

the
LYNX

October 2011

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IEEE/Orange County Website:
www.ieee.org/ocs

With thanks to our sponsors:



The Chair's Corner:

by Alvin Joseph

Greetings and hope you are enjoying the fall (back to school) season!

On October 6th, 2011, IEEE will celebrate the 2nd annual IEEE Day. As a leading organization IEEE defines standards and directions in technology but as a leader, it is also responsible for future generations of engineers. Thus, this year the theme of the IEEE Day will be focused on "Empowering Members to Create the Future". Read more at <http://www.ieeeday.org/>). One single theme that has kept technology going is innovation. As engineers and technologists, we have to look at ways to innovate - this I believe is the best way to build better tools, technologies and a great future.

Here is the October Lynx OC section newsletter with updates on IEEE Orange County section activities and upcoming event information. As you can see, we have a variety of upcoming events - seminars, conferences, a student design contest and Job fair. Please choose the events that are of interest to you and sign up soon. Also, let us know areas that you'd like to see more events on. This will help shape up our future programs.

As always, feel free to drop me a line at alvin@ieee.org. I'd love to hear from you on how the IEEE Orange County section can serve you better.

Alvin Joseph
Chairman, IEEE Orange County Section
www.ieee.org/ocs

About the IEEE

The Institute of Electrical & Electronics Engineers [IEEE] is the leading organization for the advancement of technology. The IEEE is a 501(c)(3) non-profit, technical professional association of more than 390,000 individual members in over 175 countries. The IEEE Orange County Section serves over 3,700 members in Orange County in addition to the local community.

IEEE Orange County Section
P.O.Box 15264, Irvine, CA 92623-5264

The IEEE Orange County Upcoming Events

Oct 8

Exascale Computing Challenges and Opportunities

UC Irvine,
RSVP: IEEE.OC.SSCS.RSVP@gmail.com

Oct 10 - 12

2011 IEEE Symposium on Product Compliance Engineering

San Diego, California,
www.psessymposium.org

Oct 11

Design and Simulation of Integrated High-Efficiency Power Amplifier Modules

OC Plaza, Irvine, CA
RSVP: info@nanomems-reserach.com

Oct 12

3D IC/Si Integration Technology

Broadcom Corporation, Irvine, CA
http://meetings.vtools.ieee.org/meeting_view/list_meeting/8511

Oct 18

An Introduction to 802.11a/b/g/n/ac Radio Design: From Systems to Transistors

Knobbe Martens, Irvine, CA
RSVP: IEEE.OC.SSCS.RSVP@gmail.com

Oct 28

Antenna and Microwave Technology (Preliminary)

Hacienda Hotel, El Segundo, CA
RSVP: IEEE.OC.SSCS.RSVP@gmail.com

Oct 30 - Nov 1

IEEE Global Humanitarian Technology Conference

Seattle, Washington
www.ieeeghtc.org

Nov 2

IEEE Student Design Contest

Radisson Hotel Newport Beach, CA
www.socconference.com/students.htm

Nov 2

IEEE Job Fair

Nov 2 - 4

International Games Innovation Conference

Chapman University, Orange, California
http://ice-gic.ieee-cesoc.org/

Nov 2-4

The Third IEEE International Games Innovation Conference

One University Drive, Chapman University, Orange, CA

If you'd like your event to be included, please email details to me@sharonforsberg.com

IEEE Electron Devices Society and the IEEE Reliability Society to Sponsor Reliability Physics Conference

The IEEE EDS and Reliability societies are will co-sponsor the conference entitled "2012 IEEE International Reliability Physics Symposium (IRPS)". This conference will be held April 15-19, 2012 in Garden Grove, California, USA.

For further information, please contact,

David Barber

PO Box 2097

Banner Elk NC 28604 USA

Ph : +1 828 898 7001

Fax: +1 828 898 6379

dbarbsta@aol.com

or Conference Services Dept., at IEEE Operations Center at +1 732 562 3878

New IEEE Orange County, California, MTT-S/EDS-S Joint Chapter Group in LinkedIn

You are invited to join the IEEE OC MTT-S/EDS-S open group in LinkedIn. This group brings together members of the IEEE Microwave Theory and Techniques, and Electron Devices Societies, residing in Orange County. Its purpose is to serve as a medium for sharing information about: Topics of interest and announcements for future Talks, networking, etc, including first-hand information on new job opportunities in the RF/Microwave, RFIC, Semiconductor Devices and related fields.

Hector J. De Los Santos, Ph.D.

