Commission GASS 2026 Report

Commission K

Commission K held three Commission Coordinating Activities (CCA) meetings on 17, 19 and 21 August 2026, from 18:00 to 19:00, at the ICE Kraków Congress Centre (Meeting Room K). The meetings were open to all GASS participants and addressed the Commission's leadership, scope and advisory structure, future scientific activities, and preparation for AT-RASC 2027.

At the opening meeting, the Commission remembered Lars Ole Fichte, Vice-Chair during 2023–2026, who passed away unexpectedly in May 2026. He had been expected to assume the Chair at GASS 2026. Commission K expressed gratitude for his dedication to URSI and his contribution to the community.

The GASS 2026 scientific programme included 18 Commission K session entries (including a poster session) and two additional joint sessions led by other Commissions (ACK and CAK), involving 42 conveners of the sessions.

Commission K also contributed a keynote lecture by Elham Salimi on single-cell dielectrophoresis and dielectric spectroscopy. In addition, Commission K, jointly with Commission C, actively contributed to the organization of the URSI Radio Science School for Young Scientists, dedicated to "Living in Complex Electromagnetic Environments: Integrated Sensing, Communications, and Electromagnetic Exposure." Four Young Scientist Award recipients and one Student Paper Competition finalist were associated with Commission K.

1. Elections of Commission Officers

The first CCA meeting introduced four Vice-Chair candidates for 2026–2029: Michal Cifra (Czech Republic), Raquel Cruz Conceição (Portugal), Sima Noghanian (USA) and Masaki Sekino (Japan). Micol Colella (Italy) was the candidate for the new Early Career Representative (ECR) position. The composition of the incoming Commission K leadership was presented at the third CCA meeting:

Position	Officer	Country
Chair	Francesca Apollonio	Italy
Vice-Chair	Michal Cifra	Czech Republic
ECR (1)	Kun Li	Japan
ECR (2)	Micol Colella	Italy

The new officer team covers the 2026–2029 triennium. Commission K acknowledges the contributions of the outgoing ECR, Emily Porter, and the candidates who made themselves available for service.

2. Review of Terms of Reference

The Commission reviewed and agreed on revised Terms of Reference (ToR) during the CCA meetings. Following discussion of the draft presented on 19 August, the final wording was adopted at the meeting of 21 August. The agreed revision clarifies the distinction between biological and health effects, explicitly addresses biomaterials and environmental and ecological effects, and refines the description of exposure assessment and biomedical applications.

The agreed wording, with minor editorial standardization, is:

- Mechanisms and modelling of the biophysical interactions of electromagnetic fields with biological systems and biomaterials, from static to optical frequencies.
- Biological effects of electromagnetic field exposure at molecular, cellular, tissue, organ, whole-organism and population levels.
- Environmental, ecological and health effects of anthropogenic electromagnetic fields on organisms, ecosystems and biodiversity.
- Electromagnetic field exposure systems and dosimetry, including computational and experimental methods, tissue dielectric characterization, anatomical models, tissue-mimicking materials and phantoms.
- Electromagnetic field exposure assessment and safety, including measurements, monitoring, modelling and risk assessment.
- Biological and medical diagnostic, sensing and imaging applications of electromagnetic fields.
- Therapeutic, rehabilitative and assistive applications of electromagnetic fields.

The updated ToR reflect the wording agreed by Commission K at GASS 2026.

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

Commission K confirmed the continuation of its existing activities and inter-Commission collaboration. No changes to its Working Group arrangements or appointments in other URSI organizations were included in the decisions recorded in the three CCA meetings. The Commission endorsed continued joint scientific initiatives with other Commissions, including joint sessions at URSI flagship meetings.

4. Technical Advisory Committee

The Commission reviewed and confirmed the role of its Technical Advisory Committee (TAC) as the advisory structure supporting the coordination of scientific activities. The first CCA meeting reported a TAC of 21 members from 16 countries and representation through 39 national Member Committees. The roster displayed at GASS 2026 was the reference list presented during the meeting; subsequent administrative updates to the named membership for 2026–2029 are separate from this report.

