

## REGISTRATION

All sessions of GOMACTech-10 are being held at The Peppermill Hotel in Reno, Nevada. Both check-in and onsite registration will take place in the hotel's Tuscan Ballroom Foyer.

### Conference check-in and on-site registration hours:

Monday, 22 March -- 7:00 am - 8:30 am (Tutorial 1 only)

Monday, 22 March -- 9:00 am - 5:00 pm (General check-in and onsite registration)

Tuesday, 23 March -- 7:00 am - 5:00 pm

Wednesday, 24 March -- 7:00 am - 5:00 pm

Thursday, 25 March -- 7:00 am - 5:00 pm

## SECURITY PROCEDURES

The GOMACTech Conference is an Unclassified, Export-Controlled event that requires participants to be U.S. Citizens or legal U.S. Permanent Residents. All registrants must provide proof of U.S. Citizenship or Permanent Resident status prior to being permitted entry into the conference. Additionally, a signed **Non-Disclosure Statement** will be required.

You may prove U.S. citizenship with any one of the following:

U.S. Passport

Birth Certificate AND valid government issued photo ID

Naturalization Certificate AND valid government issued photo ID

The following are NOT proof of citizenship

Voter registration cards

Driver's license

## GOMACTech TUTORIALS

Three tutorials of interest to the GOMACTech community are a special feature of the conference. The tutorials are all being held on Monday, 22 March. There is no additional fee for Tutorials 2 & 3 but individuals must be registered for the Conference and must indicate their intention to attend a specific tutorial on their registration form. Tutorial 1 includes a lunch. The fee for Tutorial 1 is \$20.00.

### Tutorial 1: Trusted Suppliers Summit Tutorial

Monday

22 March 2010, 8:30 AM - 5:00 PM

Peppermill Hotel, Tuscan 9

## **Organizer:**

Harry Kelzi, Teledyne

The first national Trusted Suppliers meeting will gather members of industry and government agencies representing the interests of integrated circuit and electronics producers who are focused on serving Defense and Aerospace applications which are trusted. This daylong event will bring together suppliers who have been accredited as trusted in order to discuss critical issues facing this emerging community. Some of the key issues to be discussed include accreditation activity and criteria, emerging defense policy and demand for trusted supplies, trust solutions and opportunities for industry to work together and with government for further progress in this area.

The early part of the day will be focused on government representatives providing status and updates on DoD policy, the accreditation process and programmatic initiatives. Later in the morning industry representatives will discuss their capabilities, services that serve the industry OEMs as well as in supplying prime contracts to the Defense and Aerospace marketplace. The afternoon session will convene a moderated panel discussion representing both industry and Government that will take on topics that are frequently being asked by industry participants.

Organizations that are accredited by the time of the Summit are invited to participate as presenters at the Summit. Although the summit is open to all attendees, suppliers who are planning to become a certified Trusted Supplier, are urged to attend as this event will be of utmost interest and beneficial to your organization in understanding, promoting and networking with the Trusted Suppliers community.

## **Tutorial 2: Anti Tamper Tutorial**

Monday

22 March 2010, 1:00 PM-5:00 PM

Peppermill Hotel, Tuscany 11

## **Organizers:**

Dr. Robert Cunningham, Information Systems Technology Group, MIT Lincoln Laboratory

Dr. Ted Lyszczarz, Submicrometer Technology Group, MIT Lincoln Laboratory

Tamper-resistant systems and anti-tamper techniques are important for ensuring that systems, the data they collect and the control signals they emit are used as intended. The US requires anti-tamper technology for military systems that we sell to our closest allies, to ensure that the ally can use the system, but not duplicate it. Commercial applications are important as well - ATMs, satellite TV boxes, cellular telephones, and video game consoles are only a few examples. In both DoD and commercial applications, designers, producers and operators need to cooperate to thwart potential reverse-engineering attacks. This half-day seminar will cover an approach to protect systems and the data they process and produce. The approach rests on a combination of policy, legal and technical techniques. We will discuss some of the policy and legal issues, and focus on the technical techniques. The tutorial will motivate the need for anti-tamper techniques, drawing from commercial and DoD systems that have been attacked and illustrating the level of effort adversaries will invest in reverse-engineering. The tutorial also covers threat modeling, cryptography and side-channel attacks, and approaches to determine what needs to be done to protect the system from attack. The tutorial will finish with a discussion of gaps in the space.

