



Radio Wireless Week

20-23 January 2019, Orlando, FL, USA

Paper Deadline
July 24, 2018



IEEE



<http://www.radiowirelessweek.org/>

Steering Committee

General Chair

Rashaunda Henderson,
University of Texas, Dallas

General Co-Chair

Robert Caverly, *Villanova University*

Technical Program Chair

Nuno Borges Carvalho,
Universidade de Aveiro

Finance Chair

Kevin Chuang, *Nanosemi, Inc.*

PAWR Co-Chairs

Pere Gilabert, *University Politecnica de Catalunya*
Neil Braithwaite, *Tarana Wireless*

WiSNet Co-Chairs

Luca Roselli, *Univ. of Perugia*
Rahul Khanna, *Intel*

SiRF General Chair

Monte Miller, *NXP Semiconductors*

TWIOS Co-Chairs

Holger Maune, *Technical University of Darmstadt*
Charlie Jackson, *Northrop Grumman*

Executive Committee Chair

Dietmar Kissinger, *IHP Microelectronics*

Special Sessions Chair

Ahmet Cagri Ulusoy, *Michigan State University*

Conference Management

Elsie Vega, *IEEE*

Call For Papers

The 2019 IEEE Radio and Wireless Symposium (RWS2019) will be held during the week of 20 January 2019 in Orlando, FL, USA.



RWS2019 and the 19th IEEE Topical Meeting on Silicon Monolithic Integrated Circuits SiRF2019 are co-located and will continue to hold joint sessions. Topical conferences held in parallel provide more focused sessions in the areas of RF Power Amplifiers (PAWR), Wireless Sensors and Sensor Networks (WiSNet), and The Topical Workshop on the Internet of Space (TWIOS). The RWS Demonstration Track provides an interactive forum for hands-on demonstration of latest wireless experiments and innovations. There are also Focus sessions on 5G and MM-Wave to THz Technologies and Applications.

RWS Papers featuring innovative work are solicited in (but not limited to) the following areas:

1. High-speed and Broadband Wireless Technologies

- Broadband Fixed Wireless and Last-Mile Access
- Ultra-High Data Rate Communications Links - Powerline Communication Technologies
- 3G/4G/5G Wireless Communication Services
- Ultra-Wideband (UWB) Systems
- Optical Networks and Systems

2. Emerging Wireless Technologies and Applications

- M2M & V2V Technologies & Applications
- Resource Management, Security
- Femtocell and Heterogeneous Networks
- Green, Sustainable Wireless Tech. & Networks

3. Wireless System Architecture and Modeling

- Ad Hoc Network Techniques for Internetworking
- Distributed Network Architectures and Systems
- Wireless Mesh and Broadband Local/Personal/ Body Area Networks
- Wireless Security and RFID Technologies

4. Propagation/Channel Modeling and Utilization

- Propagation/Channel Characterization & Modeling - Fading Countermeasures
- Spectrum Sensing Technologies
- Frequency and Channel Allocation Algorithms

5. Digital Signal Processing, SDR, & Cognitive Radio

- Digital/Analog Adaptive/Collaborative Signal Processing
- Methods for Signal Integrity and Signal Conditioning
- Interference Mitigation and Cancellation Techniques
- Software/Hardware architectures, Algorithms
- MAC, Networking protocols, Policies, Standardization
- Dynamic Spectrum Sharing, Coexistence, Interoperability

6. Applications to Bio-Medical, Environmental, and Internet of Things

- Miniaturization and Integration of Wireless Technologies
- Personal Area Networks and Body area Sensor Networks
- Wireless Positioning Technologies & Remote Sensing

7. MIMO and Multi-Antenna Communications

- MIMO, MU-MIMO, Space-Time Processing - Relaying Technologies
- Cooperative/Collaborative Technology
- Multi-Beam Smart Antennas

8. Antenna Technologies

- Passive & Active Antennas from RF to THz Frequencies
- Miniaturized, Multi-frequency and Broadband Antennas
- Wireless Platform Integrated Antennas

9. Transceiver & Front-end Technologies, SOC & SiP

- Receiver, Transmitter and Transceiver Components - Active Circuits and Sub-Systems
- Multi-Standard Circuits and Sub-systems
- Low-Power/Low Noise RF/Analog IC and SoC
- Highly Integrated Transceivers for Sensing and Imaging

10. Passive Components & Packaging

- Discrete, Embedded and Distributed Passive Components, Filters, Couplers and Signal Separation Devices
- Discrete and Highly Integrated Packaging
- 3D-Packaging, Interconnects, and Applications
- Packaging of MEMs, Biosensors, Organic ICs, etc.

