



IEEE ComSoc Technical Committee on Cognitive Networks (TCCN)

<https://cn.committees.comsoc.org/>

Chair: Shiwen Mao

szm0001@auburn.edu

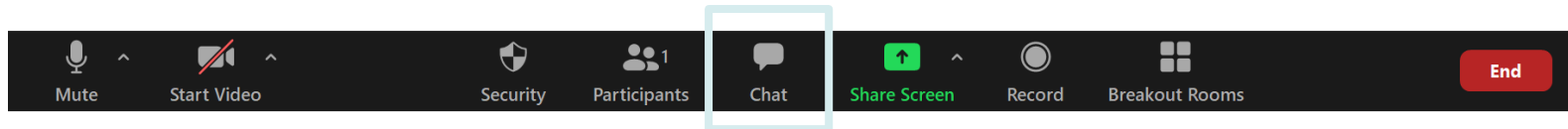
Auburn University, Auburn, AL, USA

IEEE ICC 2024, May 30, 2024

Registration – 1 min break

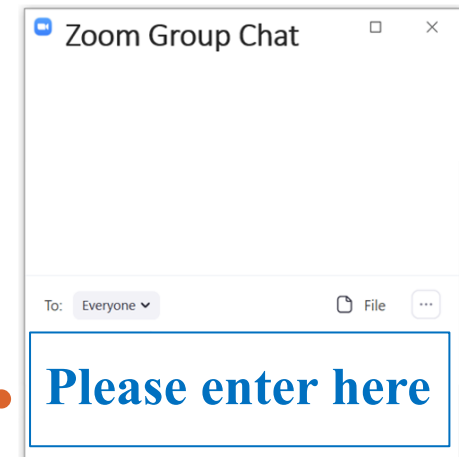


- Step 1: find and click “Chat” icon at the bottom of Zoom meeting interface



- Step 2: please write your information in the chat box:

your name + affiliation + email



Important for your active member status (for voting, election, and awards)

Agenda



- 1. Welcome and Introduction**
- 2. Attendance Registration**
- 3. Approval of the Agenda**
- 4. Approval of the GLOBECOM 2023 (Dec. 2023) TCCN meeting minutes**
- 5. Reports from the Chairs**
- 6. Reports on TCCN Awards and Subcommittee**
- 7. Reports on TCCN Webinars and Journal Collaborations**
- 8. Reports on Special Interest Groups (SIGs)**
- 9. Reports on conferences**
- 10. Reports on publications**
- 11. Reports on innovation project**
- 12. TCCN publicity**
- 13. Next TCCN Meeting**
- 14. Any other business**

Meet the Officers (2023-2024)

- **Chair:** Shiwen Mao, Auburn University, USA
- **Vice-Chairs**
 - Yuan Ma, Shenzhen University, China (Asia Pacific)
 - Yuanwei Liu, Queen Mary University of London, UK (Europe/Africa)
 - Ning Zhang, University of Windsor, Canada (Americas)
- **Secretary:** Hongliang Zhang, Peking University, China
- **Standards Liaison:** R. Venkatesha Prasad, Delft University of Technology, Netherlands
- **Publicity Board:** Hongliang Zhang, Peking University, China
- **Student Competition Program**
 - Kaoru Ota, Muroran Institute of Technology, Japan
 - Boya Di, Peking University, China
- **Newsletter Coordinator:** Dola Saha, University at Albany, USA

Our term will be over by end of 2024. An election will be organized to elect the new officers for 2025-2026

Introduction

- TC Goal
 - Technical Committee on Cognitive Networks (TCCN) is to provide a platform for its members, in particular, on [cognitive and artificial intelligence \(AI\) enabled networking research](#), development, policy making and standardization community in general, to interact and exchange technical ideas to identify major challenges and also drive solutions in the development of AI-enabled networking technologies
- Technical Scope
 - [Spectrum](#) agile/dynamic spectrum access networks, related issues from PHY to application layers, security and privacy issues, policy issues, implementation technologies (e.g., embedded [AI](#), software [radio](#), middleware), economic considerations and standardization activities
- TCCN Video: http://ieeetv.ieee.org/player/embed_play/233876/auto