### **Tutorial 3: The Re-emerging Need for 'MILSPEC' Parts: Escalated Design Costs**

Monday

22 March 2010, 1:00 PM-5:00 PM

Peppermill Hotel, Tuscany 12

#### **Organizer:**

John Penn, Army Research Laboratory, Adelphi, MD

The primary enabling technology for C4ISR over the past 40 years has been integrated electronics. However, the decisions made over 15 years ago to leverage commercial off the shelf (COTS) parts nearly eliminated the demand for integrated circuits specialized for the military environment. Holding less than 1% of the global market for IC's, the majority of production capital and design intellectual property has migrated offshore. Nonetheless, the need remains for critical portions of the electronic design to be performed in a custom manner. In the meantime, design tool costs have continued to escalate as feature size and device density have increased. Reconciling these cost challenges with design criticality and throughput will initiate opportunities for novel business/enterprise strategies.

#### **LUNCHEON SPEAKERS**

Lunch will be provided on Tuesday, Wednesday and Thursday. Both Wednesday and Thursday lunches will include presentations of great interest to the GOMACTech community.

#### **EXHIBITION**

An exhibition comprised of commercial vendors exhibiting products of interest to the GOMACTech community is an integral part of the conference. All attendees are reminded to visit the exhibitors when they have some free time. The Exhibit Hall is located in the hotel's Tuscany A/B Ballroom. Coffee breaks will be held in the exhibit area when they coincide with the exhibition's hours of operation. On Tuesday evening an Exhibitors' Reception attendees can mix in a relaxing atmosphere of food and good spirits. Exhibition hours are as follows:

**Tuesday, 23 March 12:00 pm – 8:00 pm**

**Wednesday, 24 March 9:00 am – 4:00 pm**

Exhibitors

Accel-RF

Aeroflex Colorado Springs

BAE Systems

CapeSym, Inc.

Cobham

Corwil Technology Corporation

Helic SA

IBM

ITT

Kilopass Technology Inc.  
M/A-COM Technology Solutions  
MOSIS Services  
Nallatech  
National Reconnaissance Office  
National Semiconductor Corporation  
NNSAs National Secure Manufacturing Center  
Northrop Grumman  
Peregrine Semiconductor  
Sandia National Laboratories  
Silvaco Data Systems  
Solid State Scientific Corp.  
Tahoe RF Semiconductor, Inc.  
Tela Innovations  
Teledyne Microelectronics  
The Boeing Company  
TriQuint Semiconductor  
Trusted Access Program Office  
Ultra Communications Inc  
Virage Logic Corp.

### **WEDNESDAY EVENING SOCIAL: DINNER**

TBD

Buses will leave the hotel                      Adults \$25, Children (12 and under) \$15.

### **HOTEL ACCOMMODATIONS**

GOMACTech has reserved a block of rooms at the Peppermill at two special rates. These rates are exclusive of applicable Washoe County room tax of 12% and a \$5 resort fee which includes use of the pool, valet, shuttle service to and from the airport, concierge, local and 800# phone calls.

Peppermill Tower Rooms (\$94 single or double) --- The Peppermill Tower rooms offer panoramic views of the majestic Sierra Nevada mountains. These richly appointed rooms are designed in a spacious 365 sq. ft. floor plan that offers smoking or non smoking rooms. Remodeled throughout 2009.

Tuscan Tower Suites (\$149 single or double on Monday through Thursday and \$159 single or double on Friday through Sunday) --- The Crown Jewel of the hotel's \$400 million expansion is represented in the lavish accommodations you will find in the new Tuscan Suites. Hand painted Italian art and private foyers provide an elegant and personal space. From the custom made pillow top king beds and 42 inch plasma television to the spacious marble bathroom with European soaking tub, separate marble shower and high def television, you are sure to find true elegance.

Reservations may be made on line at [https://reserve2.peppermillcas.com/cgi-bin/lansaweb?PROCFUN+RN+RESNET+PRN+funcparms+UP\(A2560\);;gmact10;?](https://reserve2.peppermillcas.com/cgi-bin/lansaweb?PROCFUN+RN+RESNET+PRN+funcparms+UP(A2560);;gmact10;?)

Or, by calling the hotel reservations department at 1-866-282-2444. Be sure to note that you are attending GOMACTech.

The deadline for reservations is Saturday, 27 February 2010.

## **CONFERENCE CONTACT**

Anyone requiring additional information about GOMACTech should contact the Conference Coordinator, Ralph Nadell, GOMACTech, 411 Lafayette Street, Suite 201, New York, NY 10003 (212/460-8090 x203), Rnadell@pcm411.com.

