

IEEE ComSoc Society Radio Communications Committee (RCC)

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Minutes for the meeting held on December 8, 2024 IEEE GLOBECOM 2024, Cape Town (Hybrid Meeting)

1. Introduction

The Committee Vice-Chair Enrico Paolini opens the Radio Communications Committee (RCC) meeting at 8:30 am South Africa Standard Time (SAST). There are 32 members present; a list of participants is attached at the end of these minutes. Then, the Committee Vice-Chair presents the agenda:

1. Welcome
2. Approval of agenda
3. General information about RCC
4. Approval of ICC'24 RCC meeting minutes (available on the website)
5. Conferment of 2024 IEEE ComSoc RCC Technical Recognition Award and Early Achievement Award
6. Report on RCC special interest groups (SIGs)
7. Report on conference/workshop/standardization activities
8. Report on ComSoc Student Competition
9. Report on RCC Activities
10. Introduction of new RCC Officers candidates
11. Next RCC meeting
12. Adjourn

2. Approval of the Agenda

The agenda is approved.

3. General Information about RCC

The Vice-Chair reviews the mission and the goals of the RCC and then overviews general information about RCC (current officers, meetings, how to become an RCC member). He also reminds attendees regarding the difference between “member” and “active member”.

4. Approval of IEEE ICC’24 RCC Meeting Minutes

The minutes (circulated via RCC website) are approved.

5. Conferment of 2024 RCC Technical Recognition Award and Early Achievement Award

The Vice-Chair reviews the scope of the awards, as follows:

The Radio Communications Committee (RCC) Technical Recognition Award aims to promote radio communications research and development activities in both the academic and industrial community. This award is established as part of the RCC activities in which research and development takes place in areas related to radio communications. The award recognizes members of the IEEE Communications Society (ComSoc) who have made outstanding contributions to the technological advancement of radio communications.

The RCC Early Achievement Award aims to promote radio communications research and development activities in both the academic and industrial community. This award is established as part of the RCC activities in which research and development takes place in areas related to radio communications. The award recognizes members of the IEEE ComSoc who have achieved early career visibility in the field through research and service to the RCC.

The Vice-Chair points out that the Award Committee 2023-2024 has the following composition:

- Octavia A. Dobre (Chair)
- Emil Björnson
- Pooi Yuen Kam
- Santiago Mazuelas
- Enrico Paolini

The 2024 IEEE ComSoc RCC Technical Recognition Award is conferred to Prof. Thomas Marzetta, New York University, USA, for pioneer contributions to massive MIMO. The 2024 IEEE ComSoc RCC Early Achievement Award is conferred to Prof. Chong Han, Shanghai Jiao Tong University, China, for contributions to Terahertz channels and communications. Prof. Han gives a short speech thanking the committee for the EAA award.

6. Report on RCC Special Interest Groups (SIGs)

The Secretary presents the five RCC special interest groups. Each SIG presents the most recent activities, as reported in the following. More details about these activities are available in the meeting slides.

Wireless Localization SIG

The Secretary invites Dr. Stefania Bartoletti, the Chair of the Wireless Localization SIG, to report about the SIG activities. Dr. Bartoletti describes the activities of the Wireless Localization SIG and presents the SIG officers. She explains the general goal of the SIG and then presents the most recent activities carried out by the SIG. They include:

- Organization of the 4th Workshop on “Synergies of Communication, Localization, and Sensing towards 6G” at IEEE ICC 2025, Montreal, Canada;
- 3rd Workshop on “Near-Field Localization and Communication for 6G” at IEEE ICC 2025, Montreal, Canada;
- Workshop on “Distributed Signal Processing and Machine Learning for Autonomous Systems”, at IEEE ICASSP 2025, Hyderabad, India;
- Special Issue on “Near-Field Radar Technologies and Applications” in *IEEE Transactions on Aerospace and Electronic Systems*, 2025.

Propagation Channels for 5G and Beyond SIG

The Secretary invites Prof. Dajana Cassioli, the Chair of the Propagation Channels for 5G and Beyond SIG, to report about the SIG activities. Prof. Cassioli reviews both the motivation and the goals of the SIG, presents the SIG officers, and then presents the main activities carried out by the SIG. They include:

- Standardization activities (in IEEE P1944, IEEE P2982, IEEE P3472, IEEE P1955, and the NextG Channel Model Alliance);
- Organization of a workshop at IEEE WCNC 2024;
- Special Issue on “Modeling Methods for Wave Propagation in Wireless Systems” in *IEEE Journal on Multiscale and Multiphysics in Computational Techniques*, 2025;
- Panel discussion at IEEE VTC-2024-Spring on “Mobile-to-Mobile Channel Modeling and Propagation for B5G”;
- Two keynote lectures delivered at the 2023 International Electronic Conference on Sensors and Applications and at the 2024 IEEE Future Networks World Forum, by Leyre Azpilicueta and Aniruddha Chandra, respectively;
- Activities relating to diversity, equity and inclusion as well as student mentoring (IEEE Italy Section and IEEE India Council);
- Planning of further events (tutorial and workshop proposals for selected 2025 conferences).