Chairman, IEEE OC MTT-S/EDS-S Joint Chapter

GHTC: Technology for the Benefit of Humanity

IEEE Global Humanitarian Technology Conference

October 30 - November 1, 2011

Seattle, Washington, USA

www.ieeeghtc.org

Sponsored by the Institute of Electrical and Electronics Engineers, and the IEEE Foundation



Member Discounts

As you well know, IEEE members can take advantage of a myriad of discount opportunities, either in the form of core IEEE products OR from IEEE sponsored programs which are offered at reduced rates as a benefit of membership. However, member surveys indicate that awareness of IEEE discount programs is low, such that 50% of members do not know about them or where to find them.

To address this issue, a decision was made to present information about all these programs in a new centralized location, which is now the “IEEE Member Discounts” Web page. This notice also serves to announce that the brand “Financial Advantage Program” has been retired.

Please take a look at the new IEEE Member Discounts page: <http://www.ieee.org/go/discounts>.

The “IEEE product discounts” section is listed first and we are still working on compiling all the entries to appear here. The “IEEE sponsored discounts” section lists programs in the following categories: Insurance, Travel, Technology and Home/Office Discounts. Programs that are available globally are clearly marked in this listing. We have also added an FAQ page that seeks to clarify the geographic availability of the sponsored programs and how they are developed and vetted.

Welcome New IEEE members in Orange County!

We'd like to extend a warm welcome to the following new members:

Member	Grade	Member	Grade
		Kevin Nguyen	Student Member
Abdullah Alkudsi	Graduate Student Member	shane pase	Student Member
JP Allport	Student Member	David Pecoraro	Student Member
Maury T Bennett	Member	Ken Persen	Member
Lawrence Ramis Cagatin	Graduate Student Member	James Richard Pitta	Student Member
Dante Carrillo	Student Member	Julian Popescu	Member
Joshua Carrillo	Student Member	Jose Robles	Graduate Student Member
Sophia L Carzan	Student Member	Michael Saqr	Student Member
Nathan Dale Coulombe	Student Member	Sarah Schaller	Student Member
Lilliana Escobedo	Student Member	Jonas Tsai	Graduate Student Member
Mark Anthony Espinosa	Graduate Student Member	Derek Andrew Van Riper	Student Member
c fan	Graduate Student Member	Scott Venard	Student Member
Ranjini Bangalore Guruprasad	Graduate Student Member	Nick Thanh Vu	Student Member
Andrew Hayes	Student Member	Tsering Wangden	Graduate Student Member
Les Amtman Karr	Member	Todd Watanabe	Graduate Student Member
Thanh Ly	Member	Brandon Wu	Student Member
Gopi Meenakshisundaram	Member		



Job Openings in OC

Optical Engineer

Job Summary:

Are you a **Senior Software Engineer** (Visual Studio, C#, .NET, SQL Server) whose hands-on technical and **team leadership, project management** career path should ultimately lead to being the principal software engineer for the R&D division of this stable \$1B+ household brand that enjoys a 100+ year history of international name recognition?

You will be THE Senior in-house Software Engineer and key member of a small, elite R&D team, responsible for the development of the next generation of software to replace a legacy system involved in the automated quality screening, packaging, and distribution processes of the most recognized agricultural brand name in the world.

The job is 50% heads-down coding and 50% heads-up project management, collaborating and interfacing with a 3rd party development team, and being the key technical liaison between major customers and corporate executives. Ideally, the successful person in this capacity will evolve into technical leader and mentor of a small, accountable and high-energy internal software development team.

You'll enjoy a great deal of autonomy working in a stable and long established corporate environment (near Ontario International Airport) that offers great benefits, unlimited career growth and the opportunity to be solely responsible for software strategy and technical leadership in what amounts to the capstone of a 20 year long transition process from being an Academic/Research environment into a cutting edge and innovative Profit Center of the corporation.

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If you or your company has a job to advertise, please send an email to shireesh@ieee.org with a concise description of the job and contact information. Depending on space availability, we will attempt to post the job opening in the IEEE Section newsletter and website.

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Your development background in any of the following industries may qualify you for this career-making unique opportunity: Artificial Intelligence (AI), Algorithms, Process Control, Document Automation, Image Processing, Programmable Logic Controls (PLC), Robotics, Manufacturing Automation, Security Appliances, or Vision/Optics/OCR/Video/Radar, I/O or related embedded systems.

This mission critical role will guide the software technology involved in the NEXT 100 years of this company's history, and be an integral part of a new technical leadership team that includes the Director of Engineering and a Division VP/GM who have joined the organization expressly for this purpose from the unrelated but relevant automated material handling systems industry.

For more information and immediate confidential consideration, contact:

Mark A. Bassett, CPC
SCVN Board of Directors
eNamix Inc.
emerging technology executive services
O: 949.502.4219
C: 949.395.7793
E: MarkB+at+eNamix+dot+com

Advertising Section in the Newsletter

Our Newsletter now includes an advertising section. For details on how to place your ad please send us e-mail at: info.at.nanomems-research.com

Hector J. De Los Santos
IEEE Orange County Section Newsletter Editor



**IEEE's Orange County Solid-State Circuits Society (SSCS)
Present:**

Exascale Computing Challenges and Opportunities!