How to Get Involved in TCCN

- **Many ways of getting involved**
 - Subscribe to the mailing list to become a **member**
 - Attend **two out of the past five** TCCN meetings to become an **active member** (need to be IEEE and ComSoc member or student member)
 - Create new or participate in existing Special Interest Groups (SIGs)
 - Organize special issues for the TCCN Newsletter
 - Participate in TCCN related standardization efforts
 - Contribute to the publicity efforts of TCCN
 - Contribute to student competition program and young professional activities
 - Represent TCCN in ComSoc conference organization
 - Represent TCCN in guest editing ComSoc journal special issues
- **TC rewards its members through various nominations and endorsements**
- **It is important for TCCN to have more members and active members**

TCCN membership

- **Joining TCCN**

1. The TCCN mailing list

- ① The TCCN mailing list is reserved for the **most important TC announcements**
- ② To subscribe to the mailing list, please visit <https://cn.committees.comsoc.org/mailling-list/>

2. ComSoc Group

- ① Go to <http://community.comsoc.org/>, and create your account by your email address (you can directly use your current IEEE account credentials).
- ② Log in and choose “TC Cognitive Networks” as “My Groups”

- **Active Membership**

- Anybody can be a member of the TCCN. To become a Member, you only need to subscribe to the TCCN mailing list
- You become an Active Member if you attend (physically present or by teleconference) two or more of the prior five regularly scheduled TCCN meetings

Attendance Online Meeting Nov 2021	Attendance Online Meeting Apr 2022	Attendance Online Meeting Nov 2022	Attendance Online Meeting May 2023	Attendance In-person Meeting Dec 2023
51	44	66	65	86

TCCN Special Interest Groups (SIGs)

- **What is a SIG?**
 - SIGs are mini-TC, representing the hot and emerging research areas in the general field of cognitive networks
- **What does a SIG do?**
 - Attract submissions to CRN symposium at ICC and GLOBECOM
 - Organize journal special issues for TCCN and others
 - Organize workshops and conferences
 - Organize other related technical activities (conference call, blogs, etc.)
- **Who are in a SIG?**
 - Leadership team: a Chair, one or more Vice-Chairs, one or more advisors
 - 10+ key members
 - Good gender, geographical, and academia/industry diversity
- **How to establish a SIG?**
 - Fill in the form with the proposed SIG team and activities <http://cn.committees.comsoc.org/special-interest-groups-sigs/application-for-special-interest-groups/>
 - Send to the TC Chair
 - Usually go through 1-2 rounds of feedback before official approval

Current Status of TCCN SIGs

- **Active SIGs**

1. SIG on AI and Machine Learning in Security (K.P. (Suba) Subbalakshmi)
2. SIG on Sensing, Communications, Caching, and Computing C^3 in Cognitive Networks (Li Wang)
3. SIG on AI Empowered Internet of Vehicles (Ning Lu)
4. SIG on Wireless Blockchain Networks (Zehui Xiong)

- **Inactive SIGs**

- SIG on Cognitive Network for 5G
- SIG on Data-Driven Cognitive Networks
- SIG on AI Embedded Cognitive Networks
- SIG on Cognitive Communications and Networking in Cyber-Physical Systems
- SIG on Energy-harvesting Cognitive Radio Networks

TCCN Nominations



- 1. ComSoc Distinguished Lecturers**
- 2. ICC/GC Symposium Chairs**
- 3. TCCN Awards**
- 4. IEEE Fellows**
- 5. Senior Member, paper and service awards**
- 6. Conference sponsorship**

