



**IEEE SOLID-STATE
CIRCUITS SOCIETY**
Where ICs are in IEEE

February 2016

Education

Upcoming Webinar

Please join us for the webinar
**"Monolithic Phased Arrays:
Radio Frequency to Optical"**, presented by
Hossein Hashemi on
Friday, February 26th at
Noon EST.



Abstract- In 1909, accepting the Nobel Prize for Physics for "contributions to the development of wireless telegraphy", Karl Ferdinand Braun stated "It had always seemed most desirable to me to transmit the waves, in the main, in one direction only." He also presented a schematic of a three-antenna system that can form a desired beam in one direction. In the following decades, this simple scheme was advanced to large-scaled phased arrays used for military radars in WWII and beyond. In 1965, Gordon Moore predicted that advancement in integrated circuit technology will enable monolithic microwave phased arrays that can revolutionize radar. Nearly four decades later, monolithic microwave silicon phased arrays were reported for the first time. Today, monolithic radio frequency, microwave, and millimeter wave phased arrays are turning mainstream in commercial products including automotive radars and high speed wireless transceivers. Shortly following the invention of laser in 1960, electronically-steerable laser beam was conceived to be useful in optical radars (nowadays known as lidars), free-space optical communications with moving transmitter and/or receiver, and projection television. While optical beam steering has been around for several decades, monolithic optical phased arrays are more recent thanks to advancements in fabrication technology. Monolithic optical phased arrays may be applicable in compact commercial devices for imaging, ranging, sensing, display, and

holography. This talk will cover the basics, history, and applications of phased arrays followed by state-of-the-art realizations from radio frequencies up to optical frequencies.

[REGISTER HERE](#)

Upcoming Distinguished Lecturer Tours

FEBRUARY

February 19	SSCS Singapore - Chulwoo Kim	Singapore
February 29 - March 3	SSCS Shanghai - Eric Klumperink (Mini Tour)	Shanghai, China

MARCH

March 14	SSCS Delhi and Bangalore - Peter Kinget	Shanghai, China
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For more information, [CLICK HERE.](#)

Conferences



ESSCIRC-ESSDERC 2016

The aim of ESSDERC and ESSCIRC is to provide an annual European forum for the presentation and discussion of recent advances in solid-state devices and circuits. While keeping separate Technical Program Committees, ESSCIRC and ESSDERC are governed by a common Steering Committee and share Plenary Keynote Presentations and Joint Sessions bridging both communities.

Conference highlights include 3 ESSCIRC keynote presentations, 3 ESSDERC keynote presentations, invited papers with overall coverage of all aspects of advanced devices and circuits, special focus sessions, 1 join panel discussion, and a single tutorial and workshop day.

Call for Papers- Paper submissions are due April 18, 2016. Please click [here](#) for more details.

The conference will be held September 12-15, 2016 in Lausanne, Switzerland.

For more information, please click [here](#)!

Brain-Machine Interface Systems



IEEE SMC 2016's 6th Workshop on Brain-Machine Interface Systems will be held October 9-12, 2016 in Budapest as part of the program of SMC 2016 - the flagship annual conference of the IEEE Systems, Man, and Cybernetics Society. SCS is one of the technical co-sponsors for this workshop. The four day workshop will feature tutorials, panels, discussions with the audience and a number of prominent invited speakers from industry and academia. The goal of the workshop is to facilitate the interaction and intellectual exchange between all researchers, developers, and consumers of this technology.

Call for Papers- April 15, 2016 is the deadline for submission of full-length papers. Please [click here](#) to download an electronic version of the Call for Papers of the BMI Workshop.

If you have any questions, please contact - Michael H. Smith (m.h.smith@ieee.org)

For more information, please click [here](#).

Upcoming Conferences

<u>2016 Design, Automation, and Test in Europe Conference & Exhibition (DATE)</u>	March 14 - March 18, 2016
Dresden, Germany	
<u>2016 International Symposium on VLSI Technology, Systems and Application (VLSI-TSA)</u>	April 25 - April 27, 2016
Taiwan	
<u>2016 International Symposium on VLSI Design, Automation, and Test (VLSI-DAT)</u>	April 25 - April 27, 2016
Taiwan	
<u>2016 IEEE Symposium on VLSI Technology</u>	June 14 - June 16, 2016
Hawaii	
<u>2016 IEEE Symposium on VLSI Circuits</u>	June 14- June 16, 2016
Hawaii	

Call for Papers

[2016 International Symposium on Low Power Electronics and Design](#)



San Francisco, California

Paper Submission Deadline: Abstract registration by
Feb 28, 2016 , Full Paper Due by March 6, 2016

**2016 IEEE Conference on Electron Devices and
Solid-State Circuits**

Hong Kong

Paper Submission Deadline: April 1, 2016

Bipolar/BiCMOS Circuits and Technology Meeting

New Brunswick, New Jersey

Paper Submission Deadline: April 1, 2016

Brain-Machine Interface Systems Workshop

Budapest

Paper Submission Deadline: April 15, 2016

ESSCIRC- ESSDERC 2016

Lausanne, Switzerland

Paper Submission Deadline: April 18, 2016

**2016 IEEE Compound Semiconductor IC
Symposium**

Austin, Texas

Paper Submission Deadline: April 22, 2016

Publications



Introducing BrowZine, a Tablet and Phone Based Reader for the JSSC

We are happy to introduce BrowZine, a tablet and phone based journal reader for Journal of Solid-State Circuits. BrowZine access to the

JSSC is available for all Solid-State Circuits Society members. BrowZine offers a convenient and easy way to read current and past JSSC articles on Android and Apple mobile devices.