11. MM-Wave to THz Technology & Applications

- Device and Circuit Concept & Demonstration
- Unique Receivers and Transmitters - Integrated Circuits
- Wireless Links, Arrays & Applications

12. 3D & Novel Engineered Materials

- Additive 3D manufacturing for wireless applications
- Novel Engineered Materials for Antenna, Packaging, Passive Devices and Flexible Electronic Integration

RWS 2019 Chair

Rashaunda Henderson, *Univ. Texas, Dallas*

RWS 2019 Co-Chair

Robert Caverly, *Villanova University*

Paper submission instructions will be found at <http://www.radiowirelessweek.org/>.

Submissions should be formatted according to the submission review. Authors should indicate preference for oral or poster presentation. All submissions must be received by **24 July 2018**.

All accepted papers will be published in a digest and be included in IEEE Xplore Digital Library. Submissions will be evaluated based on novelty, significance of the work, technical content, interest to the audience, and presentation.



The 19th IEEE Topical Meeting on
Silicon Monolithic Integrated Circuits in RF Systems
20 – 23 January 2019, Orlando, FL, USA



SiRF 2019



IEEE

Call for Papers

SiRF 

Conference Chair

Monte Miller
NXP Semiconductors

Technical Program Chair

Ahmet Cagri Ulusoy
Michigan State University

Technical Program Co-Chair

Vadim Issakov
Infineon Technologies

Publicity Chair

TBD

International Liaison - Asia

Jae-Sung Rieh
Korea University

International Liaison - Europe

Mehmet Kaynak
IHP

Executive Committee

Julio Costa
Qorvo
Mehmet Kaynak
IHP
Eric Kerherve
University of Bordeaux
Dietmar Kissinger
IHP / TU Berlin
Chien-Nan Kuo
National Chiao Tung University
Donald Lie
Texas Tech University
Guofu Niu
Auburn University
Sergio Pacheco
NXP Semiconductors
Nils Pohl
Ruhr-Universität Bochum
George Ponchak
NASA Glenn Research Center
Jae-Sung Rieh
Korea University
Hermann Schumacher
Ulm University
Jung-Hun Seo
SUNY Buffalo
Hasan Sharifi
HRL Labs
Václav Valenta
ESA / ESTEC
Katsuyoshi Washio
Tohoku University
Robert Weigel
FAU Erlangen-Nürnberg

IEEE Topical Meetings on Silicon Monolithic Integrated Circuits in RF Systems have been at the forefront of moving Silicon technologies into microwave and millimeter-wave applications – a development now widely accepted, and of great importance. RF CMOS and Si/SiGe BiCMOS technologies are well established in commercial and increasingly also military applications.

SiRF 2019 will continue this trend, with a renewed emphasis on promoting a dialogue between IC designers and researchers promoting non-standard technologies, exploiting the maturity of Silicon processes, but addressing the challenges of tomorrow. The three days of SiRF 2019 will chronicle recent advances in our dynamic field, and provide the platform for developing new ideas, and candid exchange, facilitated by SiRF's single-session format. As in past years, a line-up of reputed invited speakers will stimulate our discussions, with an emphasis on emerging technologies. For more details, visit: <http://www.radiowirelessweek.org/sirf-home>

We solicit technical papers in the following and similar fields of research:

- **Materials:**
Epitaxy, strain engineering, characterization, stability issues, smart materials.
- **Technologies:**
Nano-technologies incl. CNT, nanowire and graphene; Si-based heterostructures, advanced RF CMOS and Si/SiGe BiCMOS incl. through-Si vias integration; RFMEMS and micromachining for improved RF performance and integrated antennas, RFMEMS/RFIC integration; advanced packaging.
- **Devices:**
Physics, optimization, and scaling limits of SiGe HBTs, RF CMOS, strained-Si CMOS, Si-Ge MOSFETs and MODFETs, mm-wave diodes; advanced passive devices, integrated antennas; nano-devices for micro-/millimeter-wave applications.
- **Circuits:**
Microwave, mm-wave, THz and mixed signal building blocks and multi-functional ICs, integrated transceivers, high-speed DAC and ADC, RFICs, reconfigurable micro-/mm-wave ICs.
- **Si photonics:**
Si-based photonic components, integration with electronic circuits.
- **Applications:**
System-on-Chip (SoC) and System-in-Package (SiP), Flexible electronics; 2-D electronics; ultra-wideband (UWB) frontends, wireless sensor networks, intelligent antennas and antenna array solutions, emerging telecom (e.g. 60 GHz WLAN, E-band) and sensor systems (automotive, security, health monitoring); radio over fiber.
- **Yield, Reliability and Signal Integrity:**
Yield impact of nano-scaling and heterogeneous integration; robustness and reliability of ultra-scaled technologies; substrate noise, on-chip crosstalk; thermal management.
- **Measurement and Modeling:**
Multi-physics modeling, EM simulation of complex RFICs, robust measurement and de-embedding, built-in self-test, self-calibration, high-throughput RFIC testing.

PAPER SUBMISSION GUIDELINE

Submit a **three page** manuscript in PDF format online and indicate clearly the advances over the state-of-the-art. Papers include: 1) the names of all authors and their affiliations, 2) whether this is a student paper, and 3) the mailing address, phone number, fax number, and email address of the corresponding author. Use the template provided on the SiRF website. Accepted papers will be submitted to the Xplore Digital Library.

OPPORTUNITY FOR IEEE JOURNAL PUBLICATION OF EXPANDED PAPERS

A set of selected conference papers is planned to be specially arranged for submission to IEEE Transactions on Microwave Theory and Techniques, for publication in a single issue. Papers will need to be significantly expanded from the conference version and will go through the regular review process for publication.

MEETING DETAILS

SiRF 2019 will be held during Radio and Wireless Week in Orlando, along with the Radio and Wireless Symposium (RWS), the Topical Conference on Power Amplifiers for Wireless and Radio Applications (PAWR), the Topical Meeting on Wireless Sensors and Sensor Networks (WisNet), and the Topical Workshop on the Internet of Space (TWIOS).



Abstract Submission Deadline: 24 July 2018



IEEE Topical Conference on RF/Microwave Power Amplifiers for Radio and Wireless Applications

20-23 January 2019, Orlando, FL, USA



IEEE



Paper Deadline
July 24, 2018

Steering Committee

General Chair

Rashaunda Henderson,
University of Texas, Dallas

General co-Chair

Robert Caverly, *Villanova University*

Technical Program Chair

Nuno Borges Carvalho,
Universidade de Aveiro

Finance Chair

Kevin Chuang, *Nanosemi, Inc.*

PAWR Co-Chairs

Pere Gilabert, *University Politecnica de Catalunya*
Neil Braithwaite, *Tarana Wireless*

WiSNet Co-Chairs

Luca Roselli, *Univ. of Perugia*
Rahul Khanna, *Intel*

SiRF General Chair

Monte Miller, *NXP Semiconductors*

TWIOS Co-Chairs

Holger Maune, *Technical University of Darmstadt*
Charlie Jackson, *Northrop Grumman*

Executive Committee Chair

Dietmar Kissinger, *IHP Microelectronics*

Special Sessions Chair

Ahmet Cagri Ulusoy, *Michigan State University*

Conference Management

Elsie Vega, *IEEE*

Call For Papers

The 2019 IEEE Topical Conference on RF/Microwave Power Amplifiers for Radio and Wireless Applications (PAWR2019) will be a part of 2019 IEEE Radio and Wireless Week (RWW2019) which will be held the week of 20 January 2019 in Orlando, FL, USA.

RWW2019 will also feature:

- IEEE Radio and Wireless Symposium (RWS)
- 19th Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems (SiRF)
- IEEE Topical Conference on Wireless Sensors and Sensor Networks (WiSNet)
- IEEE Topical Workshop on the Internet of Space (TWIOS)
- Focus sessions on 5G and MM-Wave to THz Technologies and Applications

Each of these events will be organized separately, with their own call for papers found at <http://www.radiowirelessweek.org/>.