Nominations for ComSoc Distinguished Lecturer Program

- ComSoc DLs that are TCCN member (15)
 - Kaigui Bian, Sudip Misra, Kun Yang, Shui Yu, Angela Yingjun Zhang, Melike Erol-Kantarci, Fabrizio Granelli, Cheng Li, Shiwen Mao, Qiang Ni, Damla Turgut, Yan Zhang, Arumugam Nallanathan, Giorgio Quer, Beibei Wang
- TCCN can nominate up to 4 candidates per year
 - Evaluated by the ComSoc DL Selection Standing Committee
- If you are interested, please submit a nomination or self-nomination with the following information
 - to: Shiwen Mao (smao@ieee.org), cc: Hongliang Zhang (hongliang.zhang@pku.edu.cn)
 - With detailed CV, including your contribution/involvement to TCCN
 - List of potential DL topics
- **Deadline: Aug. 15, 2024**

Nominations for Symposium Co-chairs for IEEE GC 2025

- Call for nominations distributed on the TCCN mailing list: Oct. 24, 2023
- TCCN officers selected the top three candidates
- Nominations submitted to the GC'25 TPC Chairs: by Nov. 3, 2023
 - All selected by the GC'25 TPC chairs, and approved by the GITC

Cognitive Radio and AI-Enabled Networks	
Chee Wei Tan	Nanyang Technological University
Boya Di	Peking University
Next-Generation Networking and Internet	
Stefano Giordano	University of Pisa
Yulei Wu	University of Bristol
Ranga Rao Venkatesha Prasad	TU Delft

Nominations for Symposium Co-chairs for IEEE ICC 2026

- TCCN can nominate up to 3 candidates
- Call for nominations distributed on the TCCN Mailing list: May 27, 2024
- If you are interested, please email your nomination (in a single PDF file)
 - to: Shiwen Mao (smao@ieee.org),
 - cc: Hongliang Zhang (hongliang.zhang@pku.edu.cn)
 - Including the following information
 - Your name, affiliation, contact information, bio and website, ComSoc Member Number
 - A ranked list of up to 3 symposia or tracks that you wish to chair
 - A list of all prior ICC/GLOBECOM symposia chaired or comparable experiences in other major conferences
 - Your past experience/contributions to TCCN
 - Your commitment of time/efforts, and your plans to increase submissions to the Cognitive Radio & AI-Enabled Networks Symposium.
- **Deadline: May 30, 2024 (TPC Chairs' Deadline: May 31, 2024)**

Nominations for 2024 TCCN Recognition Award and TCCN Publication Award

- IEEE ComSoc TCCN awards:
 - IEEE ComSoc TCCN Recognition Award
 - IEEE ComSoc TCCN Publication Award
- See the call for nominations for the TCCN Recognition Award and TCCN Publication Award at:
 - <https://cn.committees.comsoc.org/awards/> (Will be updated after this meeting)

IEEE ComSoc TCCN Recognition Award

The recognition award is given to (up to) one individual who is deemed to have made significant and sustained contributions to cognitive network community.

- Nomination Process
 - For each nomination, both the nominator and the nominee must be members of IEEE ComSoc. The nominator should send the nomination to the TCCN Recognition Award Subcommittee in PDF format by **Sept. 30, 2024**.
 - A nomination must include a short CV of the nominee (no more than 5 pages), copies of supporting materials, and an advocacy statement by the nominator (no more than 300 words) detailing the reasons for nomination. Neither late nor self-nominations will be considered.
- Award Announcement
 - The selected award recipient(s) will be informed via e-mail. The award ceremony will take place in IEEE GLOBECOM 2024.

IEEE ComSoc TCCN Publication Award

- The publication award is given to (up to) one individual or group who are deemed to have made outstanding technical contributions to TCCN. The Awards committee may choose, at their discretion and based on nominations, to award it for a singular (Best Paper) achievement.
- Nomination Process
 - For each nomination, both the nominator and the nominee must be members of IEEE ComSoc. The nominator should send the nomination to the TCCN Publication Award Committee in PDF format by **Sept. 30, 2024**.
 - A nomination must include a brief CV of the nominee, copies of supporting materials (publications in ComSoc journals and conferences) that form the basis for the nomination, and an advocacy statement by the nominator (no more than 200 words) detailing the reasons for the nomination.
- Award Announcement
 - The selected award recipient(s) will be informed via e-mail. The award ceremony will take place in IEEE GLOBECOM 2024.