To begin using BrowZine:

- Go to the Apple App Store or Google Play Store and search for "BrowZine"
- Download and install BrowZine
- In opening BrowZine for the first time, you will see a list of organizations.
Scroll through the list or use the search box to find "IEEE Solid-State Circuits

Society SSCS" and select it

- When prompted for a username and password, please enter your IEEEExplorer Login Username and Password

Short Regular Papers

Most accepted JSSC manuscripts are now e-published of submission. We now introduce Short Papers, to facilitate even more timely publication of new circuit ideas. The guidelines for short papers are given inside the back cover of the Journal. Submissions should be 4 to 6 doubled spaced pages of text, not including references. In addition, there can be up to 3 pages of figures. Short Papers go through the same rigorous peer review process as regular length manuscripts.



To submit, please [click here](#).

Awards

A list of SSCS awards presented at ISSCC 2016 and the recipients are below. Congratulations to all!

2015 OUTSTANDING CHAPTER AWARD: Benelux Chapter

2014 JSSC BEST PAPER AWARD: "A 16TX/16RX 60 GHz 802.11ad Chipset With Single Coaxial Interface and Polarization Diversity" by - Michael Boers, Bagher Afshar, Iason Vassiliou, Saikat Sarkar, Sean T. Nicolson, Ehsan Adabi, Bevin George Perumana, Theodoros Chalvatzis, Spyros Kavvadias, Padmanava Sen, Wei Liat Chan, Alvin Hsing-Ting Yu, Ali Parsa, Med Nariman, Seunghwan Yoon, Alfred Grau Besoli, Chryssoula A. Kyriazidou, Gerasimos Zochios, Jesus A. Castaneda, Tirdad Sowlati, Maryam Rofougaran, and Ahmadreza Rofougaran

PREDOCTORAL ACHIEVEMENT AWARD 2015-2016: Ahmed Elkholy, Amrith Sukumaran, Hans Meyvaert, Hyeok-Ki Hong, Injoon Hong, Jianxun Zhu, Jin Zhou, Masoud Babaie, Muhammad Awais Bin Altaf, Saleh Heidary Shalmany, Sameed Hameed, Song Hu, Teerachot Siriburanon, Tong Zhang, Xiaosen Liu, Xilin Liu, Youchang Kim, Zeshan Ahmad, Wouter Volkaerts

2016 STUDENT TRAVEL GRANT AWARDS: Natalie Butz, Sandro Binsfeld Ferreira, Xinfei Guo, Nicholas Butzen, Wei-Han Yu, Kiarash Gharibdoust, Guanghua Shu, Chio In leong, Dongsheng Yang, Sameed Hameed, Iskender Haydaroglu, Bakul Vinchhi, Junheng Zhu, Lishan Lv, Jian Pang, Yong Wang, Xiasen Liu, Chenxin Su, Sujith Kumar Billa, Sudipta Sarkar, Deyan Levski

2016 IEEE FELLOWS (SSCS MEMBERS): Ajay Poddar, Ben U. Seng-Pan, Brian Brandt,

Degang Chen, Eugenio Cantatore, Gareiele Manganaro, Gyu Hyeong Cho, Jieh Wu, Kenichi Osada, Lawrence Kushner, Massimo Alioto, Mehmet Soyuer, Patrick Fay, Peng Li, Terry Cisco, Toru Tanzawa, Tzyy-Sheng Horng

News

New Chapters - 2016

Hawaii Section Joint Chapter (SSCS/EDS)

Student Branch Chapter - American University of Sharjah



New and Improved SSCS Website

Have you visited the SSCS website yet? The website has recently been updated with exciting new content, a clean and easy to read format, and new pictures. Click [here](#) to check it out.

Seeking News

Please send any chapter news or happenings (Distinguished Lecturer visits, events hosted by your SSCS chapter, awards received by members, etc) to Abira Sengupta, SSCS Magazine News Editor for inclusion in an upcoming issue of the magazine. Please email - Abira.Sengupta@ieee.org. We look forward to receiving your news articles!

For more chapter news, check out the Winter 2016 issue of the Solid-State Circuits Magazine.

Feedback

Let us know what you think! Please [click here](#) to send us your comments about the newsletter, what you'd like to see included each month, or any other comments.

[CLICK HERE TO VISIT OUR WEBSITE](#)