Power amplifiers are often the most critical component of RF/microwave communications systems and consequently the focus of intense research to achieve increased linearity and power efficiency. New forms of power amplification are being developed to meet the needs of the wireless communication equipment industry and the world's demand for greater information transmission. PAWR2019 will feature tracks on RF/microwave Power Amplifiers. Papers featuring innovative work are solicited in (but not limited to) the following areas of RF/microwave power amplifier technology:

- High Power/Wideband Active Devices
- Power Amplifiers for Mobile, Avionics and Space
- Modeling and Characterization
- Advanced Circuit Design and Topologies
- Green Power Amplifier Technology
- Integration Technology
- Packaging and Reliability
- Linearization and Efficiency Enhancement Techniques
- Applications, Novel Architectures and System Analysis

PAWR2019 Co-Chairs

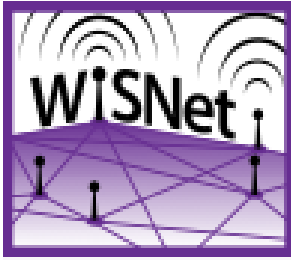
Neil Braithwaite, *Tarana Wireless*

Pere Gilabert, *University Politecnica de Catalunya*

Paper submission instructions will be found at <http://www.radiowirelessweek.org/>.

Submissions should be formatted according to the submission review. Authors should indicate preference for oral or poster presentation. All submissions must be received by **24 July 2018**.

All accepted papers will be published in a digest and included in IEEE Xplore Digital Library. Submissions will be evaluated based on novelty, significance of the work, technical content, interest to the audience, and presentation.



IEEE Topical Conference on Wireless Sensors and Sensor Networks

20-23 January 2019, Orlando, FL, USA



Paper Deadline
July 24, 2018

Steering Committee

General Chair

Rashaunda Henderson,
University of Texas, Dallas

General Co-Chair

Robert Caverly, *Villanova University*

Technical Program Chair

Nuno Borges Carvalho,
Universidade de Aveiro

Finance Chair

Kevin Chuang, *Nanosemi, Inc.*

PAWR Co-Chairs

Pere Gilabert, *University Politecnica de Catalunya*
Neil Braithwaite, *Tarana Wireless*

WiSNet Co-Chairs

Luca Roselli, *Univ. of Perugia*
Rahul Khanna, *Intel*

SiRF General Chair

Monte Miller, *NXP Semiconductors*

TWIOS Co-Chairs

Holger Maune, *Technical University of Darmstadt*
Charlie Jackson, *Northrop Grumman*

Executive Committee Chair

Dietmar Kissinger, *IHP Microelectronics*

Special Sessions Chair

Ahmet Cagri Ulusoy, *Michigan State University*

Conference Management

Elsie Vega, *IEEE*

Call For Papers

The 2019 IEEE Topical Conference on Wireless Sensors and Sensor Networks (WiSNet2019) will be a part of 2019 IEEE Radio and Wireless Week (RWW2019) which will be held the week of 20 January 2019 in Orlando, FL, USA.

RWW2019 will also feature:

- IEEE Radio and Wireless Symposium (RWS)
- 19th Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems (SiRF)
- IEEE Topical Conference on RF/Microwave Power Amplifiers for Radio and Wireless Applications (PAWR)
- IEEE Topical Workshop on the Internet of Space (TWIOS)
- Focus sessions on 5G and MM-Wave to THz Technologies and Applications

Each of these events will be organized separately, with their own call for papers found at <http://www.radiowirelessweek.org/>.

Wireless sensors and wireless sensor networks are crucial components for manufacturing, structural health, security monitoring, environmental monitoring, smart agriculture, transportation, commercial applications, localization, tracking systems and other important and emerging applications. WiSNet 2019 is intended to stimulate discussion and foster innovation on these components and applications.

Papers featuring innovative work are solicited in (but not limited to) the following areas:

- Wireless Sensors for Communication, Radar, Positioning and Imaging Applications
- Wireless Sensors for Localization and Tracking
- Wireless Integrated Sensors, Front-Ends and Building Blocks
- Wireless Sensors for Harsh Environments, Environmental, Health, Home and Commercial Applications
- Wireless Sensors Networks, Smart Sensor Systems, and Autonomous Networking
- RFID Sensors and Sensor Tags
- Sensor Networks for Sensor Network Topologies and Sensor Network Communication Architecture
- Coexistence, Synchronization and Scheduling in Hybrid and Social Networks
- Cryptography, Security, Privacy Issues in Ad-Hoc, Sensor and Mesh Networks
- Six-Port and Multi-Port Technology
- Internet of Things Hardware, Protocols and Applications
- Wireless Sensors Applications in Wearable Computing and Body Area Nets
- QoS Aware Design: Energy Optimization and Deployment Techniques Large, Dense and Dynamic Network Topologies

WiSNet 2019 Co-Chairs

Luca Roselli, *University of Perugia*
Rahul Khanna, *Intel*

Paper submission instructions will be found at <http://www.radiowirelessweek.org/>.