IEEE ComSoc TCCN Recognition Award Committee



TCCN Recognition Award Subcommittee (2023-2024)

- **Chair:**

- Lingyang Song, Peking University, China

- **Members:**

- Marco De Renzo, Paris-Saclay University, France
- Luiz DaSilva, Virginia Tech, US
- Geoffrey Ye Li, Imperial College London, UK
- Angela Yingjun Zhang, Chinese University of Hong Kong, China

IEEE ComSoc TCCN Publication Award Committee



TCCN Publication Award Subcommittee (2023-2024)

- **Chair:**

- Lingyang Song, Peking University, China

- **Members:**

- Yusheng Ji, National Institute of Informatics, Japan
- Petar Popovski, Aalborg University, Denmark
- Dusit Niyato, Nanyang Technological University, Singapore
- Jianwei Huang, Chinese University of Hong Kong (Shenzhen), China

IEEE ComSoc TCCN Member Elevation and Awards



- **IEEE Fellow:**

- Endorsement by the TC chair

- 2 endorsement in 2024; 3 endorsements in 2023

- Reference and/or nominator by TCCN fellows

- 2023: 8/16 awarded; 2024: ?/20

- 2024 new fellows: Alagan Anpalagan, Yu Cheng, Guan Gui, Yuanwei Liu, Yue Gao, Kan Zheng, Pan Li, Zheng Yan, Kaushik Chowdhury

- **Senior Member:**

- 10 years of extensive activities and contributions

- **IEEE ComSoc service and paper awards**

IEEE ComSoc TCCN Sponsored Conferences

- **Technical sponsorship of conferences:**

- Endorse the application for Technically Co-Sponsored Conference in the scope of TCCN (occasionally)
 - From more information: <https://www.comsoc.org/conferences-events/events-sponsorship/tcs-frequently-asked-questions-faqs>
- Three or more TCCN members in OC/TPC
- Report after the conference

- **2023**

- The 2023 3rd International Conference on Intelligent Communications and Computing (ICC), Nov. 24-26, 2023, Nanchang, China, <http://www.ic-icc.org/>
- The 14th International Conference on ICT Convergence, Oct. 11-13, 2023, Jeju Island, Korea, <https://2023.ictc.org>

- **2024**

- The 15th International Conference on Ubiquitous and Future Networks, July 2-5, 2024, Budapest, Hungary, <https://icufn.org>
- The 19th International Symposium on Wireless Communication Systems, July 14-17, 2024, Rio de Janeiro, Brazil, <https://iswcs2024.usuarios.rdc.puc-rio.br>
- The 6th International Conference on Artificial Intelligence in Information and Communication, Feb. 19-22, 2024, Osaka, Japan, <http://www.icaaic.org>
- The 5th Information Communication Technologies Conference (ICTC 2024), May 10-12, 2024, Nanjing, China, <https://www.ictc.net>

TCCN Webinars

- [04/24] The Art of Marriage: How to Integrate Data Communications and Radar Sensing? – Dr. Husheng Li, Purdue University, USA
- [12/23] Distributionally Robust Optimization and Its Applications in Communication and Networking – Zhu Han, University of Houston
- [12/23] Reconfigurable Holographic Surfaces: A New Paradigm to Ultra-Massive MIMO for 6G – Lingyang Song, Peking University
- [11/23] Learning Scheduling and Optimization in Federated Edge Learning – Dr. Yu Wang, Temple University, USA
- [09/23] RingSFL: An Adaptive Split Federated Learning Towards Taming Client Heterogeneity – Dr. Nan Cheng, Xidian University, China (Seminar conducted by SIG on AI empowered Internet of Vehicles)
- [08/23] Unleashing the Power of Mobile Edge-Cloud Generative AI Services and AIGC Networks – Dr. Dusit Niyato, Nanyang Technological University, Singapore
- [07/23] On Optimal Partitioning and Scheduling of DNNs in Mobile Edge/Cloud Computing – Dr. Jie Wu, Temple University, USA
- [01/23] On Communication and Sensing Measurements and Modeling for Next “G” – Dr. Nada T. Golmie, National Institute of Standards and Technology, USA