By Dr. Nader Bagherzadeh, University of California, Irvine.

Day: Saturday, October 8, 2011

Time: Registration & Networking 10:00 a.m. – 10:30 a.m.
Presentation (Dr. Bagherzadeh) 10:30 a.m. – 11:30 a.m.
Q&A and Networking 11:30 a.m. – 11:45 a.m.

Fee: Free for all the IEEE members, students, engineers in transition, technologists, as well as those who are exploring to join IEEE & SSCS in the future.

Space is limited, please RSVP: IEEE.OC.SSCS.RSVP@Gmail.com

Send questions to Farhad Mafie, IEEE-OC SSCS Chair: FarhadMafie@Gmail.com

Abstract: This talk gives an overview of current efforts to develop the next generation HPC technologies in order to reach the peak computing power that is 400 times faster than the fastest machine of 2010 from China. In order to meet this level of improvement, many new hardware and software technologies must be developed to overcome current technological barriers.

Dr. Nader Bagherzadeh has been involved in research and development in the areas of computer architecture, reconfigurable computing, VLSI chip design, and computer graphics. For almost ten years ago, he was the first researcher working on the VLSI design of a Very Long Instruction Word (VLIW) processor. Since then, he has been working on multithreaded superscalars and their application to signal processing and general purpose computing. His current project at UC, Irvine is concerned with the design of coarse grain reconfigurable pixel processors for video applications. The proposed architecture, called MorphoSys, is versatile enough to be used for digital signal processing tasks such as the ones encountered in wireless communications and sonar processing. DARPA and NSF fund the MorphoSys project (total support \$1.5 million). Dr. Bagherzadeh was the Chair of Department of Electrical and Computer Engineering in the Henry Samueli School of Engineering at University of California, Irvine. Before joining UC, Irvine, from 1979 to 1984, he was a member of the technical staff (MTS) at AT&T Bell Laboratories, developing the hardware and software components of the next-generation digital switching systems (#5 ESS). Dr. Bagherzadeh holds a Ph.D. in computer engineering from The University of Texas at Austin. As a Professor, he has published more than a hundred articles in peer-reviewed journals and conference papers in areas such as advanced computer architecture, system software techniques, and high performance algorithms. He has trained hundreds of students who have assumed key positions in software and computer systems design companies in the past twelve years. He has been a Principal Investigator (PI) or Co-PI on more than \$2.5 million worth of research grants for developing next-generation computer systems for solving computationally intensive applications related to signal and image processing.



Address & Information: Knobbe Martens, 2040 Main St., Irvine, CA. (Free parking on Saturday)

SPECIAL THANKS TO

Knobbe Martens
INTELLECTUAL PROPERTY LAW

**FOR SPONSORING & HOSTING
THIS EVENT!**

Knobbe Martens Building, 2040 Main St., Irvine 92614, Knobbe Conference Center on the second floor. For Directions and Maps see the KMOB web site at http://www.kmob.com/offices_irvine_map.htm#map. The building entrance and parking structure are on the back side of the building. Follow signs to the 2040 entrance (there is no parking on Main St.). For GPS or Google Map junkies, the GPS coordinates are 33.682383, -117.852565.



2011 IEEE Symposium on Product Compliance Engineering

Sponsored by the IEEE Product Safety Engineering Society

October 10 - October 12, 2011
San Diego, California, USA
www.psessymposium.org

Call for Papers, Workshops, and Tutorials

Technical Program Co-Chairs

Gary Tornquist, garytor@microsoft.com
Bob Griffin, bobgriff@us.ibm.com

Editorial Board Chair

Murlin Marks, murlinm@ieee.org

Conference Management/Registration

Chris Dyer,
cdyer@conferencecatalysts.com

General Chair

Bansi Patel, Bansi.Patel@IEEE.org

General Co-Chair

Anna Klostermann,
aklostermann@case4n6.com

The IEEE Product Safety Engineering Society seeks original, unpublished papers and tutorials on all aspects of product safety and compliance engineering including, but not limited to:

- Product Specific:** Consumer, medical, computer (IT), test and measurement, power supplies, telecommunication, industrial control, electric tools, home appliances, cellular and wireless, etc.
- Hazard Specific:** Electrical, mechanical, fire, thermal, chemical, optical, software, functional, reliability, risk assessment, etc.
- EMC / RF:** Electromagnetic emissions, electromagnetic immunity, regulatory, Introduction to EMC/RF for the safety engineer and compliance engineer.
- Components:** Grounding, insulation, opto-couplers, cables, capacitors, connectors, current-limiters, transformers, current-limiters, fuses, lasers, ferrites, environmental, electromagnetic suppression & protection, surge protectors, printed wiring boards, etc.
- Certification:** Electromagnetic emissions & immunity, Environmental, Product safety, Processes, safety testing, regulatory, product liability etc.
- Standards Activities:** Development, status, interpretations, country specific requirements, Laboratory Accreditation, etc.
- Research:** Body physiological responses to various hazardous energy sources, unique safeguard schemes, electrically-caused fire, forensic methods etc.
- Environmental:** RoHS, WEEE, EuP (Energy-using Products), Energy Star, Packaging Directives, REACH (Chemical), CeC, etc.
- Demonstration Papers:** Demonstrations of product safety testing techniques including mechanical, electrical, fire, etc.

Author's Schedule **All dates require that the associated documents be loaded into EDAS by the due date**

Abstract submission	May 15, 2011
Notification of Abstract Acceptance	June 1, 2011
Draft formal paper / presentation	July 15, 2011
Formal Final Paper	August 15, 2011
All Final Papers and Presentations	September 1, 2011

Prospective authors should submit e-papers using the on-line EDAS submission system.

Please go to the Author's Kit page of the PSES web for comprehensive submission instructions including paper templates on the author tab at: www.psessymposium.org



To IEEE Orange County Chapters: Newsletter Inputs

As we begin a new year of activities, it is fitting to remind OC Chapters of the protocol to get their news items published in the Newsletter. Simply, e-mail your news item to info.at.nanomems-research.com no later than the 15th of the month, prior to the month whose Newsletter you are targeting. For example, if you want the February'09 Newsletter to contain your news item, please, submit it no later than January 15th, 2009. In your e-mail, please, enclose your news item between two lines of "+" characters, i.e.:

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News Item Title

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Thank you,

Hector J. De Los Santos
IEEE Orange County Section,
Newsletter Editor

MEETING NOTICE for Tuesday, October 11th, 2011



IEEE Orange County EDS/MTT Joint Chapter Present:

**Dr. Marc J. Franco, Senior Engineering Manager
RFMD, Greensboro, North Carolina**

Design and Simulation of Integrated, High-Efficiency Power Amplifier Modules

The presentation will provide details on the design of high efficiency inverse class F power amplifier modules for handsets applications, emphasizing on the design constraints and challenges faced by designers, who must often trade off performance to keep costs down and fit the design within footprints that get continuously smaller. Simulation techniques to achieve first pass success will also be discussed.

Marc J. Franco holds a Ph.D. degree in electrical engineering from Drexel University, Philadelphia. He is currently with RFMD Technology Platforms, Component Advanced Development, Greensboro, North Carolina, USA, where he is involved with the design of advanced integrated circuits and integrated front-end modules. He was previously with Linearizer Technology, Inc. Hamilton, New Jersey, where he led the development of advanced RF products for commercial, military and space applications.

Dr. Franco is a reviewer and former chair of the Power Amplifier for Radio and Wireless Symposium (PAWR), and a reviewer for the European Microwave Conference. He is a member of the MTT-17 HF-VHF-UHF Technology Technical Coordination Committee. His current research interests include high efficiency RF power amplifiers, nonlinear distortion correction, memory effects and electromagnetic structures.

Date: Tuesday, October 11th, 2011

Location: OC Plaza
2575 McCabe Way
Irvine, CA 92614

Time: 3:00-3:30 PM Arrival
3:30-4:30 PM Talk

Reservations: Please, RSVP by 10/10/11 by sending e-mail to:
info@nanomems-research.com

Check out our website: http://www.nanomems-research.com/OC_MTT_EDS.html
for this and other announcements.

IEEE Components, Packaging and Manufacturing Technology Society Orange County Chapter

Wednesday, October 12, 2011 Technical Meeting

3D IC/Si Integration Technology

John H. Lau, PhD, IEEE, ITRI Fellow

Electronics & Optoelectronics Research Laboratory, Industrial Technology Research Institute (ITRI), Chutung,
Hsinchu, Taiwan

E-mail: johnlau@itri.org.tw

Abstract

3D integration consists of 3D IC packaging, 3D IC integration, and 3D Si integration, which will be discussed in this lecture. Emphases are placed on the key enabling technologies for 3D IC/Si integrations, such as TSV (through-silicon via) forming and filling, front and back-side metallization, RDL (redistribution layer), IPD (integrated passive devices), temporary wafer bonding, wafer thinning and handling, wafer de-bonding, thin chip/wafer strength measurement and improving, W2W bumpless bonding, lost-cost lead-free microbumping ($\leq 15\mu\text{m}$ pitch) and assembly, low-temperature wafer bumping and C2C, C2W, and W2W bonding, and thermal management. Useful characterization and reliability data for 3D IC integration will also be provided.

