IEEE COMMUNICATIONS SOCIETY
Radio Communications Committee (RCC)

IEEE GC 2019
Waikoloa, HI

December 12, 2019, 12:00 – 14:30

Chair: Yuan Shen
Vice Chair: Jemin Lee
Secretary: Julian Cheng
Agenda

1. Welcome
2. Approval of Agenda
3. Approval of ICC’19 RCC Meeting Minutes (available on the website)
4. Report on Conference/Workshop activities
5. Standardization Activities
6. New Business Items
7. Conferment of 2019 IEEE ComSoc RCC Technical Recognition Award
8. Invited talk: “Channel measurements for Beyond 5G: Faster, higher, denser”
9. Adjourn
Approval of ICC’19 RCC Meeting Minutes
available at http://rc.committees.comsoc.org
RCC Mission

The IEEE Communications Society’s Radio Communications Committee (RCC) is primarily interested in physical layer wireless communications. Its areas of interest include engineering aspects of communication and localization systems, equipment, and operation with involvement in standardization, spectrum, and regulatory efforts. Technologies considered span point-to-point, point-to-multipoint, multipoint-to-multipoint, mobile radio access, and adaptive diversity systems. The RCC sponsors and promotes technical publications, conferences, symposia, workshops, tutorials, and other related activities on the aforementioned aspects. The committee also assumes the proactive duty to nominate suitable candidates for Communications Society and IEEE awards, propose distinguished lecturer candidates, and endorse deserving candidates for the election to IEEE Senior Member and Fellow grade.
Supported conferences

The following conferences received Technical Sponsorship from IEEE Communications Society based on RCC recommendation
Conference Reports

- **ICC 2019**: Julian Cheng (WC)
- **GLOBECOM 2019**: Enrico Paolini (CT), Fauzi Bader (CR)
- **ICC 2020**: Mark Flanagan (CT), Yuan Shen (WC), Santiago Mazuelas (SPC)
- **GLOBECOM 2020**: Julian Cheng (CR-AI), Marco Chiani (CT), Jemin Lee (SPC), Dania Marabissi (SPC)
- **ICC 2021**: Norman Beaulieu (WC), Hesham Elsawy (MWN)

- **Other endorsed conferences**:
  - ICT, ASMS/SPSC, WCSP, WiSEE, IINTEC, ICSPCS, BSC
ICC 2019– Wireless Communications Symposium

When: 20.05.2019 – 24.05.2019  Where: Shanghai, China

Symposium: Wireless Communications
Co-chairs: Xu (Judy) Zhu, Harpreet Dhillon, Feifei Gao, Julian Cheng, Andreas Knopp

RCC representative: Julian Cheng (Julian.Cheng@ubc.ca)

Total Submissions: 436
Acceptance Rate (expected): 39%
#TPC members: 153
Avg number of reviews/paper = 4  Rebuttal process: No

Keynote/Invited Speakers: Zhengmao Li (China Mobile), Vincent Poor (Princeton), Wen Tong (Huawei), Lajos Hanzo (Southampton), Hai Tang (OPPO), Xinhui Wang (ZTE), Edward Tiedemann (Qualcomm)
Globecom 2019– Communication Theory Symposium


Symposium: Communication Theory
Co-chairs: Wei Yu, Enrico Paolini, Andrea M. Tonello

RCC representative: Enrico Paolini (e.paolini@unibo.it)

Total Submissions: 144
Total Accepted: 60  Acceptance Rate: 41.7%
#TPC members: 139  Avg number of reviews/paper = 2.9

7 oral sessions (4 sessions with 5 papers, 3 sessions with 6 papers)
1 interactive session with 22 papers
Globecom 2019– Cognitive Radio and AI-Enabled Networks

Where: Waikoloa Village, HI United States

Symposium: Cognitive Radio and AI-Enabled Networks (CRAEN)
Co-chairs: Daniel Benevides da Costa, Faouzi Bader

RCC representative: Faouzi Bader (faouzi.bader@supelec.fr)

Total Submissions: 92
Acceptance Rate (expected): 41% , #TPC members: 283
Avg number of reviews/paper = 4
Rebuttal process: No

CRAEN sessions: 2 sessions on “Deep Reinforcement Learning”, 1 session on “Dynamic Spectrum Access”, 2 sessions on “Performance Analysis and Optimization”, and one CRAEN poster session named “Merged poster session3"
ICC 2020– Wireless Communications Symposium

When: 07.06.2020 – 11.06.2020  Where: Dublin, IE.