Journal Collaboration

Impact Factor 6.359



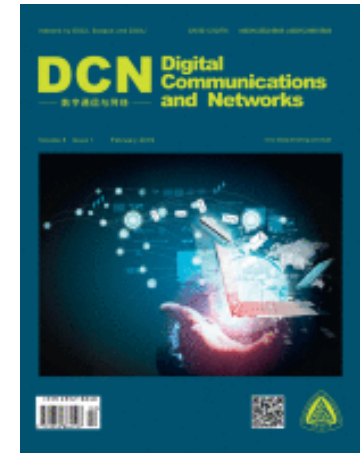
China Institute of Communications recommended top journals

Recommend AEs, submitting papers, serving as reviewers, and organizing special issues.

Impact Factor 3.17



Impact Factor 6.348



1	China Communications	1673-5447
2	Digital Communications and Networks	2352-8648
3	Frontiers of Information Technology & Electronic Engineering	2095-9184
4	Journal of Communications and Information Networks	2096-1081

16	IEEE TRANSACTIONS ON COGNITIVE COMMUNICATIONS AND NETWORKING	2332-7731
17	IEEE TRANSACTIONS ON COMMUNICATIONS	0090-6778
18	IEEE TRANSACTIONS ON MOBILE COMPUTING	1526-1022

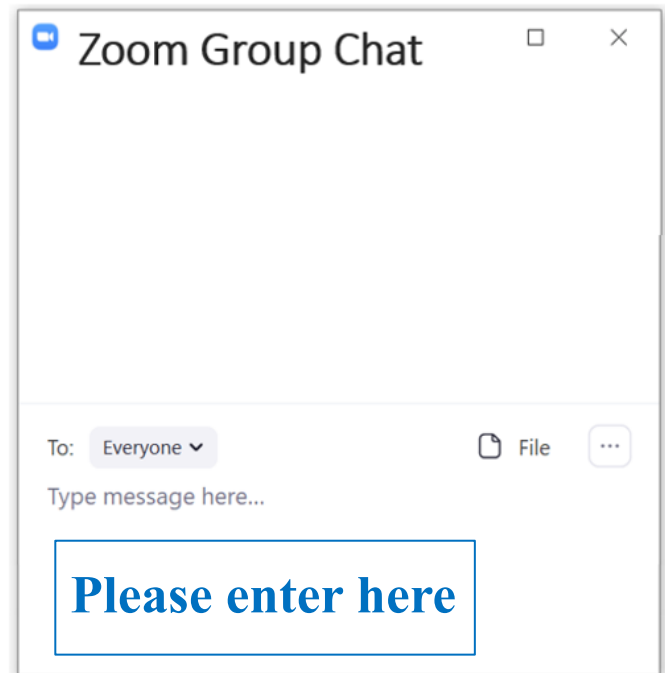
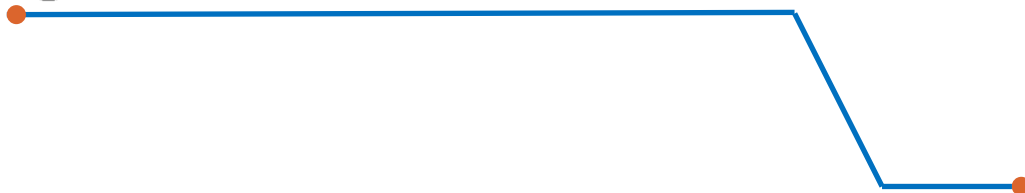
<https://cn.committees.comsoc.org/journals/>

Registration – last reminder

Before you leave the meeting, please check if you have written your information in the Zoom chat box:



your name + affiliation + email



Agenda



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