

IEEE COMMUNICATIONS SOCIETY
Radio Communications Committee (RCC)

IEEE ICC 2020
Virtual Conference

July 15, 2020, 10:00 – 11:30 AM EST

Chair: Yuan Shen

Vice Chair: Jemin Lee

Secretary: Julian Cheng

Agenda

1. Welcome
2. Approval of Agenda
3. Opening Remarks by ComSoc President Vincent Chan, MIT
4. Approval of GC'20 RCC Meeting Minutes (available on the website)
5. Special Interest Groups (SIGs)
6. Conferment of 2020 IEEE ComSoc RCC Outstanding Service Award
7. Conferment of 2020 IEEE ComSoc RCC Early Achievement Award
Invited talk: “Random Networks on Lines: Stochastic Geometry for Vehicular Systems”
8. Report on TC Activities
9. Technical Committee P&P Amendment
10. New Business Items
11. Adjourn

RCC Mission

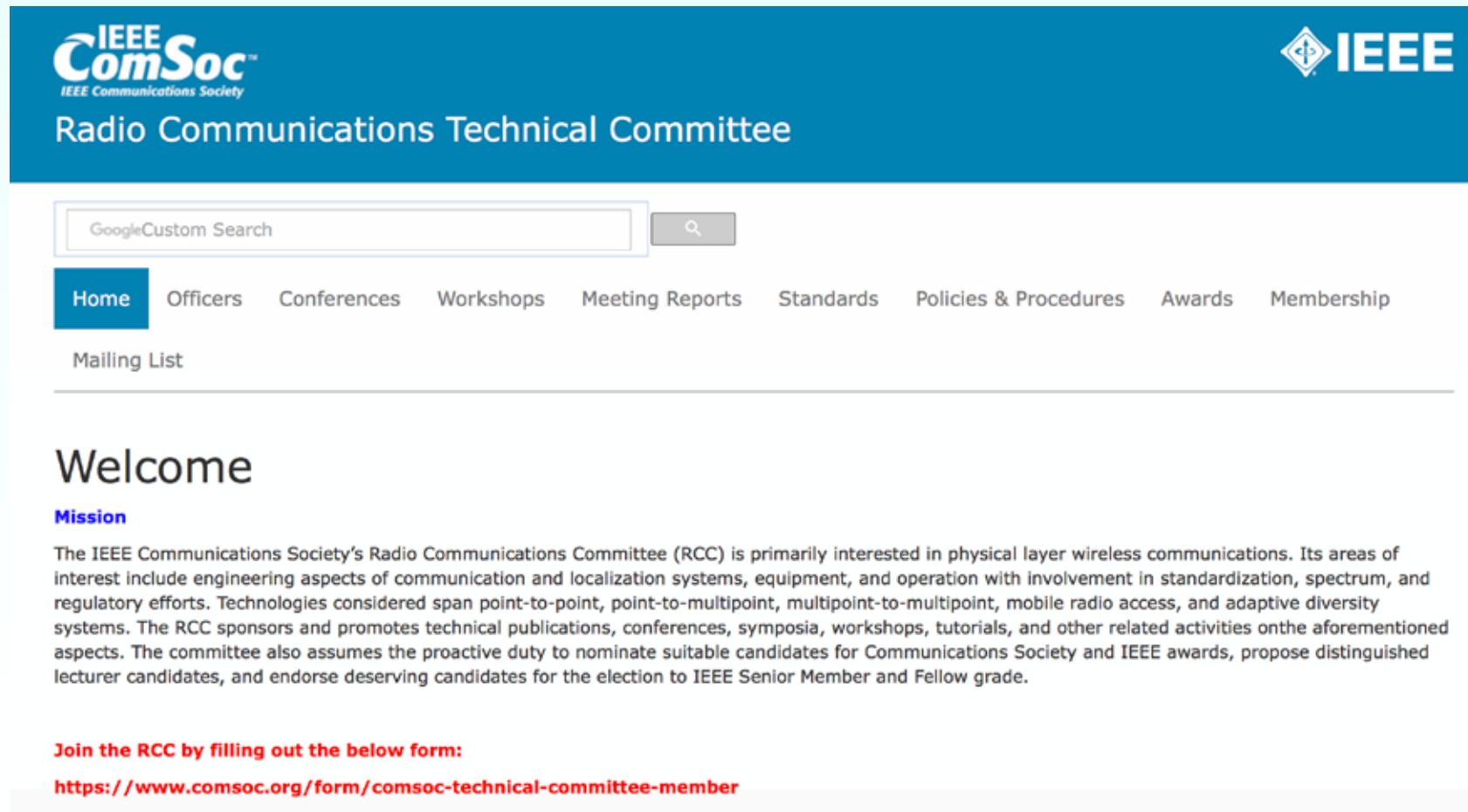
The IEEE Communications Society's Radio Communications Committee (RCC) is primarily interested in physical layer wireless communications. Its areas of interest include engineering aspects of **communication and localization systems, equipment, and operation with involvement in standardization, spectrum, 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.