## **GOMACTECH PAPER AWARDS**

Paper awards based on audience evaluations from GOMACTech-09 will include the George Abraham Outstanding Paper Award, a Meritorious Paper Awards, Best Poster Paper Award, and Best Student Poster Award. Presentation of these well-deserved awards will be made at the Plenary Session on Tuesday morning in Tuscan C Ballroom. The GOMACTech-09 winners are:

### **The George Abraham Outstanding Paper Award (24.4)**

S. J. Koester, I. Lauer, A. Majumdar, T. P. O'Regan, J. Cai, J. Sleight, and L. Chang, IBM T.J. Watson Research Center, Yorktown Heights, NY

P. Tomasini, and S. G. Thomas ASM America Inc. Phoenix, AZ.

*"Design and Fabrication of Planar Si/SiGe Heterojunction Tunneling Transistors"*

### **Meritorious Paper Award (19.3)**

Charlie Kuznia and Chuck Tabbert, Ultra Communications, Inc., Vista, CA

*"Board-to-Board Optical Interconnects within Aerospace and Missile/Munitions Systems"*

### **Meritorious Paper Award (26.3)**

Aaron D. Franklin, IBM T.J. Watson Research Center, Yorktown Heights, NY

Timothy S. Fisher, Purdue University, West Lafayette, IN

*"Toward Manufacturable Nanoelectronics using Templated Vertical Carbon Nanotubes"*

### **Best Poster Paper Award (31.16)**

Aleksey E. Bolotnikov, Giuseppe S. Camarda, Yonggang Cui, Anwar Hossain, Ge Yang, and Ralph B. James, Brookhaven National Laboratory, Upton, NY

Stephen Babalola, Fisk University and Vanderbilt University, Nashville, TN

Stephen U. Egarievwe (Brookhaven National Laboratory, Upton, NY and Vanderbilt University, Nashville, TN

*"Material Properties Limiting the Performance of CZT Gamma Ray Detectors"*

### **Best Student Poster Paper Award (32.10)**

Jonmei Yang, University of California, La Jolla, CA

Paul Draxler, Qualcomm Inc.

Donald Kimball, and Peter Asbeck, University of California, San Diego

*"High Efficiency Envelope Tracking High Power Amplifier under Average Power Back-Off Operation"*

## **RATING FORM / QUESTIONNAIRE**

Don't forget to vote for your favorite presentation this year before you leave the conference. A rating form/questionnaire is being handed out at conference check-in. To encourage submission of these forms, GOMACTech has a special gift for all attendees submitting a completed form. Please turn your form in at the Conference registration desk when you leave the Conference to receive your gift item.

## **SPEAKERS' PREP ROOM**

The Green Room is designated as a speakers' preparation room and will be available during the hours the conference registration desk is open. Speakers are encouraged to use the Green Room facilities to ensure compatibility with the meeting's AV equipment. Speakers having difficulties should request at the conference registration desk to see an AV operator. Speakers are also asked to be at their assigned presentation room **30 minutes before the sessions begins** to meet with their session chair. An AV operator will be assigned to each technical session room.

## **CD-ROM PROCEEDINGS**

The first volume of the GOMACTech CD-ROM Proceedings, containing searchable, condensed versions of submitted papers presented at the Conference will be distributed to all registrants. Additional copies of the CD-ROM can be purchased at the Conference at a cost of \$40.00 per CD.

Previously published as the GOMAC Digest of Technical Papers, Volumes I – XXVII, this publication is the only record of the conference. Previous GOMAC Digests will, upon request, be made available to qualified Defense Technical Information Center (DTIC) users. Please call 1-800-225-3842 for bound or microfiche copies. Past Digests can be ordered by calling the above number and identifying the following accession numbers (please note that GOMAC was not held in the calendar year of 1995):

GOMAC-84 B113271	-86 B107186	-87 B119187
-88 B129239	-89 B138550	-90 B150254
-91 B160081	-92 B169396	-93 B177761
-94 B195015	-96 B212362	-97 B222171
-98 B235088	-99 B242763	-00 B254138
-01 B264749	-02 M201603	-03 M201604
-04 M201663	-05 M201849	-06 M202011
-07 M202134	-08 M202438	-09 M202646

## **INFORMATION / MESSAGE CENTER**

The Information/Message Center will be located adjacent to the GOMACTech Registration Desk in The Peppermill Hotel. The message center telephone number for incoming calls is (775) 826-2121. Callers should ask to be transferred to the GOMACTech Registration Desk.

## **PARTICIPATING GOVERNMENT ORGANIZATIONS**

Participating Government Organizations of GOMACTech-10 include: Department of Defense (Army, Navy, Air Force) ... National Aeronautics and Space Administration ... Department of Commerce (National Institute of Standards and Technology) ... National Security Agency ... Department of Energy (Sandia National Laboratories) ... Department of Energy (National Nuclear Security Administration) Defense Logistics Agency ... Department of Health and Human Services ... Defense Threat Reduction Agency ... Defense Advanced Research Projects Agency ... Advisory Group on Electron Devices ... Central Intelligence Agency ... National Reconnaissance Office

## **GOMAC WEB SITE**

Information on GOMACTech may be obtained through its Website at [www.gomactech.net](http://www.gomactech.net).