The application of 3D IC integration such as CMOS image sensor, MEMS, LED, memory + logic, logic + logic, memory + microprocessor, active and passive interposers will be presented. More than 15 companies' passive interposers (samples not power-point engineering) used as substrates, stress relief (reliability) buffer, carriers, and thermal management tools will be presented and discussed. Furthermore, the critical issues of TSV and 3D IC integration will be given and some potential solutions or research topics will be recommended. Finally, several roadmaps of 3D IC/Si integration will be provided. All the materials are based on the technical papers and books published within the past 3 years by the lecturer and others.

Biography



Dr. John Lau has been an ITRI Fellow since January 2010. Prior to that, he was a visiting professor at HKUST for 1 year, Director of MMC Laboratory with IME in Singapore for 2 years and a Senior Scientist/MTS at HPL/Agilent in California, USA for more than 25 years. With more than 35 years of R&D and manufacturing experience, Dr Lau has published more than 350 peer-reviewed papers, 30 issued and pending US patents, given 270 lectures, workshops, and keynotes worldwide, published 16 textbooks on 3D MEMS packaging, 2D and 3D IC integrations, flip chip & WLP, high-density PCB, SMT, lead-free materials, soldering, manufacturing and reliability. John earned his PhD degree from the University of Illinois and three MASc degrees in North America. John received many awards, e.g., the best IEEE/ECTC Proceedings paper (1989) award, best ASME Transactions paper (Journal of Electronic Packaging, 2000) award, best IEEE Transactions paper (in CPMT, 2010) award, ASME/EEP Outstanding Technical Achievements award, IEEE/CPMT Manufacturing award, Outstanding Contribution award, and Outstanding Sustained Technical Contribution award. SME Total Excellence in Electronics Manufacturing award, and IEEE Meritorious Achievement in Continuing Education award. He is an elected ASME Fellow and has been an IEEE Fellow since 1994.

Date: **Wednesday, October 12th, 2011**

Location: **Broadcom Corporation, 5300 California Ave., Irvine, CA 92617 – Bldg. 2 Conf. Room 2-1037 (Salt Creek)**
Check in at the Security Gate and proceed to Bldg. 2. You will be escorted into the building.

Time: **5:30-6:00pm: Social time, 6:00-7:00pm: Presentation, 7:00pm: Dinner** (Pizza and Soda provided by CPMT OC Chapter)

RSVP: **IEEE members and non-members all are welcome to attend. Please RSVP at**

http://meetings.vtools.ieee.org/meeting_view/list_meeting/8511. Please be at Bldg. 2 entrance by 6:00 pm; no escorts after that. For questions regarding RSVP, please contact Mehdi Saeidi (saeidi@ieee.org).

For more information please call any of the following officers of [the IEEE CPMT OC Chapter](#):

Wei Koh (714) 417-9979

Mehdi Saeidi (949) 296-5618

Sam Karikalan (949) 413-0029

Follow us on [LinkedIn](#).

Don Frye (310) 487-0148



**IEEE's Orange County Solid-State Circuits Society (SSCS)
& IEEE SSACS Distinguished Lecturer Program
Present:**

**An Introduction to 802.11a/b/g/n/ac Radio Design:
From Systems to Transistors**

By Arya Behzad

Senior Director of Engineering, Broadcom

Day: Tuesday, October 18, 2011

Time: 6:30 p.m. – 7:00 p.m. Registration & Networking
7:00 p.m. – 8:45 p.m. Presentation by Arya Behzad
8:45 p.m. – 9:00 p.m. Q&A and Networking

Fee: Free for all the IEEE members, students, engineers in transition, technologists, as well as those who are exploring to join IEEE & SSACS in the future.

Space is limited, please RSVP: IEEE.OC.SSCS.RSVP@Gmail.com

Send questions to Farhad Mafie, IEEE-OC SSACS Chair: FarhadMafie@Gmail.com

Abstract: A short lecture on the evolution of the 802.11 standard with an emphasis on the radio design will be presented. After a brief discussion of the market trends, the performance of the 802.11's OFDM-based modulations as well as multi-in multi-out (MIMO) design in a multi-path environment will be outlined. The general evolution of the 802.11 PHY from b to a to g to n to ac is presented and the impact of these PHYs on the radio design is discussed. Further, the impacts of various radio impairments (noise, quadrature inaccuracy, nonlinearity, etc.) on the performance of the various PHYs will also be presented. Some specific examples of circuit techniques and architectures used in various 802.11n radios will be discussed. The evolution of 802.11 radio performance metrics throughout the past several years will be outlined. The lecture will wrap up with some real-world throughput measurement results and a brief discussion of the future trends of radio design.

