Call for Papers

3rd Electron Devices Technology and Manufacturing (EDTM) Conference 2019

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http://ewh.ieee.org/conf/edtm/2019

Extended Abstract Submission deadline: October 15th, 2018
Three pages including text, figures, tables and references
Notification for Acceptance: December 30th, 2018
Conference Venue: Marina Bay Sands Convention Centre, Singapore
Date: March 12th to 15th, 2019

IEEE Electron Devices Technology and Manufacturing (EDTM) Conference is a four-day meeting to be held at Marina Bay Sands Convention Centre in Singapore from March 12th to 15th, 2019. Launched in 2017 and sponsored by the IEEE Electron Devices Society (EDS), EDTM is rapidly becoming a premier conference for the electron devices community. EDTM provides a unique forum for discussion of a broad range of device-related topics including materials, processes, devices, packaging, modeling, reliability, manufacturing, and yield. The conference location rotates among countries in Asia, coming to Singapore for the first time in 2019.

Technical areas
EDTM solicits papers in the areas of materials, processes, devices, packaging, modeling, reliability, manufacturing, and yield. Authors should recommend a technical category based on the detailed descriptions in this flyer.

Oral and poster sessions
EDTM will include three days of technical presentations organized into several parallel sessions. The conference will also include poster presentation sessions. Authors should indicate their preference for oral or poster presentation format when submitting their abstracts.

Publication
EDTM papers will be subjected to IEEE-EDS standard review processes and conference publishing guidelines. Accepted and presented papers will be published in the EDTM proceedings and IEEE Xplore. A selected number of high impact EDTM presented papers will be invited for publication in the *IEEE Journal of Electron Devices Society* (J-EDS), as extended versions of EDTM conference papers, following the IEEE publication policy and J-EDS author-guidelines.

Education
The first day of the conference will comprise educational programs that give attendees an opportunity to broaden and deepen their knowledge.
- ✓ *Tutorials*: Teaching about a topic from the basics all the way to current state-of-the art, giving attendees a chance to come up to speed quickly.
- ✓ *Short courses*: Presentations of the latest research and challenges to be addressed in several contemporary topics.

Exhibition
An exhibition hall will allow organizations with related products and technology to showcase their capabilities and will provide conference attendees an opportunity to learn more about the tools and techniques that can help them to succeed in their programs.

Secretariat:

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Submitted papers should be categorized into one of these technical areas:

Packaging: papers discussing semiconductor packaging including 3D/2.5D packaging, TSV, heterogeneous integration, wafer-level packaging, panel-level packaging, ultra-fine-pitch interconnection, package-level wiring, optical interconnect, wireless interconnect, power device packaging, sensor packaging, control of thermal-expansion coefficient, thermal management, package design methodology, miniaturization of systems, package manufacturability, bio-compatible packages, neuromorphic interconnection, flexible packages.

Devices: papers discussing device technology including CMOS technology, stand-alone and embedded memory, interconnects, optical interconnects, compound semiconductors, nanowires, nanotubes, quantum dots, 3D devices, energy harvesting devices, photovoltaic devices, high-voltage devices, power devices, RF devices, photonic devices, sensors, display devices, actuators, MEMS.

Manufacturing/Yield: papers discussing semiconductor manufacturing and yield technologies for including clean-room management, wafer handling, uniformity of process, repeatability of tool, design for manufacturing (DFM), design for test (DFT), defect density (D_0), yield management, use of sensors, connectivity, machine-to-machine communication, data collection and analysis.

Process/Tools: papers discussing semiconductor processes and equipment, including process modules (thin film deposition, dry and wet etch, cleaning, planarization, isolation, heterogeneous materials, dielectric layers, metal layers, silicides, contacts and vias, lithography), process integration, process control, equipment impact on device performance, reliability, yield, equipment enabling new/better devices, self-assembly techniques, process sensing technologies, process enhancement by machine learning.

Materials: papers discussing electron device related materials, including semiconductors, magnetics, ferroelectrics, insulators, metals, liquid crystals, photoresist, organic films, etching gas, CMP materials, gas chemistries, substrate materials, filaments, phase change memory materials, materials strategies for reducing costs, improving reliability, yield, manufacturability.

Modeling: papers discussing modeling of electron devices, packages, and processes, including numerical, analytical, and statistical modeling and simulation of electronic, optical or hybrid devices, interconnects, integration, parasitic elements, fabrication processes, physical phenomena, mechanical systems, electro-thermal effects, model test structures and methodologies.

Reliability: papers discussing the reliability of materials, processes, and devices, including interconnects, ESD, latch-up, soft errors, noise and mismatch behavior, hot carrier effects, bias temperature instabilities, EMI, test structures and methodologies, defect monitoring and control, design-for-reliability.

Prospective authors must submit the final version of their original research work on-line to the EDTM 2019 website. The abstracts must be camera ready, maximum of three pages including text, figures, tables and references. Accepted papers will be included in the EDTM Proceedings as submitted. A template should be downloaded from the website and papers should be prepared according to this guideline.

Extended Abstracts Deadline : 15 October 2018