Symposium: Wireless Communications
Co-chairs: Simon Pun, Xiangyun (Sean) Zhou, Yuan Shen, Paulo Cardieri, Changchuan Yin

RCC representative: Yuan Shen (shenyuan_e@tsinghua.edu.cn)

Total Submissions: 365
Acceptance Rate (expected): <40%
#TPC members: 461
Avg number of reviews/paper = 4  Rebuttal process: No
ICC 2020– Communication Theory Symposium

When: 07.06.2020 – 11.06.2020
Where: Dublin, IE.

Symposium: Communication Theory
Co-chairs: Harpreet S. Dhillon, Mark Flanagan, Deniz Gunduz

RCC representative: Mark Flanagan (mark.flanagan@ieee.org)

Total Submissions: 119
Acceptance Rate (expected): <40%
#TPC members: 144
Avg number of reviews/paper = 4
Rebuttal process: No
ICC 2020– Signal Processing for Communications Symposium

When: 07.06.2020 – 11.06.2020  Where: Dublin, IE.

Symposium: Signal Processing for Communications
Co-chairs: Tomoaki Ohtsuki, Santiago Mazuelas Franco, Xiaoming Tao

RCC representative: Santiago Mazuelas (smazuelas@bcamath.org)

Total Submissions: 110
Acceptance Rate (expected): <40%
#TPC members: 228
Avg number of reviews/paper = 4  Rebuttal process: No

http://rc.committees.comsoc.org
GLOBECOM 2020

Where: Taipei, Taiwan

Symposium: Cognitive Radio & AI-Enabled Networks Symposium (CR-AI)  
Co-chairs: Julian Cheng (julian.cheng@ubc.ca)

Symposium: Communication Theory Symposium (CT)  
Co-chairs: Marco Chiani (marco.chiani@unibo.it)

Symposium: Signal Processing for Communications (SPC)  
Co-chairs: Jemin Lee (jmnlee@dgist.ac.kr), Dania Marabissi (dania.marabissi@unifi.it)

Prospective TPC members may contact to RCC representatives.
ICC 2021

When: 14.06.2021 – 18.06.2021  Where: Montreal QC, Canada

Symposium: Wireless Communications Symposium (WC)
Co-chairs: Norman Beaulieu (nborm@bupt.edu.cn)

Symposium: Mobile & Wireless Networks (MWN)
Co-chairs: Hesham ElSawy (elsawyhesham@gmail.com)

Prospective TPC members may contact to RCC representatives.
ComSoc Standards Board Technical Committee Liaisons Report

RCC Standard Liaisons Officer: George Chrisikos (gchrisikos@ieee.org)

- ComSoc SB Objective:
  - Discussion of IEEE/ComSoc Standards Development Projects
  - New Standardization Initiatives
  - Procedures
  - Operational Issues
  - In partnership with the IEEE-SA Standards Board
IEEE Communications Society (ComSoc) Standards Development Board (SDB)

**Approved standards:**
- IEEE 1652-2016: IEEE Standard for Translating Head and Torso Simulator Measurements from Eardrum to Other Acoustic Reference Points

**Active projects:**
- P269: Standard for Measuring Electroacoustic Performance of Communication Devices
- P2784: Guide for the Technology and Process Framework for Planning a Smart City
Dynamic Spectrum Access Networks Standards Committee (DySPAN-SC)

**Approved standards:**

- IEEE 1900.2-2008: IEEE Recommended Practice for the Analysis of In-Band and Adjacent Band Interference and Coexistence Between Radio Systems

**Active projects:**

- P1900.5.1: Standard Policy Language for Dynamic Spectrum Access Systems
Power Line Communication Standards Committee (PLC-SC)

**Approved standards:**

- IEEE 1901.2-2013: IEEE Standard for Low Frequency (less than 500 kHz) Narrow Band Power Line Communications for Smart Grid Applications
- IEEE 2030.5-2013: IEEE Adoption of Smart Energy Profile 2.0 Application Protocol Standard
- IEEE 1909.1-2014: IEEE Recommended Practice for Smart Grid Communications Equipment — Test Methods and Installation Requirements
- IEEE 1901.2a-2015: IEEE Standard for Low-Frequency (less than 500 kHz) Narrowband Power Line Communications for Smart Grid Applications – Amendment 1