Arya Behzad obtained his BSEE and MSEE from ASU and UC Berkeley in 1991 and 1994 respectively. After working for UTC, Microunity and Maxim, he joined Broadcom in 1988 where he is currently a Senior Director of Engineering working on radios and SoCs for current and future generation wireless products. He was designated as a Broadcom Distinguished Engineer in 2007 and as a Broadcom Fellow in 2009 for the design and productization contributions to CMOS RF transceivers and power amplifiers. He has published numerous papers and is an inventor on well over 100 issued patents in the areas of precision analog circuits, gigabit Ethernet, set-top boxes and wireless networking. He has taught courses and presented technical seminars at various conferences and at several universities including UC Berkeley, UCLA, UCSD and Caltech. He is a retired member of the International Solid State Society Conference Wireless Technical Committee as well as a retired Guest and Associate Editor of the Journal of Solid State Circuits. He has authored the book, "Wireless LAN Radios", IEEE Press/Wiley. He is an Institute of Electrical and Electronics Engineers' Distinguished Lecturer as well as an IEEE Fellow.



Address & Information: Knobbe Martens, 2040 Main St., Irvine, CA. (Free parking after 7 p.m.)

SPECIAL THANKS TO



Knobbe Martens Building, 2040 Main St., Irvine 92614, Knobbe Conference Center on the second floor. For Directions and Maps see the KMOB web site at http://www.kmob.com/offices_irvine_map.htm#map. The building entrance and parking structure are on the back side of the building. Follow signs to the 2040 entrance (there is no parking on Main St.). For GPS or Google Map junkies, the GPS coordinates are 33.682383, -117.852565.

**FOR SPONSORING & HOSTING
THIS EVENT!**



**THE RAILWAY ASSOCIATION OF
SOUTHERN CALIFORNIA**

This Month's Speaker:

Jeff Young

*Assistant Vice President - Operation Systems,
Union Pacific Railroad*

*Chairman of the Association of American
Railroads Positive Train Control Policy Committee*

This Month's Topic:

Positive Train Control

Society Organizing this Event:

[WHERE]

Doubletree Club

*Orange County Airport
7 Hutton Centre Drive,
Santa Ana, CA, 92707-5794*

[WHEN]

Monday Oct. 24, 2011
6:00 pm - Social Hour
6:30 pm - Dinner
7:15 pm - Presentation



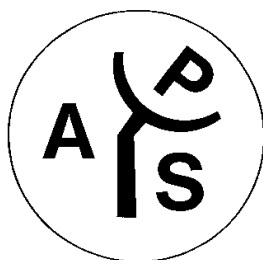
**Institute of Electrical and
Electronic Engineers Orange
County Computer Society
(OCCS) Chapter**

*This is not the RASC monthly meeting but we would
like to support IEEE (OCCS) in this endeavor.*

RSVP via online at: <http://occs.ieee.org/>

Coastal LA Section Presents CLASTECH Symposium and Exhibition Antenna and Microwave Technology (Preliminary)

October 28, 2011
Hacienda Hotel
El Segundo, CA



Exhibition & Poster Sessions

There will be an exhibition with local and national vendors.
10 AM to 3:30 PM
There will also be a student poster session during lunch

Steering Committee Chair

Charlie Jackson

TPC Chair

Arvind Sharma

Antennas

John Gianvittorio

Microwaves

Vesna Radisic

Student Papers

Phil Arnold, and Terry Cisco

Exhibition Chair

Alan Reynolds

Local Arrangements

Brian Welles, Manny

Olemeda, Mike Brown

Past Antenna Chair

Frank Villegas

ROOM A- Microwaves

8:30 AM

Session A1 Topic

"State-of-the-Art Time-Domain Measurement and Modeling Techniques for Nonlinear Components and Systems", by **Dr. Christopher P. Silva, The Aerospace Corporation**

10:10 - 10:40 AM Break

(Exhibit Opens at 7:30 AM)

10:40 AM

Session A2 Topic

"From Switched Mode Power Amplifiers to Power DAC", by **Prof. Ethan Wang, UCLA**

11:30 AM – 1:00 PM Lunch

Lunch and the Student Poster Competition

1:00 PM – 3:00 PM Microwaves

Session A3 Topic

"Inkjet-Printed Paper/Polymer-Based "Green" RFID and Wireless Sensor Nodes: The Final Step to Bridge Cognitive Intelligence, Nanotechnology and RF?" by **Manos Tentzeris, Georgia Institute of Technology**

"MEMS based reconfigurable antenna and its application to multiple input multiple output (MIMO) antenna system", by **Prof. Franco De Flaviis, UCI**

