



Commission GASS 2023 Report

Commission C

1. Elections of Commission Officers

Vice Chair elections

Two candidates applied for the Vice-Chair position (2023-2026):

Peter Vouras (USA)

Haijun Zhang (China CIE)

Result: Peter Vouras has been elected as the new Vice-Chair.

Junior Early Career Representative (ECR) elections

Four candidates applied for the ECR position (2023-2026):

Sangeeta Bhattacharjee (India)

Xuesong Cai (Sweden)

Samuel Pinilla (United Kingdom)

Li You (China CIE)

Result: Sangeeta Bhattacharjee has been elected as the new ECR.

2. Review of Terms of Reference

The updated list of the Terms of Reference of Commission C is:

Information theory, coding, modulation & detection
Massive Multi-Input Multi Output antenna systems
Waveform for radar & communications
Smart radio-communications: cognitive radio, software defined radio
Reconfigurable intelligent surfaces
Radar, sonar, navigation systems & positioning
Artificial intelligence and machine learning
Energy efficient communications and power transfer
Security & privacy in communications
Quantum communications
Wireless networks
6G and future high frequency radio systems
Integrated Sensing and Communications
Non Terrestrial networks

3. Any changes/confirmation in Working Groups and other organizations



The following working group was discontinued starting from GASS 2023:

1. Quantum communications

Chair : Y. Louet (France), Member: A. Tarable (Italy)

The following working groups were retained during GASS 2023:

1. Efficient & Green Wireless Comm

Co-chairs: Pape Abdoulaye Fam (Senegal) & S. Tsukamoto (Japan)

2. Joint FCGEH working group: Risk and Disaster Management

Chair: T. Tanzi (France, Commission F) Participants Commission G: C. Cesaroni (Italy), A. Ippolito (Italy)

Following 3 new working groups were set up during GASS 2023:

1. Integrated Sensing and Communications

Chair: Shobha Sundar Ram (India), Member: Sangeeta Bhattacharjee (India)

2. Synthetic Apertures

Chair: Peter Vouras (USA), Member: Raghu G. Raj (USA)

3. AI/ML/DL for wireless systems and networks

Chair: Krzysztof Cwalina (Poland)

4. Technical Advisory Committee

There was no change in the TAC during GASS 2023. But the TAC will be reconstituted and updated by year end. Current TAC is as follows:

Martin O'droma: Ireland

Fortunato Santucci: Italy

Xavier Neyt: Belgium

Alain Sibille: France

Sana Salous: UK

Roman Marsalek (Czech Rep)

Robert Bultitude (Canada)

Prof. Makoto Taromaru (Japan)

5. Appointment of Associate Editor for Radio Science Letters

From Commission C, Raghu G. Raj (USA) will serve on the editorial board of Radio Science Letters as Associate Editor

6. Appointment of Representative for the Radio Science School for Young Scientists

From Commission C, Krzysztof Cwalina (Poland) will serve Representative for the Radio Science School for Young Scientists

7. Identification of meetings to be supported (cfr. Commission budget)

So far (11 September 2023), no other meeting has been proposed for the two upcoming years to be supported by Commission C



8. Preparation of Future Meetings

It is a little soon to precisely list the sessions for AP-RASC 2025 and GASS 2026. Nevertheless, following topics will certainly be featured in the program of both meetings based on the new working groups created:

- Emerging technologies in radar and communications
- Synthetic apertures
- Integrated sensing and communications
- AI/ML for radar and wireless communications
- Wireless power transfer
- Security and privacy in wireless communications
- 5/6G technologies

9. Proposed sessions and conveners for AT-RASC 2024

The following sessions will be organized at AT-RASC 2024. These were decided during GASS 2023. However, we expect more session proposals through an open call as well:

1. Emerging Technologies for Radar & Communications -Kumar Vijay Mishra (kvm@ieee.org), Amir Zaghloul (amir.i.zaghloul.civ@army.mil)
2. 6G and future wireless systems - Haijun Zhang (haijunzhang@ieee.org), Satoshi Tsukamoto (tsukamoto@comm.ee.tut.ac.jp), Sangeeta Bhattacharjee (sangeeta.Bhatta@gmail.com)
3. Wireless Power Transfer - Satoshi Tsukamoto (tsukamoto@ieee.org), Yves Louet (yves.louet@centralesupelec.fr)
4. Satellite Systems & positioning - Sanat K Biswas (sanat@iiitd.ac.in), Amitava Sen Gupta (sengupta53@yahoo.com)
5. Low-Cost GNSS Receivers - Dinesh Manandhar (dinesh@csis.u-tokyo.ac.jp), Anindya Bose (abose@phys.buruniv.ac.in)
6. Reconfigurable intelligent surfaces - Kumar Vijay Mishra (kvm@ieee.org), Alberto Tarable (alberto.tarable@cnr.it)
7. Artificial Intelligence for Communications (in cooperation with COST ACTION CA20120 INTERACT) -Krzysztof Cwalina (kkcwalina@eti.pg.edu.pl), Kumar Vijay Mishra (kvm@ieee.org), Hiren KD Sarma (hiroo135@yahoo.co.uk)
8. Integrated sensing and communications – Shobha Sundar Ram (shobha@iiitd.ac.in)
9. High-dimensional feature processing – Peter Vouras (synthetic_aperture_twg@ieee.org)
10. Point-cloud processing and sensor fusion with lidar/radar/camera - Peter Vouras (synthetic_aperture_twg@ieee.org), Shobha Sundar Ram (shobha@iiitd.ac.in)
11. Radio localization, timing, and navigation (in cooperation with COST ACTION CA20120 INTERACT) - Krzysztof Cwalina (kkcwalina@eti.pg.edu.pl), Piotr Rajchowski (piorajch@pg.edu.pl)



12. Data-driven signal processing – Peter Vouras (synthetic_aperture_twg@ieee.org)
13. Adaptive Reconfigurable Receivers – Peter Vouras (synthetic_aperture_twg@ieee.org)
14. Distributed and multistatic sensing – Raghu G. Raj (raghu.raj@nrl.navy.mil)
15. Advances in ORAN - Sangeeta Bhattacharjee (sangeeta.Bhatta@gmail.com), Peter Vouras (synthetic_aperture_twg@ieee.org)
16. Non-terrestrial networks - Alberto Tarable (alberto.tarable@cnr.it)

10. Other Business

None