Integrated Sensing and Communications SIG

The Secretary invites Dr. Tingting Zhang, the Chair of the Integrated Sensing and Communications SIG, to report about the SIG activities. Dr. Zhang presents the SIG officers and points out the SIG motivation and interests. The SIG is very interested in

industrial collaborations, including standard contributions, prototype implementations, etc. Dr. Zhang then overviews the most recent activities of the SIG. They include:

- Organization of the 3rd International Workshop on “Sensing Advances in Wireless Networks” (SAWN), at IEEE VTC-2024-Fall, Washington DC, USA;
- Organization of a Recent Results track at IEEE VTC2024-Spring, Singapore;
- Organization of the SAC-RIS track at IEEE GLOBECOM 2024, Cape Town, South Africa ;
- Special Issues in several IEEE journals.

Terahertz Communications SIG

The Secretary invites Dr. Josep Jornet, the Chair of the Terahertz Communications SIG, to report about the SIG activities. Dr. Jornet presents the SIG officers. He explains that the goal of the SIG is to become the unifying forum of discussion for all the aspects relating to THz communications, from device technologies to radio propagation and communication systems design. He then reviews the SIG activities, that include:

- Many hosted seminars on THz communications (12 to date, with a new webinar series to be announced in Spring 2025);
- Organization of several tutorials and short courses at prominent venues such as IEEE PIMRC, IEEE MTT-S International Microwave Symposium, and IEEE GLOBECOM;
- Special issue “Electromagnetic Nanonetworks: From On-chip Communication to Wearable and Implantable Networks”, in *IEEE Journal on Selected Areas in Communications*, August 2024;
- Special issue “Terahertz Communications and Sensing for 6G and Beyond: How Far Are We?”, in *IEEE Wireless Communications*, February 2024;
- Organization of the SAC Track on Terahertz Communications at IEEE Globecom 2025;
- First IEEE Workshop on Terahertz Communications, Sensing and Security, IEEE Military Communications Conference (MILCOM), October 2024;
- Updating of the Best Readings on THz Communications.

Beyond Diagonal Reconfigurable Intelligent Surfaces SIG

The Secretary invites Dr. Bruno Clerckx, Chair of the Beyond Diagonal Reconfigurable Intelligent Surfaces (BD-RIS) SIG, to report about the SIG activities. Dr. Clerckx describes the motivation of the SIG and presents the SIG officers. He provides an overview of the SIG (which focuses on RIS-assisted systems where the RIS is not necessarily restricted to having a diagonal matrix structure). He then reviews the SIG activities so far, that include:

- Organization of a BD-RIS Webinar Series (Jan-May 2024), comprised of a series of 8 one-hour webinars;
- Workshop on “Intelligent Surfaces and Analog Computing for Wireless Communications” at Imperial College London, November 2024.
- Special Session on “Beyond Diagonal Reconfigurable Intelligent Surfaces” at IEEE SPAWC 2024;
- Organization of tutorials at prominent IEEE conferences including IEEE GLOBECOM 2024, SPAWC 2024, WCNC 2024 and ICASSP 2024;

- Contribution to the standardization group report ETSI GR RIS 002 on “Reconfigurable Intelligent Surfaces (RIS): Technological challenges, architecture and impact on standardization”;
- Organization of invited talks and keynotes at prominent venues.

7. Report on Conference/Workshop/Standardization Activities

The Secretary presents the report on the RCC sponsored conferences/workshops. The report for each specific conference/workshop is available in the slides that can be downloaded from the RCC website. Conferences/workshops and the corresponding RCC representatives are listed below (interested parties can check the online meeting slides for further details):

- GC 2024: Himlal Suraweera (SPC), Yuan Shen (WC), Daniel Benevides da Costa (WC), Josep Jornet (SAC-THz).
- ICC 2025: Yuanwei Liu (CT), Yuan Shen (SPC), Cunhua Pan (WC), Mauro Biagi (WC).
- GC 2025: Dajana Cassioli (WC), Theodoros Tsiftsis (CISS).

No critical aspects emerge from the presented report. The Secretary also presents the report on standardization activities. RCC members actively participate in several standardization initiatives promoted by the IEEE, including the ComSoc Standards Development Board, IEEE Dynamic Spectrum Access Networks Standards Committee, Power Line Communication Standards Committee, Virtualized and Software Defined Networks and Services Standards Committee, Mobile Communication Networks Standards Committee and Access and Core Networks Standards Committee. Details about such activities are available in the slides that can be downloaded from the RCC website. People interested in being involved in these activities may contact the RCC Standards Liaison Officer Dr. George Chrisikos or any of the RCC officers.

8. Report on IEEE ComSoc Student Competition

The RCC representative Dr. Tingting Zhang presents the IEEE ComSoc Student Competition 2024. The competition recognizes students, or teams of students, who demonstrate the ability to improve people’s lives through the application of communication technology, to the development of projects displaying potential to contribute to a better future. The number of eligible submissions is first reviewed: 93 in 2024 (a new record number), 72 in 2023, 68 in 2022, 53 in 2021, 54 in 2020, and 51 in 2019. Concerning 2024, submissions were received from over 25 countries around the world. In 2024, hot topics of the proposals were IoT and Smart Systems, UAVs and Non-Terrestrial Networks, Next-Generation Wireless Communication, Radio Sensing, Communication for Healthcare, and Disaster Management and Emergency Response. Dr. Zhang then explains the review process, composed of two different phases, and mentions the projects that received the first and the second prize, as follows:

- First Prize: “Swell Wave Prediction System Through Smart Buoys”, Lee Jieun, Soobin Kwon, Jeonghun Shin and Joosung Kim, Sejong University, South Korea.

