ISSCC 2020 Awards
February 17, 2020
2019 Lewis Winner Award for Outstanding Paper
“A 3.2GS/s 10 ENOB 61mW Ringamp ADC in 16nm with Background Monitoring of Distortion”

Benjamin Hershberg Davide Dermit Barend van Liempd Ewout Martens Nereo Markulic Jorge Lages Jan Craninckx

imec, Leuven, Belgium

2019 Lewis Winner Award for Outstanding Paper
“A Scalable 71-to-76GHz 64-Element Phased-Array Transceiver Module with 2×2 Direct-Conversion IC in 22nm FinFET CMOS Technology”

Stefano Pellerano1 Steven Callender1 Woorim Shin1 Yanjie Wang2 Somnath Kundu1 Abhishek Agrawal1

Peter Sagazio1 Brent Carlton1 Farhana Sheikh1 Arnaud Amadikpe1 William Lambert3 Divya Shree Vemparala1

Mark Chakravorti1 Satoshi Suzuki1 Robert Flory1 Chris Hull1

1Intel, Hillsboro, OR, 2Hillsboro, OR, 3Intel, Chandler, AZ

The Lewis Winner Award for Outstanding Paper
Lewis Winner served ISSCC for three decades (1958 to 1988) as Editor, Publisher, and Conference Coordinator. He was responsible, in considerable part, for establishing and maintaining the high standards of ISSCC publications and presentations. The Award in his honour is based on ratings by Conference attendees in the previous year.
2019 Jan Van Vessem Award for Outstanding European Paper
“A 256×256 40nm/90nm CMOS 3D-Stacked 120dB Dynamic-Range Reconfigurable Time-Resolved SPAD Imager”

Robert K. Henderson1 Nick Johnston1 Sam W. Hutchings1 Istvan Gyongy1 Tarek Al Abbas1
Neale Dutton2 Max Tyler3 Susan Chan3 Jonathan Leach3

1University of Edinburgh, Edinburgh, United Kingdom, 2STMicroelectronics, Edinburgh, United Kingdom, 3Heriot-Watt University, Edinburgh, United Kingdom

The Jan Van Vessem Award for Outstanding European Paper
Jan Van Vessem served ISSCC as the first Chair of the European Program Committee from 1968 to 1974. The Award in his honour is based on ratings by Conference attendees in the previous year.

2019 Anantha P. Chandrakasan Award for Outstanding Distinguished-Technical Paper
“A 769μW Battery-Powered Single-Chip SoC with BLE for Multi-Modal Vital Sign Health Patches”

Mario Konijnenburg1 Roland van Wegberg1 Shuang Song2 Hyunsoo Ha1 Wim Sijbers2 Jiawei Xu3 Stefano Stanzione1
Chris van Liempd1 Dwaipayan Biswas2 Arjan Breeschoten1 Peter Vis1 Chris Van Hoof1,2,3 Nick Van Helleputte2

1imec - Netherlands, Eindhoven, The Netherlands, 2imec, Leuven, Belgium, 3KU Leuven, Heverlee, Belgium

Anantha P. Chandrakasan Award for Outstanding Distinguished-Technical Paper
This Award is based on ITPC ratings at paper selection, as normalized at paper presentation time by members of the Awards & Recognition Committee (ARC). This year, in recognition of the many decades of contribution by Anantha Chandrakasan and his retirement as Conference Chair, this Award has now been renamed in his honor.
2019 ISSCC Award for Outstanding Forum Presenter
“LiDAR Sensor Systems”

Ming Wu
UC Berkeley, Berkeley, CA

The Outstanding Forum-Presenter Award
This Award is based on Forum-attendee ratings from the previous year.

2019 Takuo Sugano Award for Outstanding Far-East Paper
“Background Capacitor-Current-Sensor Calibration of DC-DC Buck Converter with DVS for Accurately Accelerating Load-Transient Response”

Tai-Haur Kuo
Yi-Wei Huang
Pai-Yi Wang

National Cheng Kung University, Tainan, Taiwan

The Takuo Sugano Award for Outstanding Far-East Paper
Takuo Sugano served ISSCC as an early member of what became the Far-East Program Committee, from 1967 to 1989. The Award in his honour is based on ratings by Conference attendees in the previous year.

