

Advanced Metallization Conference 2019: 29th Asian Session

October 9 - 11, 2019

The University of Tokyo, Sanjo Conference Hall (Hongo Campus), Tokyo

Sponsorship by ADMETA Committee

Co-sponsorship by the Japan Society of Applied Physics

The ADMETA^{Plus} is heading for its 29th historical meeting and has a long record of important contributions to practical progress for advanced MPU and various memory devices. In recent years, the importance of interconnect technology for realizing low resistance, large integration, rich functionality, low cost, and high reliability has increased in various device application fields beyond silicon electronics. This conference will focus on interconnects technology and science related to materials, processes, device design, assembly, equipment, cost performance, and characterization. We will host comprehensive discussions on a wide range of topics, establish basics to applications, with researchers and engineers from industry, government, and academia. We are looking forward to new developments in interconnect technology fields and contributing to the growth of semiconductor industry in the Asian area.

ADMETA^{Plus} 2019 General Chair, Shinji Yokogawa (The University of Electro-Communications)

Conference Topics of Interest:

Integration: Interconnection Structure and Performance, Parasitic Capacitance, Reliability Technology, Testing and Analysis

Reliability Science and Failure Analysis: EM, SIV, TDDDB, Defect Detection and Analysis, Failure Mechanism and Modeling

Metallization: PVD, CVD, ALD, Plating, Barrier Metal, New Material, Alloy, Supercritical Fluid, Reflow

Low-k Dielectric: CVD, ALD, SOD, Film Properties, New Materials, Dielectric Structures (Air Gap), Metrology, etc.

CMP: Planarization Technology, Slurry, Pad, Dress, End Point Detection, Cleaning, Anti-corrosive Technology, etc.

Contact: Silicide, Interface, Solid Phase Reaction, Shallow Junction, Crystal Properties, Electron Properties, Carrier Transport, etc.

MEMS/RF: Interconnection Structure and Materials, Packaging, Fabrication Process Technology, Device Design, etc.

Emerging Technology: Active Wiring, Power Electronics, Silicon Photonics, Flexible Electronics, Energy Harvesting, etc.

Backend Device Technology: Tech. for Embedding Devices (MRAM, PCRAM, ReRAM, DRAM etc.), Materials and Processing of Magnetics, Phase-Change and Resistive-Change Devices, Electrode, Metallization, etc.

Nano Carbon: Graphene, CNT, Deposition, Integration, Electrical Characteristics, Reliability, Evaluation, Analysis, etc.

3D and Packaging: TSV, TMV, Stacking Method (CoW, WoW), Thinning, Planarization, Bonding, Bump, Stress and Thermal Analysis, Sealing, Cooling, Reliability.

To Apply:

Prepare an abstract per the directions below and submit it to the ADMETA^{Plus} 2019 Secretariat;

A4 format, up to 2 pages, figures and tables are recommended but not required,

Oral [15 min. talk & 5 min. QA] or Poster [90 min.],

Abstracts are due ~~June 28, 2019~~ >> July 12, 2019 .

Prospective authors must submit a PDF file up to 2 pages with necessary figures and tables. Send the **PDF file** of the manuscript, the subject of your paper (please choose from the **Conference Topics of Interest**), and desired presentation style (Oral or Poster) to the secretariat office via e-mail. On the abstract, please indicate the author to whom correspondence should be addressed, and include mailing and e-mail addresses. A template of abstract can be downloaded from the ADMETA^{Plus} 2019 website. Notification of acceptance will be made to the authors by **August 23, 2019**. Upon notification, authors will be requested to confirm their participation in the conference.

The accepted abstracts will be included in the conference proceedings (paper and/or CD-ROM), which the participants will receive on site at the registration desk of ADMETA^{Plus} 2019. Pre-registered participants will also be able to download the accepted abstracts from the ADMETA^{Plus} 2019 webpage after **Oct. 2, 2019**.

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<http://www.admeta.org/>

Special Issue of JJAP

Authors with papers presented at ADMETA^{Plus} 2019 are encouraged to submit their original manuscripts to a Special Issue of the Japanese Journal of Applied Physics (JJAP) dedicated to the ADMETA^{Plus} 2019. The deadline for submitting the Special Issue is scheduled around **November 2019**. The manuscript will be reviewed based on the JJAP standard for an original paper. JJAP Special Issues are accepting regular papers (RP), brief notes (BN), and reviews (RV), and will be published in July, 2020.

Reminder

As the papers of the Special Issue will be the original papers, please be careful not to post the same contents to any other journals.

Conference Information: Oct.10-11, 2019 (in English)**# Preliminary list of Plenary Speakers include:**

- 1) Atsuyoshi Koike (Western Digital Japan)
- 2) Ruth Brain (Intel)

Preliminary list of Invited Speakers include:

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|-------------------------------------|--|
| 1) Thin films and Dielectrics | Koichi Motoyama (IBM Research) |
| 2) CMP | Haedo Jeong (Pusan National University) |
| 3) CMP | Ara Philipossian (Araca, Inc, The University of Arizona) |
| 4) Advanced Integration and Process | Griselda Bonilla (IBM Research) |
| 5) Emerging Technologies | Kaidong Xu (Leuven Instruments) |
| 6) Emerging Technologies | Tetsuro Endo (Tohoku University) |

Organized Sessions

- 1) Emerging Technologies (STT-MRAM, ReRAM)
- 2) Advanced Metallization
- 3) Advanced Integration and Process

General Sessions

- 1) Thin films and Dielectrics
- 2) CMP and Cleaning
- 3) Next Generation Interconnect (Carbon, Optical Interconnects etc.)
- 4) 3D Device, TSV and Packaging

Tutorial Information: Oct.9, 2019 (in Japanese)**# Preliminary list of Tutorial Lecturers include:**

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|----------------------------------|--|
| 1) Metallization | Koichi Motoyama (IBM Research) |
| 2) 3D Flash Memory | Masayoshi Tagami (Toshiba Memory) |
| 3) ALD | Fumiaki Hayase (Tokyo Electron Technology Solutions) |
| 4) Semiconductor Market Trend | Hiroshi Kuwatsuka (Deloitte Tohmatsu Financial Advisory) |
| 5) Interconnect Conference Trend | Kazuyoshi Ueno (Shibaura Institute of Technology) |
| 6) Lithography | Satoshi Tanaka (Toshiba Memory) |
| 7) CMP | Kazumi Sugai (Fujimi Incorporated) |
| 8) 3D CMOS image sensor | Hayato Iwamoto (Sony Semiconductor Solutions) |

*Full list of the invited speakers and tutorial lecturers will be announced later.

****Official language of the Tutorial Lecturers is Japanese.**

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