Membership: 1224

Mailing list: rcc@comsoc.org

Approval of GC'19 RCC Meeting Minutes

available at <http://rc.committees.comsoc.org>



The screenshot shows the website for the IEEE ComSoc Radio Communications Technical Committee. At the top left is the IEEE ComSoc logo, and at the top right is the IEEE logo. Below the logos is the text "Radio Communications Technical Committee". A search bar with the placeholder "GoogleCustom Search" and a magnifying glass icon is present. A navigation menu includes links for Home, Officers, Conferences, Workshops, Meeting Reports, Standards, Policies & Procedures, Awards, and Membership. Below the menu is a "Mailing List" link. The main content area features a "Welcome" heading, a "Mission" sub-heading, and a paragraph describing the committee's focus on physical layer wireless communications. At the bottom, there is a red link to join the RCC by filling out a form.

IEEE ComSoc
IEEE Communications Society

IEEE

Radio Communications Technical Committee

GoogleCustom Search

Home Officers Conferences Workshops Meeting Reports Standards Policies & Procedures Awards Membership

Mailing List

Welcome

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.

Join the RCC by filling out the below form:
<https://www.comsoc.org/form/comsoc-technical-committee-member>

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
 - To Renew workshop on localization in IEEE ICC 2021
 - Possible special sessions on localization in IEEE Globecom 2021

SIG: Wireless Localization

- **Workshop Organized 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@ucsd.edu)
- 26 submissions, 13 papers accepted, 50% acceptance, 4 technical sessions
- 1 Keynote:
 - “ToA based localization in the presence of blockage and multipath,” A. Molisch, USC

SIG: Propagation channels for 5G and beyond

- Chair: Andreas Molisch (USC)
- Motivation:
 - Propagation channels are basis on which systems are designed and tested
 - Need to account for new deployment scenarios and frequency ranges
 - 5G and B5G have many scenarios that are insufficiently covered (e.g., mm-wave V2V, UAV channels, THz, Cloud-RAN channels, factory IoT channels,.....)
- Goals for SIG:
 - Establishment of webpage for information exchange, pointing to new papers
 - Organization of tutorials and lectures
 - Organization of workshops/symposia at ComSoc conferences

SIG: Propagation channels for 5G and beyond

- Main activity: workshop organization
 - Workshop on Propagation Channels for 5G/B5G at Globecom 2020
 - Chairs: A. Molisch (Univ. Southern Cal.), D. Cassioli (Univ. l'Aquila)
 - TPC chairs: Ruisi He (Beijing Jiaotong), Harsh Tataria (Lund Univ.), Nada Golmie (NIST)
 - Call for papers will go out in the next weeks
- Other activities
 - Liaison with NIST mmWave channel alliance (A. Molisch)
 - Main activity of alliance: comparison of different high-resolution parameter extraction methods; work on “best practices” for sounder calibration.