3:00 – 3:30 PM Break

(Exhibition Closes at 3:30 PM)

Student Poster Competition

Phil Arnold parnold7@roadrunner.com and Terry Cisco

Download this flyer

<http://home.earthlink.net/~clastech/clastech.pdf>

ROOM B- Antennas

8:30 AM

Session B1 Topic

"Recent Advancement in Active Artificial Magnetic Conductors at HRL" presented by **Dr. Joseph Colburn, HRL.**

"Phased Array Antenna Design: Yesterday and Today" by **Randy Haupt, Ball Aerospace & Technologies**

10:10 - 10:40 AM Break

(Exhibit Opens at 7:30 AM)

10:40 AM

Session B2 Topic

"Science and Applications of CEMs and Multi-Physics Computations" by **Prof. Jin-Fa Lee, Ohio State University**

11:30 AM – 1:00 PM Lunch

Lunch and the Student Poster Competition

1:00 PM – 3:00 PM Antennas

Session B3 Topic

"The Fascinating Evolution of Reflector Antennas: Past, Present and Future" by **Prof. Yahya Rahmat-Samii, UCLA**

"Trade Study on Antenna Apertures for Satellite Communications", **Fayez Nima, TECOM Industries, Inc., SMITHS plc company**

3:00 – 3:30 PM Break

(Exhibition Closes at 3:30 PM)

For More Information

Contact Charlie Jackson

c.jackson@ieee.org

or go to the Coastal Los Angeles Section Calendar

http://ewh.ieee.org/r6/coastal_la/calendar.html



ORANGE COUNTY SECTION

www.ieee.org/ocs

IEEE ORANGE COUNTY SECTION PRESENTS IEEE OC STUDENT DESIGN CONTEST (SDC)*

9th International System-on-Chip (SoC) Conference, Exhibit & Workshops
November 2 & 3, 2011 – Radisson Hotel Newport Beach

www.SoCconference.com

SPONSORED BY:



ENGINEERING & COMPUTER SCIENCE STUDENTS. . .

IEEE Orange County Section cordially invites you to participate in its 2011 **Student Design Contest (SDC)**! The Contest will be held on Wednesday, November 2, 2011, at the 9th International System-on-Chip (SoC) Conference Exhibit, at the Radisson Hotel Newport Beach.

The SDC provides an outstanding forum in which graduate and undergraduate students' efforts can be shared with an audience of academic and industrial technical experts.

SDC PROJECT PROPOSAL

The Student Design Contest is designed to encourage engineering and computer science undergraduates and graduates students to work on a new project and present their work at the 9th International System-on-Chip (SoC) Conference Exhibit to a group of judges from industry and academia.

Each project will be judged based on its overall complexity, originality, and completion of the work.

THE DESIGN PROJECTS COULD BE IN . . .

- Hardware Design
- Robotics
- Software Design
- Analog Design
- Digital Design
- EDA Tools
- Chip Design / SoC
- MEMS
- SOI vs. CMOS
- Optics
- Embedded platforms
- Graphics Sub-system
- Instrumentation
- Software Algorithms
- FPGA-Based Design
- Microcontroller-Based
- Embedded Systems
- Design Methodologies
- Detailed Technology Analysis/Research
- Bio-Engineering
- CPUs & DSPs
- Memory Design
- SSD
- I/O Sub-systems
- Web-Related Projects
- And Similar Topics . . .

**"WILD & CRAZY" DESIGN PROJECTS ARE ALSO WELCOMED!
WE LOOK FORWARD TO HEARING FROM YOU.**

Don't Miss Out!

**AN EXCELLENT OPPORTUNITY TO NETWORK & PROMOTE
YOUR ENGINEERING TALENT & EXPERTISE!**

DATES TO REMEMBER

(1) Monday, October 10, 2011: Deadline for submission of Design Contest Proposal/Abstract (1-2 paragraphs in MS Word) and your biography.
Submit to: SoC@SoCconference.com

(2) Friday, October 28, 2011: Deadline for submission of Final Report (in MS Word or PowerPoint).
Submit to: SoC@SoCconference.com

(3) Wednesday, November 2, 2011: Projects will be reviewed and winner will be announced at the 9th International SoC Conference Exhibit reception starting at 5:00 PM, at the Radisson Hotel Newport Beach.

PRIZES

(1) The first 30 students that submit their FINAL report/papers will receive a Western Digital Passport Hard Drive! You must be at the event on Nov 2, to receive your WD Hard Drive. No Exceptions!

(2) First Prize: \$500.00
Second Prize: \$300.00
Third Prize: \$200.00

(3) All participating students (who have submitted their Final Report) will receive a 2-Day Conference pass.

(4) Names and pictures of the winners will be displayed on the SoC Conference and IEEE OC Section websites.