2019 Jack Kilby Award for Outstanding Student Paper
“A 10mW 16b 15MS/s Two-Step SAR ADC with 95dB DR Using Dual-Deadzone Ring-Amplifier”

Ahmed ElShater¹
Calvin Yoji Lee¹
Praveen Kumar Venkatachala¹
Jason Muhlestein¹
Spencer Leuenberger¹

Kazuki Sobue²
Koichi Hamashita²
Un-Ku Moon¹

¹Oregon State University, Corvallis, OR, ²Asahi Kasei Microdevices, Atsugi, Japan

The Jack Kilby Award for Outstanding Student Paper
Jack Kilby, an integrated-circuits pioneer responsible for designing the first monolithic IC, was a long-term ISSCC participant and contributor. The Award in his honour is based on ratings by Conference attendees in the previous year.
2019 ISSCC Award for Outstanding Forum Presenter
“Clock Generation and Distribution for 56Gb/s, 112Gb/s and Beyond Serial Links”

Didem Turker Melek
Xilinx, San Jose, CA

The Outstanding Forum-Presenter Award
This Award is based on Forum-attendee ratings from the previous year.

2019 Evening Session Award
“Moving to the Dark Side”

Jan Westra
Broadcom
Bunnik, The Netherlands

Matt Straayer
Maxim
North Chelmsford, MA

Organizer
Organizer/Moderator
Panelists

Didem Turker Melek
Xilinx, San Jose, CA

The Evening-Session Award
This Award is based on Conference-attendee ratings from the previous year.

Organizer
Jan Westra
Broadcom
Bunnik, The Netherlands

Organizer/Moderator
Matt Straayer
Maxim
North Chelmsford, MA

Panelists

Dave Dwellley
Maxim Integrated
San Jose, CA

Kavé Kianush
Catena
Delft, The Netherlands

Curtis Ling
MaxLinear
Carlsbad, CA

Jen Lloyd
Analog Devices
San Jose, CA

Tyson Tuttle
Silicon Labs
Austin, TX

Patrick Yue
Hong Kong University of Science and Technology,
Hong Kong

Special Appearances

Laura Fujino
University of Toronto
Canada

Chris Mangelsdorf
Analog Devices
San Diego, CA

Bram Nauta
University of Twente, Enschede
The Netherlands

Laura Fujino
University of Toronto
Canada

Chris Mangelsdorf
Analog Devices
San Diego, CA

Bram Nauta
University of Twente, Enschede
The Netherlands

The Evening-Session Award
This Award is based on Conference-attendee ratings from the previous year.
2019 Demonstration Session Certificate of Recognition
“A Scalable 71-to-76GHz 64-Element Phased-Array Transceiver Module with 2×2 Direct-Conversion IC in 22nm FinFET CMOS Technology”

Stefano Pellerano1, Steven Callender1, Woorim Shin1, Yanjie Wang2, Somnath Kundu1, Abhishek Agrawal1, Peter Sagazio1, Brent Carlton1, Farhana Sheikh1, Arnaud Amadjikpe1, William Lambert3, Divya Shree Vemparala1, Mark Chakravorti1, Satoshi Suzuki1, Robert Flory1, Chris Hull1

1Intel, Hillsboro, OR, 2Hillsboro, OR, 3Intel, Chandler, AZ

2019 Demonstration Session Certificate of Recognition
“AI x Robotics: Technology Challenges and Opportunities in Sensors, Actuators, and Integrated Circuits”

Masahiro Fujita
Sony, Tokyo, Japan

Demonstration-Session Award
This Award is based on ratings provided by the Demo-Session Committee from the previous year.
2019 Demonstration Session Certificate of Recognition
“An 80Gb/s 300GHz-Band Single-Chip CMOS Transceiver”

with:
Ruibing Dong¹, Takeshi Yoshida¹, Shuhei Amakawa¹,
Shinsuke Hara², Akifumi Kasamatsu²,
Junji Sato³, Minoru Fujishima¹

Sangyeop Lee³

¹Hiroshima University, Higashihiroshima, Japan, ²National Institute of Information and Communications Technology, Koganei, Japan
³Panasonic, Yokohama, Japan

2019 Demonstration Session Certificate of Recognition
“LNPU: A 25.3TFLOPS/W Sparse Deep-Neural-Network Learning Processor with Fine-Grained Mixed Precision of FP8-FP16”

with:
Juhyoung Lee, Donghyeon Han, Jinmook Lee,
Gwangtae Park, Hoi-Jun Yoo

Jinsu Lee

KAIST, Daejeon, Korea

2019 Demonstration Session Certificate of Recognition
“A 680μW Burst-Chirp UWB Radar Transceiver for Vital Signs and Occupancy Sensing up to 15m Distance”

with:
Paul Mateman¹, Johan Dijkhuis¹, Wilfried Zomagboguelou¹,²
Arjan Breeschoten¹, Stefano Traferro¹, Yan Zhan¹, Tom Torf¹,
Christian Bachmann¹, Pieter Harpe¹, Masoud Babaie²

Yao-Hong Liu¹
Sunil Sheelavant¹,²
Marco Mercuri¹

¹imec-Netherlands, Eindhoven, The Netherlands, ²Delft University of Technology, Delft, The Netherlands

