ISSCC 2018 Awards

February 12, 2018

2017 Lewis Winner Award for Outstanding Paper
"A 28GHz 32-Element Phased-Array Transceiver IC with Concurrent Dual Polarized Beams and 1.4 Degree Beam-Steering Resolution for 5G Communication"

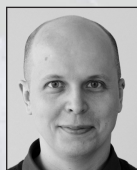**Bodhisatwa Sadhu**[1] **Yahya Tousi**[1] **Joakim Hallin**[2] **Stefan Sahl**[3] **Scott Reynolds**[1] **Örjan Renström**[3] **Kristoffer Sjögren**[2] **Olov Haapalahti**[3] **Nadav Mazor**[4] **Bo Bokinge**[3]

Gustaf Weibull[2] **Håkan Bengtsson**[3] **Anders Carlinger**[3] **Eric Westesson**[5] **Jan-Erik Thillberg**[3] **Leonard Rexberg**[3] **Mark Yeck**[1] **Xiaoxiong Gu**[1] **Daniel Friedman**[1] **Alberto Valdes-Garcia**[1]

[1]IBM T. J. Watson Research Center, Yorktown Heights, NY
[2]Ericsson, Lindholmen, Sweden; [3]Ericsson, Kista, Sweden
[4]IBM Research, Haifa, Israel; [5]Ericsson, Lund, Sweden

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.

2017 Distinguished-Technical-Paper Award
"A 12b 10GS/s Interleaved Pipeline ADC in 28nm CMOS Technology"

Siddharth Devarajan[1] **Larry Singer**[1] **Dan Kelly**[1] **Jose Silva**[1] **Janet Brunsilius**[2] **Daniel Rey-Losada**[2] **Frank Murden**[3] **Jeff Bray**[2]

Eric Otte[1] **Nevena Rakuljic**[2] **Phil Brown**[3] **Todd Weigandt**[2] **Qicheng Yu**[1] **Donald Paterson**[1] **Corey Petersen**[2] **Jeffrey Gealow**[1]

with Steve Kosic[2], **Tao Pan**[1], **Carroll Speir**[3]

[1]Analog Devices, Wilmington, MA
[2]Analog Devices, San Diego, CA
[3]Analog Devices, Greensboro, NC

The Distinguished-Technical-Paper Award
This Award is based on ITPC ratings at paper selection, as normalized at paper presentation time by ARC.

2017 Jan Van Vessem Award for Outstanding European Paper

"A 1.1W/mm²-Power-Density 82%-Efficiency Fully Integrated 3:1 Switched-Capacitor DC-DC Converter in Baseline 28nm CMOS Using Stage Outphasing and Multiphase Soft-Charging"

Nicolas Butzen   **Michiel Steyaert**

KU Leuven, Leuven, Belgium

2017 Takuo Sugano Award for Outstanding Far-East Paper

"A Reconfigurable Bidirectional Wireless Power Transceiver with Maximum-Current Charging Mode and 58.6% Battery-to-Battery Efficiency"

Mo Huang[1,*]   **Yan Lu[1]**   **Seng-Pan U[1,2]**   **Rui P. Martins[1,3]**

[1]University of Macau, Macau, China; [2]Synopsys Macau, Macau, China; [3]Instituto Superior Tecnico, Universidade de Lisboa, Portugal
*now with South China University of Technology, Guangzhou, China

2017 Jack Kilby Award for Outstanding Student Paper

"All-Wireless 64-Channel 0.013mm²/ch Closed-Loop Neurostimulator with Rail-to-Rail DC Offset Removal"

Hossein Kassiri[1*]   **M. Reza Pazhouhandeh[1]**   **Nima Soltani[2]**   **M. Tariqus Salam[2]**   **Peter Carlen[1,3]**   **Jose Luiz Perez Velazquez[1]**   **Roman Genov[1]**

[1*]University of Toronto, Toronto, Canada; [2]GSK (GlaxoSmithKline), Stevenage, United Kingdom
[3]Toronto Western Hospital, Toronto, Canada
*now at York University, Toronto, Canada

2017 ISSCC Award for Outstanding Forum Presenter
"Pushing the Boundaries of Performance – A Technology Perspective"

Marcel Pelgrom

Pelgrom Consult, Helmond, the Netherlands

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

2017 ISSCC Award for Outstanding Forum Presenter
"High-Performance Clock Generation and Distribution in Very-High-Speed Wireline Transceivers"

Nicola Da Dalt

Intel, San Jose, CA

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

2017 Evening Session Award
"*Return of* Survey Says!"

Organizer: Harry Lee
MIT, Cambridge, MA

Co-Organizer: Matt Straayer
Maxim Integrated, North Chelmsford, MA

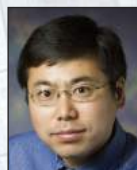**Moderator: Chris Mangelsdorf**
Analog Devices, San Diego, CA

