



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

**March 2016**

## **Education**

### **Upcoming Webinar**

Please join us for the webinar

**"The Return of Neuro-Inspired Computing - Why Now?"**, presented by

**Professor Jab Rabaey** on

**Wednesday, April 20th** at

**Noon EST.**



**Abstract-** Barring technologies surprises (such as the discovery of a perfect nanometer switch), alternative design strategies may be necessary if continued scaling of functionality in terms of size and energy is to be obtained. Neuro-inspired computing is one possible direction to be considered. Over the past decade, the brain has been receiving a lot of attention (e.g. the BRAIN initiatives in the US and Europe) - mostly from a mapping and an understanding perspective. The brain is an amazingly complex and efficient machine. While it may not be considered "general purpose" in terms of its computational capabilities, it performs a set of functions such as feature extraction, classification, synthesis, recognition, learning, and higher-order decision-making amazingly well. Carver Mead already realized this in the late 1980's - yet the technological landscape at that time was not amenable to make neuromorphic computing an attractive alternative.

Today, it is realized that neuro-inspired computing may be a perfect match to the properties of the emerging nano-scale devices (such as 3D integration, carbon and spin devices, non-volatile memory cells such as RRAM, etc): it thrives on randomness and

variability, processing is performed in the continuous or discrete domains, and massive parallelism, major redundancy and adaptivity are of essence. Computational paradigms inspired by neural information processing hence may lead to energy-efficient, low-cost, dense and/or reliable implementations of the functions the brain excels at. In this presentation, we will explore various means on how the interaction between neuroscience and information technology may lead to an exciting future.

[REGISTER HERE](#)

## Upcoming Distinguished Lecturer Tours

### APRIL

April 18                                      **SSCS Organge County- Ram California**  
**Krishnamurthy**

April 21                                      **SSCS Central Texas- Ram Texas**  
**Krishnamurthy**

### MAY

May 2                                         **SSCS New York - Ram New York**  
**Krishnamurthy**

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](#)!

# IEEE SMC 2016's Workshop on 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. SSCS 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](mailto:m.h.smith@ieee.org))

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

## Upcoming Conferences

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|--|---------------------------|
| <a href="#"><u>2016 International Symposium on VLSI Technology, Systems and Application (VLSI-TSA)</u></a>     | April 25 - April 27, 2016 |
| Taiwan   |                           |
| <a href="#"><u>2016 International Symposium on VLSI Design, Automation, and Test (VLSI-DAT)</u></a>            | April 25 - April 27, 2016 |
| Taiwan   |                           |
| <a href="#"><u>2016 IEEE Symposium on VLSI Technology</u></a>  | June 14 - June 16, 2016   |
| Hawaii   |                           |
| <a href="#"><u>2016 IEEE Symposium on VLSI Circuits</u></a>  | June 14 - June 16, 2016   |
| Hawaii   |                           |
| <a href="#"><u>2016 IEEE International Conference on Electron Devices and Solid-State Circuits (EDSSC)</u></a> | August 3 - 5, 2016        |
| Hong Kong  |                           |
| <a href="#"><u>2016 International Symposium on Low Power Electronics and Design (ISLPED)</u></a>               | August 8 - 10, 2016       |
| San Francisco  |                           |
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### **Hot Chips 2016**

Cupertino, CA

Paper Submission Deadline: March 25, 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

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## **News**

### **Did you miss last months webinar?**

Did you miss "Monolithic Phased Arrays: Radio Frequency to Optical," Presented by Hossein Hashemi?

The video recording of the webinar held on February 26th is now available to view. A list of questions and answers asked during the broadcast are also available. To view the recording and

questions, please click [here](#).



## 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](mailto: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.

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