Submissions should be formatted according to the submission review. Authors should indicate preference for oral or poster presentation. All submissions must be received by **24 July 2018**.

All accepted papers will be published in a digest and included in IEEE Xplore Digital Library. Submissions will be evaluated based on novelty, significance of the work, technical content, interest to the audience, and presentation.



IEEE Topical Workshop on The Internet of Space (TwIoS)

20–23 January 2019, Orlando, FL, USA



IEEE



Paper Deadline
24 July 2018

Steering Committee

General Chair

Rashaunda Henderson,
University of Texas, Dallas

General Co-Chair

Robert Caverly,
Villanova University

Technical Program Chair

Nuno Borges Carvalho,
Universidade de Aveiro

Finance Chair

Kevin Chuang,
Nanosemi, Inc.

PAWR Co-Chairs

Pere Gilibert,
University Politcnica de Catalunya
Neil Braithwaite,
Tarana Wireless

WiSNet Co-Chairs

Luca Roselli,
University of Perugia
Rahul Khanna,
Intel

SiRF General Chair

Monte Miller,
NXP Semiconductors

TWIOS Co-Chairs

Holger Maune,
Technische Universität Darmstadt
Charlie Jackson,
Northrop Grumman

Executive Committee Chair

Dietmar Kissinger,
IHP Microelectronics

Special Sessions Chair

Ahmet Cagri Ulusoy,
Michigan State University

Conference Management

Elsie Vega, *IEEE*

Call For Papers

The 2019 IEEE Topical Workshop on the Internet of Space (TwIoS2019) will be a part of IEEE Radio and Wireless Week (RWW), which will be held the week of 20 January 2019 in Orlando, FL, USA.

RWW2019 will also feature:

- IEEE Radio and Wireless Symposium (RWS)
- IEEE Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems (SiRF)
- IEEE Topical Conference on RF/Microwave Power Amplifiers for Radio and Wireless Applications (PAWR)
- IEEE Topical Conference on Wireless Sensors and Sensor Networks (WiSNet)
- Focus Sessions on 5G and mm-Wave to THz Technologies and Applications

Each of these events will be organized separately, with their own call for papers found at <http://www.radiowirelessweek.org/>

The Internet of Space (IoS) conference addresses the wild west of space applications, often called NewSpace, Entrepreneurial space, or Commercial Space. It is the emergent private spaceflight industry, with a special emphasis on microwave hardware. There has been a renaissance of interest and investment in space- and suborbital-based high-data-rate communication networks and other applications. Since the signal transit times are small enough, many more than classical applications are feasible: the creation of a worldwide car-to-car communication networks or global sensor & control systems for autonomous vehicles or Internet of Things (IoT) application. The Internet of Space (IoS) is ahead of the innovation curve; it is at a very early stage, so focused discussions can make great progress.

Papers featuring innovative work are solicited in (but not limited to) the following areas of the Internet of Space (IoS) hardware and systems:

- Manufacture and Deployment of Large LEO Satellite Constellations
- Lower-Cost Alternatives
- Lean Manufacturing of Space Components
- Unmanned Air Systems
- Terrestrial Systems
- Cubesat Hardware and Systems
- Satellite and Balloon Concepts
- Small and Micro-Satellite Design
- Transition from Old to New Space
- Orbital Configurations & Operations
- Radiation Effects
- Phased Arrays
- High Data Rate Links
- Geolocation
- Earth Observation
- Frequency Spectrum Allocations
- International Regulations & Standards
- SIGHT Applications of the IoS
- Optical Communication in Space

TwIoS2019 Co-Chairs

Holger Maune, *Technische Universität Darmstadt*
Charlie Jackson, *Northrop Grumman*

Paper submission instructions can be found at <http://www.radiowirelessweek.org>. Submissions will be evaluated based on novelty, significance of the work, technical content, interest to the audience, and presentation.

All submissions must be received by **24 July 2018**.

All accepted papers will be published in a digest and will be included in IEEE Digital Library Xplore.