanein (Past Chair)

Subcommittee Member: Nirwan Ansari (Past Chair)

Subcommittee Member: Hussein Mouftah (Award Recipient)

Subcommittee Member: Shuai Han (TC Secretary)

IoT-AHSN Committee Awards

2023 IoT-AHSN TC Technical Achievement and Recognition Award

Criteria:

 A person with a high degree of contributions and accomplishments in the field of "IoT-AHSN"

Award Frequency:

Annually (as appropriate)

Nomination:

- Solicited from the IoT-AHSN members annually by the IoT-AHSN Awards Subcommittee
- Should include a mention of what contributions or accomplishments the person is nominated for and a supporting material
- Should include support letters
- Deadline: September 9th, 2023

We have four SIGs, which have been presenting various activities:

SIG - Machine Learning for Ad Hoc, Sensor and IoT Networks

SIG - IoT in Tactile Internet

SIG - Internet of Unmanned Aerial Networks

SIG - Industrial IoT Networks

If interested to join these SIG, please contact the IoT-AHSN TC Officers or SIG

SIG- Machine Learning for Ad Hoc, Sensor and IoT Networks

Linkedln group: https://www.linkedin.com/groups/12464979/

• SIG leadership:

- Chair: Dr. Lyes Khoukhi
- Advisor: Dr. Damla Turgut

Recent activities:

- Participation as a Symposium chair in IEEE ICC'23 IoTSN.
- On May 19th, by Z. Abouelhouda (Professor at Yncrea Ouest)
- Title: Intelligent vision for securing IoT 5G
- Series of seminar about the use and applications of ML are under planning in the coming period.
- A special issue about "Safety and Security in autonomous vehicles" from various perspectives (ML, optimization, etc.), is under progress in the Journal of "Transactions on Internet Technology".

SIG- IoT in Tactile Internet

Linkedln group: https://www.linkedin.com/groups/12477846/

• SIG leadership:

- Chair: Dr. Liudong Xing
- Co-chair: Dr. Nikolaos Pappas
- Advisor: Dr. Soumaya Cherkaou

Recent activities:

- A webinar talk has been scheduled
- Time: 9am, June 13, 2023 (Eastern Time)
- Title: On the Utility of Gradient Compression in Distributed Training Systems
- Speaker: Dr. Hongyi Wang, Carnegie Mellon University

SIG- Internet of Unmanned Aerial Networks

Linkedln group: https://www.linkedin.com/groups/12476723/

- SIG leadership:
 - Chair: Dr. Moayad Aloqaily
 - Advisor: Dr. Sidi-Mohamed Senouci
- **Recent activities:**
 - IEEE NOMS-ITAVT 2023
 - The 6th International Workshop on Intelligent Transportation and Autonomous Vehicles Technologies (ITAVT 2023)
 - SI in IEEE WCM

Network Operations and Management Symposium (NOMS 2023) **Zero Trust Security Methods for Wireless Networks**

Manuscript Submission Deadline 1 August 2023

SIG-Industrial IoT Networks

Linkedln group: https://www.linkedin.com/groups/12481021/

SIG leadership:

- Chair: Dr. Bernardi Pranggono
- Advisor: Dr. Abdallah Shami

Recent activities:

- A special issue on "Internet of Things, Edge Computing, and Artificial Intelligence for Smart Grid" in the Energies journal.
- Webinar on "The Industrial Internet of Things Networking" on May 25, 2023, 16:00-17:00 BST by David Lou, Ph.D., Chief Researcher, Huawei Technologies.

SIG Proposal Ubiquitous Intelligence for Internet of Vehicles

Scope

As one of the typical networking scenarios for Internet-of-Things (IoT), the Internet-of-Vehicles (IoV) enables seamless information dissemination and task processing among vehicles equipped with onboard sensing, communication, computing, and storage capabilities.

Team

The objective of organizing this Special Interest Group (SIG) is to facilitate research interactions/collaborations among academic groups and industry partners, attract novel research ideas/concepts/approaches, and advance the technological development in the areas of IoV. Different SIG activities will be organized, including online seminars, special issues on journals, and workshops on flagship conferences, and will be promoted in our SIG LinkedIn Group and among different other professional networks.

SIG- Ubiquitous Intelligence for Internet of Vehicles

SIG leadership:

- Chair: Qiang Ye, Memorial University of Newfoundland, Canada
- Co-chair: Ning Zhang, University of Winsor, Canada
- Co-chair: Peng Yang, Huazhong University of Science and Technology, China
- Co-chair: Haixia Peng, Xi'an Jiaotong University, China
- Co-chair: Xiaoyu Wang, China Aerospace Science & Technology
 Corporation
- Advisor: Cheng Li, Memorial University of Newfoundland,
 Canada

Other Businesses

- 2023 IoT-AHSN TC Technical Achievement and Recognition Award
- Future GC/ICC Technical Program Committee Activities
- IEEE Fellow/Senior Member Promotion

Next Meeting

Next IoT-AHSN TC meeting at GC23, Kuala Lumpur, Malaysia. See you then.



IEEE Global Communications Conference4-8 December 2023 // Kuala Lumpur, Malaysia