The list is reported below:

- Koichi Ito – Japan
- Francesca Apollonio – Italy
- Kensuke Sasaki – Japan
- Emily Porter – USA
- Joe Wiart – France
- Puyan Mojabi – Canada
- Michal Cifra – Czech Republic
- Raquel Cruz Conceição – Portugal
- Lourdes Farrugia – Malta
- Lena Kranold – Australia
- Niels Kuster – Switzerland
- Kun Li – Japan
- Micaela Liberti – Italy
- Lluis Mir – France
- Azadeh Peyman – UK
- Frank Prato – Canada
- Masao Taki – Japan
- Vijayalaxmi – USA
- Jianqing Wang – Japan
- Tongning Wu – China
- Maxim Zhadobov – France

5. Preparation of Future Meetings/Identification of meetings to be supported (cfr. Commission budget)

The Commission agreed to prioritize scientific participation in forthcoming meetings, with particular attention to AT-RASC 2027 (Gran Canaria, Spain, 23–28 May 2027) and the involvement of Commission K in workshops, tutorials, joint sessions and educational initiatives for young scientists.

The Commission reviewed and confirmed the URSI framework for meeting support. The guidelines differentiate flagship meetings and co-located workshops, Commission and Working Group meetings (with support through the relevant Commission budget), URSI Member Committee meetings, and partner or other meetings. For national or regional Member Committee meetings, the material presented indicated the possibility of up to EUR 500 in support of a Student Paper Competition.

The Commission identified events of potential interest for scientific involvement and possible URSI support in 2027: the IEEE MTT-S & AP-S Microwaves, Antennas and Propagation Conference (MAPCON), IEEE AP-S/URSI 2027 (Kyoto, Japan), and the International Conference on Medical Microwave Imaging Applications (ICMWIA). No numerical budget allocations were specified in the meeting decisions.

6. Proposed sessions and conveners for AT-RASC 2027

The Commission agreed to launch preparations at GASS 2026. Participants were invited to submit session proposals including a title, description and keywords, with two to four conveners, and to consider joint sessions with other URSI Commissions. A dedicated online form was shared. The following initial list of proposed session topics was agreed as the working basis for programme development (titles retained from the August CCA material):

Code	Preliminary session topic
K01	Biological effects and related exposure systems for RF/MMW EMF
K02	Modeling molecular and cellular targets in bioelectromagnetics studies
K03	Monitoring and manipulating cells and tissues with EM fields
K04	Human studies and the related assessment of exposure
K05	Pulsed electric fields: from molecular interaction to medical treatment
K06	Characterization of dielectric and thermal parameters in tissues and cells
K07	Advances in Numerical Modeling
K08	Dosimetry & Exposure Assessment: Extremely low & Intermediate Frequencies
K09	Recent Progress & New Frontiers in RF Dosimetry and Exposure Assessment
K10	Monitoring EMF Exposure from emerging technologies
K11	EMF occupational assessment of exposure: measurements and numerical dosimetry
K12	Electromagnetic Biomedical Imaging
K13	Thermal therapies using EMF

Code	Preliminary session topic
K14	Therapeutic Applications from Static to Microwave EMF
K15	Non invasive brain stimulation
K16	Healthcare and Rehabilitative Applications
K17	Innovative EMF-based biomedical applications with nanoparticles
KD	RF wearable devices for body area network: from numerical modeling to manufacturing

These topics constitute the initial programme directions agreed at GASS 2026, not the final AT-RASC 2027 session programme. The Commission agreed that each session proposal should include two to four conveners, to be identified and confirmed through the subsequent proposal process; names were not included in the August working list.

7. Contact Information of Officers

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8. Other Business

Commission K actively contributes to the international Women in Radio Science (WIRS) initiative through the involvement of its members in activities promoting scientific networking, collaboration, mentoring, and the visibility of women researchers across the URSI community. At GASS 2026, Commission K members contributed to the international WIRS session, further strengthening connections between Commission K and the broader WIRS network.