**Active projects:**

- P2030.5: Standard for Smart Energy Profile Application Protocol
- P1901.1: Medium Frequency (less than 15 MHz) Power Line Communications for Smart Grid Applications
- P1901.1.1: Standard Test Procedures for IEEE 1901.1 Standard for Medium Frequency (less than 15 MHz) Power Line Communications for Smart Grid Applications
Virtualized and Software Defined Networks and Services Standards Committee (NetSoft-SC)

**Approved standards:**

**Active projects:**
- P1913: Software-Defined Quantum Communication
- P1915.1: Standard for Software Defined Networking and Network Function Virtualization Security
- P1916.1: Standard for Software Defined Networking and Network Function Virtualization Performance
- P1917.1: Standard for Software Defined Networking and Network Function Virtualization Reliability
- P1921.1: Software-Defined Networking (SDN) Bootstrapping Procedures
- P1930.1: Recommended Practice for Software Defined Networking (SDN) based Middleware for Control and Management of Wireless Networks

Green ICT Standards Committee (GreenICT-SC)

**Active projects:**
- P1922.1: A method for calculating anticipated emissions caused by virtual machine migration and placement
- P1922.2: A method to calculate near real-time emissions of information and communication technology infrastructure
- P1923.1: Computation of energy efficiency upper bound for apparatus processing communication signal waveforms
- P1924.1: Recommended practice for developing energy efficient power-proportional digital architectures
- P1925.1: Energy Efficient Dynamic Line Rate Transmission System
- P1927.1: Services Provided by the Energy-efficient Orchestration and Management of Virtualized Distributed Data Centers Interconnected by a Virtualized Network
- P1929.1: An Architectural Framework for Energy Efficient Content Distribution
Mobile Communication Networks Standards Committee (MobiNet-SC)

- **Active projects:**
  - P1914.1: Standard for Packet-based Fronthaul Transport Networks
  - P1914.3: Standard for Radio Over Ethernet Encapsulations and Mappings
  - P1918.1: Tactile Internet: Application Scenarios, Definitions and Terminology, Architecture, Functions, and Technical Assumptions
  - P1918.1.1: Haptic Codecs for the Tactile Internet
  - P1920.1: Aerial Communications and Networking Standards
  - P1931.1: An Architectural Framework for Real-time Onsite Operations Facilitation (ROOF) for the Internet of Things
  - P1932.1: Licensed/Unlicensed Spectrum Interoperability in Wireless Mobile Networks
  - P1933.1: Hybrid Automatic Repeat reQuest for High Throughput Applications

Edge, Fog, Cloud Communications with IOT, Big Data Standards Committee (EdgeCloud-SC)

- **Approved standards:**

- **Active projects:**
  - P1912: Privacy and Security Architecture for Consumer Wireless Devices
  - P1906.1.1: Standard Data Model for Nanoscale Communication Systems
  - P1934: OpenFog Reference Architecture for Fog Computing

Access and Core Networks Standards Committee (AccessCore-SC)

- **Approved standards:**

- **Active projects:**
  - P1904.2: Management Channel for Customer-Premises Equipment Connected to Ethernet-Based Subscriber Access Networks
  - P1911.3: HDBaseT 5Play
  - P1910.1: Meshed Tree Bridging with Loop Free Forwarding
Communication Technology May Change the World
Student Competition

RCC representative: Jemin Lee (jmnlee@dgist.ac.kr)

The competition Communication Technology May Change the World, by the IEEE Communications Society – Member Relations, recognizes students or teams of students who demonstrate the capacity to improve the lives of people, through the application of communication technology and the development of projects that meet the human needs of people. http://www.comsoc.org/communications-technology-changing-world

Deadline: Sept. 2019

Number of evaluated projects: 51 (it was 33 last year)

Prizes
• 1st: USD $2000 + plaque
• 2nd: USD $1000 + plaque
• All other projects judged meritorious by the evaluation committee will receive honorary certificates of appreciation by the IEEE Communications Society.
STUDENT COMPETITION 2019 RESULTS

FIRST PRIZE

MiNiMAP: Localization and Tracking in a Multistatic Millimeter Wave MIMO Radar Network
MILLER Samuel, Massachusetts Institute of Technology, USA

AirScope: An Indoor Air Quality Monitoring System with Distributed Multi-Robots,
HU Zhiwen, Peking University, China