New SIG: Integration of Sensing and Communications (ISC)

Call for participation

- Organizer: **Tingting Zhang** (Harbin Institute of Technology, Shenzhen)
- Motivations:
 - The integrated sensing and communication (ISC) system, in which the environment sensing and communication share the same frequency band and hardware, has emerged as a key technology in future wireless systems, such as the autonomous vehicle network and 5G beyond.
 - Many problems in ISC still remain open. The goal of this group is to bring together researchers in an effort to identify and discuss the major technical challenges, recent breakthroughs, and new applications related to ISC.

New SIG: Integration of Sensing and Communications (ISC)

- Main activities:
 - Online seminars on ISC (coming soon)
 - Workshop organization along with main stream IEEE conferences
- Topics of Interest:
 - Theoretical frameworks for ISC
 - Waveform/sequence/coding/modulation design for ISC
 - Co-existence and interference mitigation of ISC
 - Experimental performance demonstrations, prototyping, and field-tests of ISC
 - Typical applications (such as vehicular networks, collaborate sensing) of ISC
 - ...

New SIG: Machine Learning for Radio Communications (MLRC)

Call for participation

- Organizer: **Chenhao Qi** (Southeast University)
- Motivations:
 - With the explosive growth of smart phones and various wireless devices, future radio communications will be more intelligent. By introducing machine learning, the huge data generated from wearable devices, autonomous systems, drones, and the Internet of Things (IoT) can be sufficiently used to improve the performance of radio communications. The goal of this group is to bring together the researchers in this area and promote the development of machine learning technique for radio communications.

New SIG: Machine Learning for Radio Communications (MLRC)

- Topics of interest:
 - Machine learning for channel modeling, sensing, localization, interference mitigation, signal detection and estimation.
 - Resource optimization using machine learning techniques.
 - Secure machine learning over radio communications.
 - Machine learning for emerging radio communication systems and applications, such as drone systems, IoT, smart cities, and vehicular networks.
 - Performance analysis and evaluation of machine learning techniques in radio communications
 - Hardware or software implementation for machine learning in radio communications
 -

2020 IEEE ComSoc RCC Outstanding Service Award

The Radio Communications Committee (RCC) Outstanding Service Award is established to recognize members of the RCC who have a distinguished record of service to the RCC community, including organization of RCC endorsed symposia and workshops, providing exceptional leadership within the RCC, and promotion of RCC activities and interests in the broader research community.

Award Subcommittee:

- Hanna Bogucka (Chair), H. Vincent Poor, Yuan Shen, Jemin Lee, Julian Cheng

Conferment of
2020 IEEE ComSoc RCC Outstanding Service Award

Dr. Jack Winters



2020 IEEE ComSoc RCC Early Achievement Award

(Est. in 2017)

The Radio Communications Committee (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 Communications Society (ComSoc) who have achieved early career visibility in the field through research and service to the RCC.

Award Subcommittee:

- Hanna Bogucka (Chair), H. Vincent Poor, Yuan Shen, Jemin Lee, Julian Cheng

Conferment of
2020 IEEE ComSoc RCC Early Achievement Award

Prof. Harpreet S. Dhillon

For contributions to radio communications



IEEE COMMUNICATIONS SOCIETY

RADIO COMMUNICATIONS TECHNICAL COMMITTEE

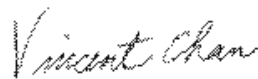
2020 EARLY ACHIEVEMENT AWARD

IS PRESENTED TO

HARPREET S. DHILLON

CITATION:

FOR CONTRIBUTIONS TO RADIO COMMUNICATIONS



VINCENT CHAN
PRESIDENT
IEEE COMMUNICATIONS SOCIETY



XUEMIN (SHERMAN) SHEN
VICE PRESIDENT
TECHNICAL & EDUCATIONAL ACTIVITIES

RCC Invited Talk

Random Networks on Lines: Stochastic Geometry for Vehicular Systems

Prof. Harpreet S. Dhillon

Conference Reports

- **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 Elsayy (MWN)
- **GLOBECOM 2021:** Andrea Giorgetti (WC) and Chenghao Qi (SPC)