Panelists

Robert Adams
Analog Devices, Wilmington, MA

Lucien Breems
NXP Semiconductors, Eindhoven, The Netherlands

Yun Chiu
University of Texas, Dallas, TX

Michael Choi
Samsung Electronics, Yongin, Korea

Ian Galton
University of California San Diego, La Jolla, CA

Shanthi Pavan
IIT Madras, Chennai, India

Kathleen Philips
imec/Holst Centre, Eindhoven, The Netherlands

Ken Poulton
Keysight Labs, Santa Clara, CA

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

2017 Demonstration Session Certificate of Recognition

"A 1ms High-Speed Vision Chip with 3D Stacked 140GOPS Column-Parallel Pesfor Spatio-Temporal Image Processing"

Tomohiro Yamazaki[1]
and
Hironobu Katayama[1], Shuji Uehara[1], Atsushi Nose[1], Masatsugu Kobayashi[1], Sayaka Shida[1], Masaki Odahara[2], Kenichi Takamiya[2], Yasuaki Hisamatsu[2], Shizunori Matsumoto[2], Leo Miyashita[3], Yoshihiro Watanabe[3], Takashi Izawa[1], Yoshinori Muramatsu[1], Masatoshi Ishikawa[3]
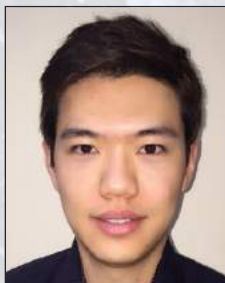
[1]Sony Semiconductor Solutions, Atsugi, Japan; [2]Sony LSI Design, Atsugi, Japan; [3]University of Tokyo, Bunkyo, Japan

Demonstration-Session Award
This Award is based on ratings provided by the Demo-Session Committee from the previous year.

2017 Demonstration Session Certificate of Recognition

"A 0.1-to-3.1GHz 4-Element MIMO Receiver Array Supporting Analog/RF Arbitrary Spatial Filtering"

Linxiao Zhang   **Harish Krishnaswamy**

Columbia University, New York, NY

Demonstration-Session Award
This Award is based on ratings provided by the Demo-Session Committee from the previous year.

![SSCS] **Solid-State Circuits Awards**

2016 Journal of Solid-State Circuits Best Paper Award
A 2.2 GHz Continuous-Time $\Delta\Sigma$ ADC With –102 dBc THD and 25 MHz Bandwidth

Lucien Breems[1]

Muhammed Bolatkale[1]

Hans Brekelmans[1]

Shagun Bajoria[1]

Jan Niehof[1]

Robert Rutten[1]

Bert Oude-Essink[2]

Franco Fritschij[2]

Jagdip Singh[2]

Gerard Lassche[2]

[1]NXP Semiconductors, Eindhoven, The Netherlands
[2]Catena Microelectronics, Delft, The Netherlands

SSCS Outstanding Chapter Award

Hanjun Jiang
Beijing Chapter

SSCS Beijing Chapter

2018 IEEE Daniel E. Noble Award for Emerging Technologies

Rajiv V. Joshi
IBM T. J. Watson Research Center, Yorktown Heights, NY

"For Contributions to Predictive Failure Analytics, VLSI Memory Design, and Technology"

2018 IEEE Donald O. Pederson Award in Solid-State Circuits
(co-recipients)

William S. Carter   **Stephen M. Trimberger**
Xilinx, San Jose, CA   Xilinx, San Jose, CA

"For Contributions to Field-Programmable Gate Array Technology."

2018 IEEE Frederik Philips Award

Ian A. Young
Intel, Hillsboro, OR

"For Leadership in Research and Development on Circuits and Processes for the Evolution of Microprocessors"

IEEE

2018 Fellows

Pamela Ann Abshire
Silver Spring, MD

"For Contributions to CMOS Biosensors"

Pietro Andreani
Lund University, Lund, Sweden

"For Contributions to CMOS Integrated Voltage-Controlled Oscillators"

Bertan Bakkaloglu
Arizona State University-Tempe, Scottsdale, AZ

"For Contributions to Radio Frequency Circuits"

Kun-Yung Chang
Los Altos Hills, CA

For Contributions to Transceivers for High-Performance Networking and High-Density Memories"

Tsung-Yung Chang
Taiwan Semiconductor Manufacturing Company, Hsinchu, Taiwan

"For Application of SRAM Technology to Low-Power and High-Performance Computing"

Andreas Demosthenous
University College London, London, UK

"For Contributions to Integrated Circuits for Active Medical Devices"

Isaac Lagnado
San Diego, CA

"For Leadership in the Development of Silicon-on-Sapphire Technology"

Sanu Mathew
Intel Corporation, Hillsboro, OR

"For Leadership in Computer Arithmetic Datapath and Security Circuits"

Earl Mc Cune
RF Communications Consulting, Santa Clara, CA

"For Leadership in Polar Modulation Circuits and Signals"

Saibal Mukhopadhyay
Georgia Institue of Technology, Atlanta, GA

"For Contributions to Energy-Efficient and Robust Computing Systems Design"

Hidetoshi Onodera
Kyoto University, Kyoto, Japan

"For Contributions to Variation-Aware Design and Analysis of Integrated Circuits"

Shanthi Pavan
Indian Institute of Technology, Chennai, India

"For Contributions to Delta Sigma Modulators and Analog Filters"

Rahul Sarpeshkar
Thayer School of Engineering at Dartmouth, Hanover, NH

"For Contributions to Ultra Low-Power Biomedical Electronics"