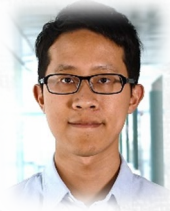


2019 Student Paper Finalists (1/3)



L.-X. Chuo, Y. Kim, N. Chiotellis, M. Yasuda, S. Miyoshi, M. Kawaminami, A. Grbic, D. Wentzloff, H.-S. Kim, D. Blaauw, University of Michigan and Fujitsu

"A 4×4×4-mm³ Fully Integrated Sensor-to-Sensor Radio Using Carrier Frequency Interlocking IF Receiver with -94dBm Sensitivity"



L. Gao and G. M. Rebeiz, University of California, San Diego

"A 24–43GHz LNA with 3.1–3.7dB Noise Figure and Embedded 3-Pole Elliptic High-Pass Response for 5G Applications in 22nm FDSOI"



R. Lu, S. Jang, Y. Hao, M. P. Flynn, University of Michigan

"A 77dB-SFDR Multi-Phase-Sampling 16-Element Digital Beamformer with 64 4GS/s 100MHz-BW Continuous-Time Band-Pass $\Delta\Sigma$ ADCs"



V. K. Purushothaman, E. Klumperink, B. T. Clavera, B. Nauta, University of Twente

"A Sub-mW All-Passive RF Front End with Implicit Capacitive Stacking Achieving 13dB Gain, 5dB NF and +25dBm OOB-IIP3"

2019 Student Paper Finalists (2/3)



S. Krishnamurthy, A. M. Niknejad, University of California, Berkeley

"Enhanced Passive Mixer-First Receiver Driving an Impedance with 40dB/Decade Roll-Off, Achieving +12dBm Blocker-P1dB, +33dBm IIP3 and Sub-2dB NF Degradation for a 0dBm Blocker"



S.-C. Hung, S.-W. Yoo, S.-M. Yoo, Michigan State University

"A Quadrature Class-G Complex-Domain Doherty Digital Power Amplifier"



H. T. Nguyen, H. Wang, Georgia Tech

"A Coupler-Based Differential Doherty Power Amplifier with Built-In Baluns for High mm-Wave Linear-Yet-Efficient Gbit/s Amplifications"



O. El-Aassar, G. M. Rebeiz, University of California, San Diego

"A 350mV Complementary 4–5GHz VCO Based on a 4-Port Transformer Resonator with 195.8dBc/Hz Peak FOM in 22nm FDSOI"

2019 Student Paper Finalists (3/3)



Y. Wang, K. Okada, *et al.*, Tokyo Institute of Technology and NEC

"A 39GHz 64-Element Phased-Array CMOS Transceiver with Built-In Calibration for Large-Array 5G NR"



M.-Y. Huang, T. Chi, F. Wang, S. Li, T.-Y. Huang, H. Wang, Georgia Tech and Speedlink Tech.

"A 24.5–43.5GHz Compact RX with Calibration-Free 32–56dB Full-Frequency Instantaneously Wideband Image Rejection Supporting Multi-Gb/s 64-QAM/256-QAM for Multi-Band 5G Massive MIMO"



T. Wu, C. Zhao, H. Liu, Y. Wu, Y. Yu, K. Kang, UESTC

"A 51.5–64.5GHz Active Phase Shifter Using Linear Phase Control Technique with 1.4° Phase Resolution in 65-nm CMOS"



A. Ruffino, Y. Peng, F. Sebastiano, M. Babaie, E. Charbon, EPFL and TU Delft

"A 6.5-GHz Cryogenic All-Pass Filter Circulator in 40-nm CMOS for Quantum Computing Applications"

The 2019 IEEE Radio Frequency Integrated Circuits Symposium

Presents this

Student Paper Award – 3rd Place

to

Vijaya Kumar Purushothaman, Eric Klumperink,
Berta Trullas Clavera, and Bram Nauta

University of Twente, Enschede, Netherlands

for the paper

**A Sub-mW All-Passive RF Front End with Implicit Capacitive Stacking
Achieving 13 dB Gain, 5 dB NF and +25 dBm OOB-IIP3**

at the 2019 IEEE RFIC Symposium, Boston, MA, USA

Stefano Pellerano
(General Chair)

Waleed Khalil and Brian Floyd
(Technical Program Co-Chairs)

The 2019 IEEE Radio Frequency Integrated Circuits Symposium

Presents this

Student Paper Award – 2nd Place

to

Li-Xuan Chuo, Yejoong Kim, Nikolaos Chiotellis, Makoto Yasuda, Satoru Miyoshi,
Masaru Kawaminami, Anthony Grbic, David Wentzloff, Hun-Seok Kim, and David Blaauw

University of Michigan, Ann Arbor, MI

for the paper

**A 4×4×4-mm³ Fully Integrated Sensor-to-Sensor Radio using
Carrier Frequency Interlocking IF Receiver with -94 dBm Sensitivity**

at the 2019 IEEE RFIC Symposium, Boston, MA, USA

Stefano Pellerano
(General Chair)

Waleed Khalil and Brian Floyd
(Technical Program Co-Chairs)

The 2019 IEEE Radio Frequency Integrated Circuits Symposium

Presents this

Student Paper Award – 1st Place

to

Y. Wang, R. Wu, J. Pang, D. You, A. Fadila, R. Saengchan, X. Fu, D. Matsumoto,
T. Nakamura, R. Kubozoe, M. Kawabuchi, B. Liu, H. Zhang, J. Qiu, H. Liu, W. Deng,
N. Oshima, K. Motoi, S. Hori, K. Kunihiro, T. Kaneko, A. Shirane, and K. Okada

