3 keynote speeches and 18 invited talks will be scheduled in AWAD 2012.

Keynote Speeches

Recent Advance of GaN Power Electronics

Daisuke Ueda
Advanced Technology Research Laboratories, Panasonic Corporation

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More-than-Moore Devices based on Advanced CMOS Technologies

Hitoshi Wakabayashi
Sony Corp.

TCAD Challenges and Opportunities for Predictive Development

Young-Kwan Park
CAE Team, Semiconductor R&D Center, Samsung electronics Co. Ltd.

Invited Talks

New Widegap Semiconductor Ga_2O_3 MESFETs and Schottky Barrier Diodes

Masataka Higashiwaki
NICT
Co-authors: Kohei Sasaki*, Akito Kuramata*, Takekazu Masui[+] and Shigenobu Yamakoshi*
*Tamura Corporation, [+]Koha Co., Ltd.

Carbon Nanotube-based Plastic Electronics

Yutaka Ohno
Department of Quantum Engineering, Nagoya University, Japan

Nonlinear Three Branch Nano-Junction Devices and Their Application to Logic Circuits

Seiya Kasai*
***Graduate School of Information Science and Technology, and Research Center for Integrated Quantum Electronics, Hokkaido University**
Co-authors: Shaharin Fadzli Abd Rahman*[+], Masaki Sato* and Xiang Yin*
[+]Faculty of Electrical Engineering, Universiti Teknologi Malaysia

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Integrated Design Platform for Power Electronics Applications with GaN Devices

Kenji Mizutani
Advanced Technology Research Laboratories, Panasonic Corporation
Co-authors: Hiroaki Ueno, Yuji Kudoh, Shuichi Nagai, Kaoru Inoue, Nobuyuki Otsuka, Tetsuzo Ueda*, Tsuyoshi Tanaka* and Daisuke Ueda
*Semiconductor Devices Development Center, Device Company, Panasonic Corporation

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Silicon on Thin Buried Oxide (SOTB) Technology for Ultralow-Power (ULP) Applications

Nobuyuki Sugii
Low-power Electronics Association & Project (LEAP)
Renesas Electronics Corp.
Co-authors: Toshiaki Iwamatsu, Y. Yamamoto, H. Makiyama, T. Tsunomura, H. Aono, H. Oda, S. Kamohara, Y. Yamaguchi, T. Mizutani*, and T. Hiramoto*
* The University of Tokyo

Gate Stack Technologies for Silicon Carbide Power MOS Devices

Takuji Hosoi
Graduate School of Engineering, Osaka University
Co-authors: Takashi Kirino Yusuke Uenishi, Daisuke Ikeguchi, Atthawut Chanthaphan, Akitaka Yoshigoe*, Yuden Teraoka*, Shuhei Mitani[+], Yuki Nakano[+], Takashi Nakamura[+], Takayoshi Shimura, and Heiji Watanabe
*Japan Atomic Energy Agency, [+]ROHM3

Thermal-aware Device Design of Nanoscale Transistors

Ken Uchida
Department of Electronics and Electrical Engineering, Faculty of Science and Technology, Keio University
Co-authors: Tsunaki Takahashi* and Nobuyasu Beppu*
*Tokyo Institute of Technology

III-V/Ge Integration on Si Platform for Electronic-photonic Integrated Circuits

Mitsuru Takenaka
The University of Tokyo
Co-author: Shinichi Takagi

Decomposition Analysis of On-current Variability of FinFETs

Takashi Matsukawa
AIST
Co-authors: Yongxun Liu, Kazuhiko Endo, Shinichi O'uchi and Meishoku Masahara

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Potential of GeSn Alloys for Application to Si Nanoelectronics

Shigeaki Zaima
Department of Crystalline Materials Science,
Graduate School of Engineering, Nagoya University
Co-authors: Yosuke Shimura・Marika Nakamura・Wakana Takeuchi・Mitsuo Sakashita・Osamu Nakatsuka

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III-nitride-based visible-blind and solar-blind photodetectors

Hai Lu
School of Electronic Science and Engineering, Nanjing University, China

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CIS in high-end mobile phone camera

Kangbong Seo
SKhynix
Co-auhotrs: Kyoungin Lee, Siwook Yoo, Sangdong Yoo and Kyoungdong Yoo

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Current Status of GaN Technologies in ETRI

Jae Kyoung Mun
Photonic/Wireless Convergence Components Department, ETRI
Co-authors: Jong-Won Lim, Sang Choon Ko, and Eun Soo Nam

InAs Quantum-Well MOSFET for Logic and High-Frequency Applications

Tae-Woo Kim
SEMATECH
Co-authors: Richard J. W. Hill, Chad D. Young, Dmitry Veksler, Chang Yong Kang, Dae-Hyun Kim*, Jesus A. del Alamo[+], Jungwoo Oh[†], Chris Hobbs, Paul D. Kirsch and Raj Jammy
*Yonsei University, [+]Teledyne, [†]MIT

The Stability of Bandgap Reference Voltage with Device Structures

Sang-Gi Lee
Analog Power Process Development, Dongbu HiTek Co., Ltd.
Co-authors: Jun-Woo Song, Eun-Sang Jo, and Kwang-Dong Yoo

Voltage Multiplier Circuits and Radio Wave Generation Module for Energy Harvesting System

Saejeong Choi
Department of Electronic Engineering, Myongji University
Co-authors: Changsun Kim, Hyunshin Lee, Inyoung Kim, Dongchul Park, Sooyoung Min, Yunsik Lee and Taikyeong Jeong,

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Exploitation of Hierarchical Nanomaterials for Improving Light-Harvesting and Charge Collecting Properties of Dye-sensitized Solar Cells

Hyun Suk Jung
School of Advanced Materials Science & Engineering, Sungkyunkwan University

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Plasmonic Terahertz Wave Detectors Based on Silicon Field-Effect Transistors

Kyung Rok Kim
UNIST
Co-authors: Min Woo Ryu, Sunhae Shin, Hee Cheol Hwang and Kibog Park