LICOT: Litter-Information-Centric Ocean of Things
RAHMATI Mehdi, Rutgers University, USA

SECOND PRIZE

Sons- A Smart Outdoor Navigation System for Visually Impaired People
SHIBER Aviad, Technion - Israel Institute of Technology, Israel

https://www.comsoc.org/education-training/student-competition/student-competition-winners
IEEE 2019 Newly Elevated Fellows

- Octavia Dobre (Memorial University)
- Rose Hu (Utah State University)

1 candidate is endorsement by RCC in 2019

Selected Distinguished Lecturers endorsed by RCC

- 10 Renewed DLs and 15 New DLs in 2019
- Tony Q. S. Quek, Singapore University of Technology and Design (renewed, 2nd term)

Call for nominations 2019 DL, Mid Jul. 2019
Best Readings

Website: [www.comsoc.org/best-readings](http://www.comsoc.org/best-readings)

List of papers (w/commentary and hyperlinks) online.

Topics include: power line communications; cognitive radio; broadband access; green communications; multi-tier cellular networks (Andrea Conti, RCC);

New Best Readings proposed by RCC on Localization

Editorial members:

- Michael Buehrer (Virginia Tech), Santiago Mazuelas (BCAM), Yuan Shen (Tsinghua University)

Updates: sent to the EiC of Best Reading for approval
Special Interest Group (SIG): Wireless Localization

Committee: Santiago Mazuelas (Chair), Javier Prieto, Stefania Bartoletti

Technical Scope:
• The goal of the SIG is to solicit the development of new positioning strategies that leverage the wealth of wireless communication technologies as well as of new location-aware procedures to enhance the efficiency of communication networks.

Conference/Workshop:
• 8th Workshop on Advances in Network Localization and Navigation (ANLN) in IEEE ICC 2020, Dublin
• Possible workshop co-located with the PAAMS and related conferences organized next year by the University of L'Aquila and sponsored by the IEEE Systems, Man and Cybernetics and ComSoc Spanish chapters
Workshop endorsed by RCC

8th Workshop on Advances in Network Localization and Navigation (ANLN)

IEEE ICC 2020
- June 7 - 11 2020, Dublin, Ireland
- Website: http://rc.committees.comsoc.org/workshops
- Workshop Co-Chairs:
  - Stefania Bartoletti (stefania.bartoletti@unife.it)
  - Subhro Das (Subhro.Das@ibm.com)
  - Andrea Giorgetti (a.giorgetti@ieee.org)
  - Santiago Mazuelas (smazuelas@bcamath.org)
  - Florian Meyer (fmeyer@mit.edu)

Submission Deadline: Jan. 20, 2020
SIG: Propagation channels for 5G and beyond

- Chair: Andreas Molisch (USC)
- Goals for SIG:
  - Establishment of webpage for information exchange, pointing to new papers
  - Organization of tutorials and lectures
  - Organization of workshops/symposia at ComSoc conference
- Immediate goals:
  - V2X channels
  - Massive and distributed MIMO channels
  - mmWave and THz: liaise with NIST
- Call for volunteers:
  - For vice chairs
  - For workshop organizers
New Business Items

- RCC P&P Updates
  - Version 10, Alignment with updated ComSoc P&Ps, Oct. 2019

1) Membership Requirements
Anybody can be a member of the Radio Communications Committee (RCC, it is noted that in the text followed we shall use TC in short to represent the RCC). To become a member it is necessary to subscribe to the TC mailing list as specified on the TC Web page. A member becomes an active member if he/she has attended (physically present or by teleconference) two or more of the prior five regular scheduled TC meetings or has provided significant service to the TC defined as follows: served as past Officer of the TC; served as TC representative for IEEE Communications Society’s flagship conferences (ICC and Globecom); and have been recipient of this TC award. The TC Secretary shall maintain both an attendance list for each of such meetings and a list of Active Members. All meetings of the TC are open. Individuals who are not ComSoc members may participate in TC activities as collaborators.
New Business Items

- RCC P&P Updates
  - Version 10, Alignment with updated ComSoc P&Ps, Oct. 2019

Post Election: A TC officer shall keep a list of the members who attended the meeting as well as a tally of the votes cast. The TC Chair shall provide an Election Report within two weeks via emailing the results of the election and the appointments of the new officers to the TC membership, the VP-TA, the Secretary of the Technical Activities Council, and ComSoc headquarters. Election results become valid when approved by the Director – Technical Committees and the VP-TEA. The new officers will take office on January 1 following the election at the Globecom meeting (typically in late November or early December).
New Business Items