Tokyo Institute of Technology, Tokyo, Japan

for the paper

**A 39GHz 64-Element Phased-Array CMOS Transceiver with
Built-in Calibration for Large-Array 5G NR**

at the 2019 IEEE RFIC Symposium, Boston, MA, USA

Stefano Pellerano

(General Chair)

Waleed Khalil and Brian Floyd

(Technical Program Co-Chairs)

2019 Industry Paper Finalists (1/3)



Renzhi Liu, Intel Corporation

"An 802.11ba-Based, -92.6dBm-Sensitivity, Blocker Tolerant 495 μ W Wake-up Radio Fully Integrated with Wi-Fi Transceiver"



Wooram Lee, IBM T.J. Watson Research Center

"RFIC Reconfigurable mmWave Radar Transmitter SoC with Broadband Frequency Tripler in 45nm SOI CMOS"



Lye Hock Kelvin Chan, GLOBALFOUNDRIES

"22nm Fully-Depleted SOI High Frequency Noise Modeling up to 90GHz Enabling Ultra Low Noise Millimetre-Wave LNA Design"



Kaushik Dasgupta, Intel Corporation

"A 26 dBm 39 GHz Power Amplifier with 26.6% PAE for 5G Applications in 28nm bulk CMOS"

2019 Industry Paper Finalists (2/3)



Steven Turner, BAE Systems

"Direct Digital Synthesizer with 14 GS-s Sampling Rate Heterogeneously Integrated in InP HBT and GaN HEMT on CMOS"



Tianbing Chen, GLOBALFOUNDRIES

"Excellent 22FDX Hot-Carrier Reliability for PA Applications"



Nam-Seog Kim, Samsung Electronics Co., Ltd.

"A 1.04 - 4V, Digital-Intensive Concurrent BLE 5.0-IEEE 802.15.4 Transceiver SoC with extended range in 28nm CMOS"



Hyun-chul Park, Samsung Electronics Co., Ltd.

"A High Efficiency 39GHz CMOS Cascode Power Amplifier for 5G Phased Array Systems"

2019 Industry Paper Finalists (3/3)



Ahmed Frid, GLOBALFOUNDRIES

"A Low Power Fully-Integrated 76-81 GHz ADPLL for Automotive Radar Applications with 150 MHz-us FMCW Chip Rate and -95 dBc-Hz Phase Noise at 1 MHz Offset in FDSOI"



Run Levinger, Intel Corporation

"X-band NMOS and CMOS Cross-Coupled DCO's with a "Folded" Common-Mode Resonators Exhibiting 188.5 dBc-Hz FoM with 29.5% Tuning Range in 16-nm CMOS FinFet"

The 2019 IEEE Radio Frequency Integrated Circuits Symposium

Presents this

Industry Paper Award – 3rd Place

to

Steven Turner, Mark Stuenkel, Gary Madison, Justin Cartwright, Richard Harwood,
Joseph Cali, Steve Chadwick, Michael Oh, John Matta, James Meredith, Justin Byrd,
and Lawrence Kushner

BAE Systems

for the paper

**Direct Digital Synthesizer with 14 GS/s Sampling Rate Heterogeneously
Integrated in InP HBT and GaN HEMT on CMOS**

at the 2019 IEEE RFIC Symposium, Boston, MA, USA

Stefano Pellerano
(General Chair)

Waleed Khalil and Brian Floyd
(Technical Program Co-Chairs)

The 2019 IEEE Radio Frequency Integrated Circuits Symposium

Presents this

Industry Paper Award – 2nd Place

to

Wooram Lee, Tolga Dinc, and Alberto Valdes-Garcia

IBM T.J. Watson Research Center

for the paper

**Reconfigurable 60-GHz Radar Transmitter SoC with
Broadband Frequency Tripler in 45nm SOI CMOS**

at the 2019 IEEE RFIC Symposium, Boston, MA, USA

Stefano Pellerano
(General Chair)

Waleed Khalil and Brian Floyd
(Technical Program Co-Chairs)

The 2019 IEEE Radio Frequency Integrated Circuits Symposium

Presents this

Industry Paper Award – 1st Place

to

Renzhi Liu, Asma Beevi K. T., Richard Dorrance, Deepak Dasalukunte,
Mario A Santana Lopez, Vinod Kristem, Shahrnaz Azizi, Minyoung Park, and Brent
Carlton

Intel Corporation

for the paper

**An 802.11ba 495 μ W -92.6dBm-Sensitivity Blocker-Tolerant Wake-Up Radio
Receiver Fully Integrated with Wi-Fi Transceiver**

at the 2019 IEEE RFIC Symposium, Boston, MA, USA

Stefano Pellerano
(General Chair)

Waleed Khalil and Brian Floyd
(Technical Program Co-Chairs)

2019 Tina Quach Service Award

The 2019 IEEE
Radio Frequency Integrated Circuits (RFIC)
Executive Committee

Presents the

2019 Tina Quach Outstanding Service Award

to

Steven Turner
BAE Systems

In recognition of his exceptional contributions to the Radio Frequency Integrated Circuits (RFIC) Symposium: his relentless dedication, attention to details and unconditional support have accelerated the conference growth and success over many years

Bertan Bakkaloglu

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