- **Other endorsed conferences:**
 - **ICT, ASMS/SPSC, WCSP, WiSEE, IINTEC, ICSPCS, BSC**

- **Nominations for symposium co-chairs for ICC and Globecom**
- **Endorsement of Conferences for ComSoc technical co-sponsorship**

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)
- Dynamic Spectrum Access Networks Standards Committee (DySPAN-SC)
- Power Line Communication Standards Committee (PLC-SC)

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>

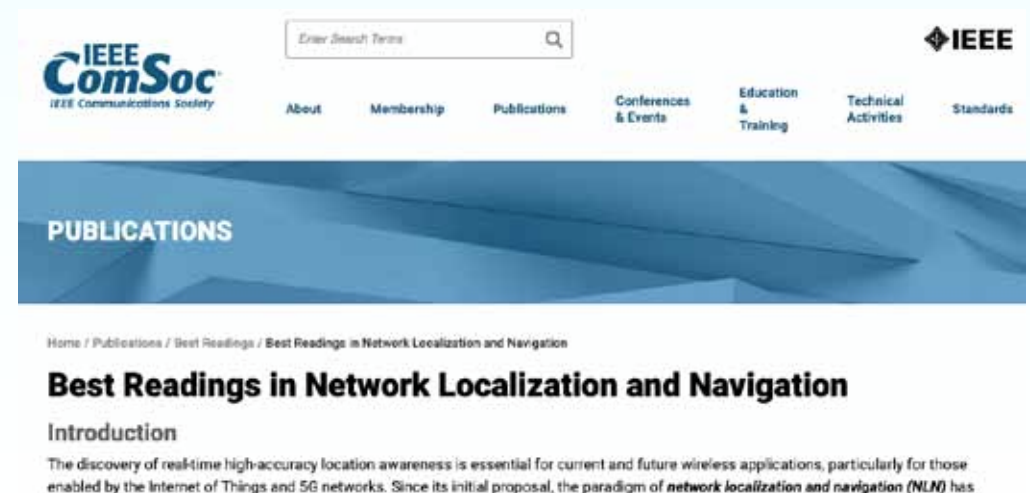
Deadline: **Aug. 15, 2020**

Prizes

- 1st: USD \$2000 + plaque
- 2nd: USD \$1000 + plaque
- All other projects judged meritorious by the evaluation committee will receive Honorable mention certificates of appreciation by the IEEE Communications Society.

Best Readings

- Website: www.comsoc.org/best-readings
- List of papers (w/commentary and hyperlinks) online.
- Topics such as power line communications; cognitive radio; broadband access; green communications; multi-tier cellular networks
- New Best Readings on **Network Localization and Navigation** proposed by RCC
- Editorial members:
 - Michael Buehrer (Virginia Tech),
Santiago Mazuelas (BCAM),
Yuan Shen (Tsinghua University)



The screenshot shows the IEEE ComSoc website. At the top left is the IEEE ComSoc logo. To its right is a search bar with the text 'Enter Search Terms' and a magnifying glass icon. Further right is the IEEE logo. Below these are navigation links: 'About', 'Membership', 'Publications', 'Conferences & Events', 'Education & Training', 'Technical Activities', and 'Standards'. The main content area has a blue header with the word 'PUBLICATIONS' in white. Below this is a breadcrumb trail: 'Home / Publications / Best Readings / Best Readings in Network Localization and Navigation'. The main heading is 'Best Readings in Network Localization and Navigation'. Underneath is the sub-heading 'Introduction' followed by a paragraph of text: 'The discovery of real-time high-accuracy location awareness is essential for current and future wireless applications, particularly for those enabled by the Internet of Things and 5G networks. Since its initial proposal, the paradigm of *network localization and navigation (NLN)* has

<https://www.comsoc.org/publications/best-readings/network-localization-and-navigation>

