

EDS VLSI TECHNOLOGY AND CIRCUITS TECHNICAL COMMITTEE REPORT

On December 4, 2016, the EDS VLSI Technology and Circuits Technical Committee (TC) met in San Francisco, California, USA, during the 2016 IEEE International Electron Devices Meeting (IEDM), held December 3–7.

The VLSI Technology and Circuits Technical Committee was formed in 1998 under the leadership of Professor Charles G. Sodini (MIT), followed by Dr. H.-S. Philip Wong (IBM), Werner Weber (Infineon), Dr. James A. Hutchby (SRC), Dr. Bin Zhao (Freescale Semiconductor), and Shu (Shuji) Ikeda (tei Solutions). Since its formation, the VLSI Technology and Circuits TC's mission is to identify new technical trends, help foster new technical concepts, and serve the emerging needs of the Electron Devices and Solid-State Circuits communities in VLSI. The committee members include many well recognized technical experts representing a wide spectrum of technical mastery in VLSI devices, technology, and circuits.

In pursuing the objective of the VLSI Technology and Circuits Committee to identify new and relevant areas of interest to the Electron Devices and Solid-State Circuits communities, the committee recommends any or all of the following based on the nature of the areas:

1) Initiate topical workshops of current interest (attached to existing



Attendees: From left to right – [Standing] Masaaki Niwa, Hitoshi Wakabayashi—[Sitting] Reza Arghavani, Seiichiro Kawamura, Steve Chung, Kazunari Ishimaru, Bin Zhao, and Shuji Ikeda.
Missing from the picture: Min Yang, Kaustav Banerjee, Hiroshi Iwai, and Jacobus Swart

conferences or incorporated in new ones)

- 2) Promote special issues for major publications (e.g., *T-ED*, *J-EDS*)
- 3) Sponsor panel session topics, invited talks and special sessions for major conferences

The following topics were discussed during the December 4, 2016 meeting:

- 1) Membership: The committee members were streamlined to a total of 21.
 - a) Membership length was confirmed for two terms of two years each (total of four years).

- b) 2017 committee members are twenty-one, with fifteen member's 2nd term expiring in December of 2017.
- c) The committee's current twenty-one geographically diverse members include:
 - i) North America, eight members (USA: University, Industry, Government)
 - ii) South America, one member (Brazil)
 - iii) Europe, two members (Switzerland, France)
 - iv) Africa, one member (South Africa)

- v) Asia, nine members (Japan, Taiwan, Hong Kong and China)
- 2) Sub-Committee roles and responsibilities of the following subcommittees were discussed:
 - a) Combined Publicity and Conference/Workshops Committee Chair: Reza Arghavani, Lam Research—Discussed promotion of EDTM Conference in March 2017 in Toyama, Japan
 - b) Publication Committee Chair: Min Yang, IBM—Propose special issues for major publications (e.g. *T-ED*, *J-EDS*). Discussed *J-EDS* Special Issue 2017: Selected from EDTM papers
- 3) EDTM—Electron Devices Technology and Manufacturing Conference:
 - February 28 to March 2, 2017 at Toyama International Convention Center <http://ewh.ieee.org/conf/edtm/2017/index.html>.

The Inaugural EDTM—Electron Devices Technology and Manufacturing, a full three-day conference, was held at Toyama International Conference Center, Japan from February 28th to March 2nd, 2017, and fully sponsored by the IEEE Electron Devices Society (EDS). As semiconductor technology scaling challenges continue to grow, the industry must increase collaborative efforts to overcome them. EDTM serves as a forum for the electron devices community to collaborate on topics ranging from devices, materials, and tools, to create new and innovative technologies.

4) EDTM—Electron Devices Technology and Manufacturing:

- a) Focus: Device, Material, and Equipment
- b) Paper Submission:
 - i) Over 170 submitted papers in the areas of Device, Package, Process, Material, Modeling & Reliability and Emerging Technologies submitted

- ii) Plenary Speakers:
 - 1) John Pellerin, GlobalFoundries
 - 2) Shizuo Tokito, Yamagata University
 - 3) Douglas Yu, TSMC
 - c) One of two tutorial courses were organized in Japanese. Other tutorials and two short courses were in English.
 - d) For detailed information on the EDTM program, please visit the web site: <http://ewh.ieee.org/conf/edtm/2017/index.html>.
- Please contact Dr. Reza Arghavani (Reza.Arghavani@lamresearch.com), Conferences/Workshops Subcommittee Chair, or Dr. Shu Ikeda (shu.ikeda@tei-solutions.com), Committee Chair, for further information.

Reza Arghavani
EDS VLSI TC Committee Member
Lam Research Corporation
Fremont, CA, USA