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Trusted Supplier Industry Day at GOMACTech 2020
Monday, March 16, 2020
8:00 AM – 2:45 PM
Town & Country Resort San Diego

The 11th Trusted Supplier Industry Day at GOMACTech 2020 is shaping up to be our most interesting event yet! Following the GOMACTech 2020 theme of *"Microelectronics for a New Decade: Global Competition and Near-Peer Challenges,"* the Industry Day agenda will provide opportunities to consider hardware security in a global context.

Our keynote speaker will be Dr. Tai Ming Cheung, Director, University of California Institute on Global Conflict and Cooperation and the Study of Innovation and Technology in China (SITC). The SITC project is part of a U.S. Defense Department Minerva Initiative project and examines the evolving relationship between technology and national security in China. Dr, Cheung's latest book is *China and Cybersecurity: Espionage, Strategy, and Politics in the Digital Domain.*

We will learn about important advanced packaging initiatives underway in government, academia, and industry. Our lunchtime speaker will provide insight into the security challenges with the increasingly ubiquitous Internet of Things (IoT) devices.

Industry Day will continue the tradition of including a government panel of experts to provide the latest news on microelectronics activities within the Office of the Secretary of Defense and other government offices.

Are you wondering about how government is responding to microelectronics supply chain threats? We'll hear from Dr. Carl McCants on supply chain security initiatives and legislation, and separately about the recent Supply Chain Provenance Challenge conducted by the Air Force Research Laboratory.

This information-packed industry day is organized by the Trusted Suppliers Steering Group; Wayne DeCarlo from Photronics will be moderating the event.

Please join us for our eleventh Industry Day and stay up to date on Trusted Microelectronics initiatives!

Joint Federated Assurance Center (JFAC) Workshop
Monday, March 16, 2020
8:00 AM – 12:00 PM
Town and Country Reseort San Diego

The Joint Federated Assurance Center (JFAC) is a federation of Department of Defense (DoD) organizations that promote and enable software and hardware assurance of electronic components, devices, and systems. JFAC members provide software and hardware assurance expertise and support, to include vulnerability assessment, detection, analysis, and mitigation services; as well as information about emerging threats and capabilities, software and hardware assessment tools and services, and best practices.

This workshop will serve to educate the broader DoD and industry community on the importance of the JFAC's contribution to the U.S. Government and the capabilities and services currently available to its customers.

GaN Modeling Workshop
Monday, March 16, 2020
8:00 AM – 12:00 PM
Town and Country Resort San Diego
Chair: Tony Quach, Co-Chair: Bryan Sanbongi, Co-Chair: Larry Dunleavy

Agenda:

1. Introduction, goals of GaN FEP Program: Tony Quach, Bryan Sanbongi, Dave Via (AFRL)
2. Reliability and Degradation Perspectives for GaN: Eric Heller (AFRL)
3. RF Modeling Landscape - Limitations of Current Approach: Larry Dunleavy (Modelithics)
4. How are models fitted today? Resources needed? Bottlenecks? What is a good model?
5. Physics-Based Modeling Overview: Sourabh Khandelwal (USF)
6. GaN FEP Program: Qorvo
7. Program Overview, Schedule: Anita Pacheco
8. A New Framework for GaN Modeling: Jose Jimenez
9. Technical Approach, Physics Wrapper around ASM-HEMT

Break (20 min)

10. Time-zero Model
11. Reliability and Trapping
12. Advanced Custom Model Implementations in AWR: Sourabh Khandelwal –20 min
13. Other GaN Foundry Perspectives: HRL

Open Source in DARPA MTO Panel Discussion
Monday, March 16, 2020
1:00– 2:40 PM
Town and Country Resort San Diego

Future of Microelectronic Design Panel Discussion
Monday, March 16, 2020
3:00 – 4:40 PM
Town and Country Resort San Diego

GTRI Tutorial
Monday, March 16, 2020
1:00 – 5:00 PM
Town and Country Resort San Diego

Title: *Microelectronics Technology Impact on Modern Electronic Warfare*
Instructors: Stan Sutphin and Aram Partizian

Electronic Warfare (EW) is the battle for effective use of the electromagnetic spectrum for military objectives. This involves using electronic support (ES) and electronic attack (EA) to exploit and deny an adversary's use of the spectrum and using electronic protection (EP) to preserve full use of the spectrum for own-force objectives. The rapid expansion of digitally enabled sensor, communication, and EW systems has increased the requirement for ever more capable microelectronic technologies that can help make EW systems more versatile, adaptive, interconnected, and intelligent. Additionally, modern EW system designs are focusing on multi-function aperture and processor architectures to allow rapid software-based reconfiguration, which further drives requirements for these technologies. Examples of such technologies include power amplifiers, broad-band isolation or active cancellation circuits, tunable radio frequency filters, low-latency/high-throughput processors, system-on-a-chip architectures, and multi-gigabit transceivers (MGTs). The tutorial will provide an overview of basic and advanced EW concepts and will give examples of how critical microelectronic technologies can potentially enable significant advances in EW system capabilities.