Technical Committee P&P

- A new version v3 of the TC Board P&Ps amendment, June 2020
 - **B.5.6.4.4 Minimum Mandatory/Recommended Policies for Technical Committees P&Ps**
- Amendment Proposal: RCC P&P in alignment with updated ComSoc P&Ps
- Major changes:
 - ADD “Charter of the Technical Committee” (originally in mission)
 - ADD “Objectives of the Technical Committee” (template from TCB)
 - Terms: *TC officers can be elected to a different officer position, but in no case shall one person continuously serve as a TC officer within the same TC for **more than eight consecutive years**. -> **A Chair cannot serve more than two consecutive terms of office, and a term has a two-year duration.***
 - **Subcommittees and Special Interest Groups (SIGs):**
 - Subcommittees deal with specific tasks related to the Technical Committee operations, e.g., nomination and selection of awards, officer elections, etc.
 - Special Interest Groups (SIGs) help the TC foster the scientific and technological development in topical emerging technologies within the scope of the TC. SIGs may also be created to promote activities in well-established technologies.

Technical Committee P&P

- Major changes (cont')
 - Membership: The minimum requirements for membership in Technical Committees shall be:
 - Be a ComSoc members in good standing.
 - ...
 - The requirements for being a **voting member** in Technical Committees shall be:
 - Be a Technical Committee member or a Technical Committee Officer.
 - **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.**
 - Other membership levels:
 - Collaborators – Individuals who are not ComSoc members. Collaborators may participate in TC activities but are not entitled to vote, run for election, or serve in appointed positions.

Technical Committee P&P

- Major changes (cont')
 - Minimum duties and responsibilities of officers
 - Chair, Vice Chair, Secretary (template)
 - Post-Election: The TC Chair shall send the election report to the Director-Technical Committees and the VP-TEA within two weeks from when the election was held...
 - Requirements of Election Report
 - Award Subcommittee members:
 - All members shall be TC members and shall be appointed by the TC Chair subject to approval of the TC.
 - The term limits of the Awards Subcommittee members shall be specified in the TC P&Ps. The roster of the Awards Subcommittee, including members' affiliations, shall be posted on the Technical Committee web page.

Technical Committee P&P

- Major changes (cont')
 - **Requirements** of Award Report
 - The Technical Committee 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 notified and the selection outcome publicly announced.
 - **TC P&Ps require the approval of the TCB** before taking effect. The process for submitting TC P&Ps amendments for approval shall be as follows:
 - **The TC shall first approve the amendment.**
 - The TC Chair shall forward the approved P&Ps to the Governance Committee for feedback, copying the Chair of the Technical Committee Board.
 - The TC P&Ps shall be revised as needed based on the feedback of the Governance Committee.
 - The finalized P&Ps shall be sent to the Technical Committee Board Chair who shall schedule them for approval at the next Technical Committee Board meeting.

New Business Items

Soliciting nominations for the 2020 Technical Recognition Award (**Aug. 15**)

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.

Past recipients:

2019 - *Andreas F. Molisch*

2019 - *Mérouane Debbah*

2018 - *Thomas Kailath*

2018 - *Arogyaswami J. Paulraj*

2017 - *Fumiyuki Adachi*

2017 - *Gordon L. Stüber*

2016 - *William C. Lindsey*

2015 - *Larry Greenstein*

2014 - *Vincent Poor*

2013 - *Lajos Hanzo*

2012 - *Desmond Taylor*

2011 - *Norman Beaulieu*

2010 - *Marco Chiani*

New Business Items

- **Soliciting nominations for ICC/GC Technical Program Symposium CoChairs**
- **Nominations for 2020 ComSoc Distinguished Lectures (Deadline Sept. 2020)**
- **SIG proposals and Participations**
- **Online meetings and seminars: Technical presentations? SIG activities?**

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

Next RCC Meeting

**The next RCC meeting will be scheduled in
GC 2020, Taipei, Taiwan**

**THANK YOU AND
SEE YOU THEN!**

Officers Contacts

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RCC Website:

<http://rc.committees.comsoc.org>