- Second Prize: “Low-cost Animal and Pedestrian Crossing Detection in Rural Roads Using WiFi Sensing and Deep Learning”, Ducca Samuel, Universidade de São Paulo, Brazil.

Finally, Dr. Zhang encourages submissions for the Student Competition 2025, which is coming soon. He emphasizes that submissions should be strongly related to communication technology (as opposed to other technologies), and also that submissions should be mainly completed by students (as opposed to wider research groups or students’ advisors). More details on this competition are available in the meeting slides which can be downloaded from the RCC website.

9. Report on RCC Activities

The Vice-Chair presents the report on RCC activities. He begins by reminding the RCC members that the call for nominations for TPC Co-Chairs for the GC 2026 Symposia was sent out via the RCC mailing list with a deadline of November 15, 2024. The Vice-Chair explains that in general, self-nomination is allowed, and that when all nominations are received by the RCC Officers, a ranked list is submitted to the relevant conference TPC Chairs who then make the final decision regarding the symposium co-chair positions. A ranked list has been submitted to the GC 2026 TPC Co-Chairs.

The Vice-Chair remarks that RCC endorses several conferences every year but that the conference should be relevant to the scope of the RCC. Interested people may contact the RCC officers to obtain support from the RCC. The Chair also reminds attendees that, to request IEEE Fellowship Endorsement from the RCC, it is necessary to contact the RCC officers.

Concerning the ComSoc Distinguished Lecturer Program (DLP) Nomination, the Vice-Chair explains that three RCC members were nominated for the Distinguished Lecturer Program in 2024, but no results have been announced as of yet.

The Vice-Chair announces that two further seminars will take place as part of the RCC Seminar Series which started in July 2021. The purpose of the RCC Seminar Series is to provide opportunities to learn the recent outcomes on trending topics from outstanding researchers. The two upcoming RCC seminars will be delivered by the winners of the 2024 IEEE ComSoc RCC Technical Recognition Award and Early Achievement Award. Specifically, Prof. Chong Han will give an online seminar on “Terahertz COMING: from Channel tO coMmUnIcations aNd sensinG” on January 13, 2025, and Prof. Thomas Marzetta will give an in-person seminar at IEEE ICC 2025 in Montreal.

The Vice-Chair reports on the ComSoc Technical Committee Newsletter. This is a quarterly published newsletter that serves as a venue to describe the many activities carried out in the framework of the several ComSoc TCs and to acknowledge the hard work of the volunteers. The Co-Editors-in-Chief are Yuanwei Liu and Ning Zhang. The sixth issue of the newsletter was published online in October 2024. People interested in reporting an initiative carried out in the context of the RCC (or RCC SIG) are encouraged to contact Dr.

Enrico Paolini. The Vice-Chair explained that pictures of events are particularly welcome for the newsletter.

10. Introduction of new RCC officers' candidates

Prof. Yuan Shen, representing the Nominations and Election (N&E) Committee, reviews the procedures, from the ComSoc P&P, regarding the upcoming RCC Officer election. He also presents the N&E Committee of the 2024 RCC Election, having the following composition:

- Chair: Julian Cheng
- 3 Past Chairs: Jemin Lee, Andrea Giorgetti, Yuan Shen

Prof. Shen then presents the selected candidates for the officer positions, in alphabetical order:

- Chair
 - Dr. Enrico Paolini, University of Bologna, Italy
 - Dr. Santiago Mazuelas, Basque Center for Applied Mathematics, Spain
- Vice-chair
 - Dr. Hina Tabassum, University of York, Canada
 - Dr. Mark Flanagan, University College Dublin, Ireland
- Secretary
 - Dr. Ahmed Elzanaty, University of Surrey, United Kingdom
 - Dr. Leyre Azpilicueta, Public University of Navarre, Spain
 - Dr. Tingting Zhang, Harbin Institute of Technology, China

For each of the candidates, Prof. Shen shows the candidate's short biography and invites the candidate to present him/herself and to give a short statement. After all candidates' statements, Prof. Shen explains the voting procedure (voting will take place by email in the weeks following the RCC meeting). The list of current RCC active members is attached to the slides. People not appearing in the list, but confident of being an active member, can contact the RCC officers for this to be checked. The approved election results will be announced by early January at the latest.

11. Next RCC Meeting

The next RCC meeting will be scheduled to take place at ICC 2025, Montreal, Canada.

12. Adjourn

The meeting was adjourned at 9:55 am SAST.

Attendance List

Enrico	Paolini	University of Bologna	e.paolini@unibo.it
Mark	Flanagan	University College Dublin	mark.flanagan@ieee.org
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