Demonstration-Session Award
This Award is based on ratings provided by the Demo-Session Committee from the previous year.
2018 Journal of Solid-State Circuits Best Paper Award

“A 6.9-μm Pixel-Pitch Back-Illuminated Global Shutter CMOS Image Sensor With Pixel-Parallel 14-Bit Subthreshold ADC”

Sony Semiconductor Solutions, Atsugi, Japan, Sony Semiconductor Manufacturing, Kumamoto, Japan

Technical Field Awards

2020 IEEE Donald O. Pederson Award in Solid-State Circuits

Klaas Bult
Delft University of Technology, The Netherlands

“For leadership in embedded analog and mixed-signal integrated circuits”

The IEEE annually recognizes outstanding contributors worldwide to the art and science of electro- and information technologies with technical awards in 3 dozen technical specialties. The IEEE Donald O. Pederson Award for Solid-State Circuits for outstanding contributions in the field of solid-state circuits goes to an individual or team of not more than three.
2020 IEEE Frederik Philips Award

Kazuo Yano
Hitachi, Tokyo, Japan

“For leadership in the development and materialization of human-centric IoT technology in the electronics industry”

Solid-State Circuits Society Awards

2020 IEEE Brokaw Award for Circuit Elegance

Matthias Eberlein
Apple, Munich, Germany / Johannes Kepler University, Linz, Austria

This Award was created to enhance appreciation and encourage innovation of simple, smart, and elegant circuit design. The award is presented in recognition of a unique, innovative, simple, smart, and elegant circuit design, created during the past decade that has demonstrated its viability.
2020 IEEE Solid-State Circuits Society New Frontier Award

Nan Sun
University of Texas at Austin, Austin, TX

The IEEE SSCS New Frontier award recognizes and honors SSCS members in their early career who are exploring innovative and visionary technical work within the field of solid-state circuits. The award aims to emphasize pioneering developments that are at the frontiers of IC design or possess an imminent potential to expand the field through new categories of circuit technologies, system design, and/or emerging applications.

2020 IEEE Solid-State Circuits Society Innovative Education Award

Peter R. Kinget
Columbia University, New York, NY

The IEEE SSCS Innovative Education Award recognizes and honors SSCS members in their early/mid-career, who are making significant contributions to education in the field of solid-state circuits using innovative approaches. The award aims to highlight distinguished and unique educational methods or programs that have a broad impact on the education of our community.

2020 IEEE Solid-State Circuits Society Industry Impact Award

Vivek De
Intel

The IEEE SSCS Industry Impact Award recognizes and honors SSCS members who have had a seminal impact and made distinctive contributions to the field of solid-state circuits and the integrated circuits industry. The award recognizes extraordinary accomplishments in entrepreneurship, leadership and/or technical excellence that led to significant breakthroughs and paradigm shifts in the IC business, thereby enabling new products and services within the ten year period prior to the application deadline.
2020 Fellows

William Bidermann
for leadership in commercially successful image sensors and microprocessors

Eric A. M. Klumperink
for contributions to thermal noise cancelling and software defined radio architecture

Ramon Carvajal
for contributions to low-voltage and low-power CMOS analog circuit design

Yiannos Manoli
for contributions to the design of integrated analog-to-digital interface circuits and energy harvesting systems

Jose De La Rosa
for contributions to delta-sigma modulators

Bich-yen Nguyen
for contributions to silicon on insulator technology

Barbara De Salvo
for contributions to device physics of nonvolatile embedded and stand-alone memories

Michael Perrott
for contributions to phase-locked loop integrated circuits

Masoud Zargari
for contributions to the development of CMOS radio-frequency integrated circuits

Pavan Kumar Hanumolu
for contributions to the design of mixed-signal integrated circuits

Ullrich Pfeiffer
for development of silicon-based millimeter-wave and terahertz circuits and systems

Ravi Todi
for contributions to innovative design and commercialization of high performance eDRAM

Huazhong Yang
for low-power circuit techniques for sensor applications and design automation

Ullrich Pfeiffer
for development of silicon-based millimeter-wave and terahertz circuits and systems
2019 Solid-State Circuits Society Outstanding Chapter Award

Andrea Baschirotto
Chapter Chair

IEEE SSCS Italy Chapter

Note that all ISSCC Awards are scrutinized and vetted by a special group, the Awards and Recognition Committee (ARC) whose current members are:

Kenneth (KC) Smith, Chair (University of Toronto)
Bryan Ackland (Old Bridge, NJ)
Anantha Chandrakasan (Massachusetts Institute of Technology)
Nicky Lu (Etron)
Willy Sansen (K.U. Leuven), Member-at-Large
Bruce Wooley (Stanford University)