- RCC P&P Updates
  - Version 10, Alignment with updated ComSoc P&Ps, Oct. 2019

Nominations will be solicited by e-mails from the TC members. All nominations must be sent to the TC Secretary. The applications can be from individual researchers on a self-nomination basis, or nominations by other people or research groups. The nomination should include a concise description of the candidate’s accomplishments as related to the TC. The TC Awards Subcommittee consists of four members including the TC officers (Chair, Vice-Chair, and Secretary) and another TC member nominated by the TC Chair. The nominations cannot be from the members of the TC Awards Subcommittee. No TC Awards Subcommittee members can be nominated while they are in their service. Amongst all received nominated candidates the TC Award Subcommittee will make the final decisions for the RCC Outstanding Service Award, RCC Technical Recognition Award, and RCC Early Achievement Award, each year. The Awards Subcommittee deliberations for each award, and all documents submitted to or created by the Subcommittee shall be strictly confidential. Only the final award recipients shall be openly announced. The TC Chair shall send the Awards Selection Report to the Technical Committees Director for approval. Once the Awards Selection Report has been approved, and only then, the final award recipients may be announced.
New Business Items

- RCC P&P Updates
  - Version 10, Alignment with updated ComSoc P&Ps, Oct. 2019

9) Information Dissemination Activities
The TC will maintain an Internet Web page at

The Secretary maintains it. This Web page will be accessible from the main ComSoc Web page. Announcements distributed to the TC’s membership, officers and their contact information, notably meeting agendas and meeting minutes, opportunities for membership participation in TC sponsored activities, as well as election-related issues, will be made available on their Web page. The TC will also provide at least one email exploder as an alternative for timely dissemination of information, and to welcome useful information from others.
New Business Items

Soliciting nominations for 2020 Outstanding Service Award (March 1, 2020)

Soliciting nominations for 2020 Early Achievement Award (March 1, 2020)

- Recognize members of the RCC who have achieved early career visibility in the field through research and service, and who
  - have participated in the RCC (e.g., attended RCC meetings, served RCC in a significant capacity, been member of the TPC for ICC/GLOBECOM)
  - are within 10 years of their Ph.D.

- Past recipients
  - 2019 Mehdi Bennis "Ultra-Reliable and Low-latency communication in 5G and Beyond"
  - 2018 Santiago Mazuelas "Probabilistic processing of complex data"
  - 2018 Walid Saad "Unmanned Aerial Vehicles for Wireless Networking: An Overview"
New Business Items

Soliciting nominees for ICC/GC Technical Program Symposium CoChairs

SIG proposals!

TC meeting: More technical discussions? SIG presentations?

Publicity: Newsletter? SIG? Interview of Awardees?

Send an email to us
Chair: Yuan Shen, shenyuan_ee@tsinghua.edu.cn
Vice Chair: Jemin Lee, jmnlee@dgist.ac.kr
Secretary: Julian Cheng, julian.cheng@ubc.ca
2019 IEEE ComSoc RCC Technical Recognition Award

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.
Conferment of

2019 IEEE ComSoc RCC Technical Recognition Award

Andreas F. Molisch
for outstanding contributions to radio channel modeling

Mérouane Debbah
for outstanding contributions to radio communications
IEEE Communications Society
Radio Communications Technical Committee

2019 Technical Recognition Award

Presented to

Andreas F. Molisch

For outstanding contributions to radio channel modeling.

Khaled B. Letaief
President 2018-2019

Nelson Fonseca
VP Technical & Educational Activities
IEEE Communications Society
Radio Communications Technical Committee

2019 Technical Recognition Award

Presented to

MÉROUANE DEBBAH

For outstanding contributions to radio communications.

KHALED B. LETAIIF
President 2018-2019

NELSON FONSECA
VP Technical & Educational Activities
RCC Invited Talk

Channel Measurements for Beyond 5G: Faster, Higher, Denser

Dr. Andreas F. Molisch
Next RCC Meeting

The next RCC meeting will be scheduled in ICC 2020, Dublin, IE

THANK YOU AND SEE YOU THEN!
Officer Contacts

Chair: Yuan Shen  
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RCC Website:  
http://rc.committees.comsoc.org