CONTEST RULES

- Final Report format must be in MS Word or PowerPoint.
- Poster size: 24x36 (or slightly larger).
- Poster presentation date: Wed, Nov 2.
- Students must be at the SoC Conference Exhibit Room for poster setup & to discuss their projects with the judges at 5:00 pm on Wed, Nov 2.
- Check the website for updates.

* SDC Program is subject to change. Savant Company Inc. and the SoC Conference Organizing Committee reserve the right to revise or modify the above program at its sole discretion. Please visit the SoC Conference website for updates and changes.

QUESTIONS

Please send your questions to:
SoC@SoCconference.com or Visit the following websites:
www.SoCconference.com/students.htm
www.ieee.org/ocs



IEEE-OC Tech Job Fair

Wednesday, November 2, 2011 — 3:00 P.M. - 6:00 P.M.

Radisson Hotel Newport Beach

www.SoCconference.com/JobFair.htm

**Free Admission for Job Seekers
&
Free Parking**

Employers: You are invited to IEEE-OC Tech Job Fair if you are seeking to hire:

<ul style="list-style-type: none"> ◆ Hardware Engineers ◆ Control Systems Engineers ◆ Biomedical Engineers ◆ EDA Engineers ◆ Power Engineers ◆ Verification Engineers ◆ Layout Engineers ◆ Project Managers 	<ul style="list-style-type: none"> ◆ Software Engineers ◆ IC & IP Designers ◆ Application Engineers ◆ Manufacturing Engineer ◆ Technical Instructors ◆ Test Engineers ◆ Packaging Engineers ◆ Analog or Digital Designers 	<ul style="list-style-type: none"> ◆ Systems Engineers ◆ Sales Engineers ◆ Marketing Engineers ◆ Application Developers ◆ Web Developers ◆ Quality Engineers ◆ Project Engineers ◆ Etc . . .
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Fee:	Table Fee: \$300
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The Tech Job Fair Program Consists of:

- Free Resume Critique
- Free Mock Interviews and Job Search Counseling
- Free Pass to SoC Conference Exhibit (Going on in Parallel)
- Networking Opportunities & Much More . . .

IEEE-OC Tech Job Fair will be promoted by advertisements, IEEE OC Section and sponsoring organizations' Email lists, Newsletters, local media, etc.

SPACE IS LIMITED! TO RESERVE YOUR TABLE:

Please make checks payable to "IEEE Orange County Section" (i.e., a nonprofit organization).

**Mail Checks to:
IEEE Orange County Section
P.O. Box 15264, Irvine, CA 92623-5264**

**If you have any questions, please contact: SoC@SoCconference.com
or visit: www.SoCconference.com/JobFair.htm or www.ieee.org/ocs**

NOTE: As our contribution to the Tech Community & IEEE Members, the International System-on-Chip (SoC) Conference is providing the space for the IEEE-OC Section Tech Job Fair FREE of charge. There is absolutely no financial gain for the SoC Conference or its organizing company and affiliates. All proceeds from IEEE-OC Tech Job Fair Tables go directly to IEEE-OC Section (i.e., a nonprofit organization).



International Games Innovation Conference November 2-4, 2011

Venue

Chapman University
Orange, California USA
(Near Disneyland
and Newport Beach)

Submission Deadlines

**Power Point
Presentations and
Proposals for
Special Sessions Due:
September 1, 2011**

Two-page
Extended Abstract
Submission:
On-going

Acceptance Notice:
September 10, 2011

Final Paper
& Presentation for
Conference Proceedings:
September 20, 2011

**For Submission
Instructions:**

<http://ice-gic.ieee-cesoc.org>

**Contact: TPC Chair
Gary Yip**
gyip.igic2011@gmail.com



Call for Presentations

The IEEE Consumer Electronics Society is pleased to announce the Third International Games Innovation Conference. This conference is a platform for disseminating peer-reviewed papers and presentations that describe innovative research and development of game technologies. Participation from industry, academia, and government is welcome.

As the Call for Papers reaches its first milestone, we are inviting submissions of presentations in power point format (~ 15 slides with abstract of ~ 200 words on 1st slide) to foster industry and government participation that describe significant, original, and on-going work. Submissions are still welcome in the previously announced format of 2-page extended abstracts that include diagrams of ideas and early results from preliminary research and development. All presentation submissions will be reviewed on the basis of their relevance, technical soundness, novelty, clarity, and overall scientific or engineering contribution. At least one presenter must attend the conference in person to be included in the Conference Program and Proceedings, IEEE Xplore and Engineering Index. Presentations reporting innovations and new developments in all areas related to games are invited, including but not limited to the following:

Multi-player Games

Cloud based games
Networked games
Location awareness
Infrastructure
Performance
Latency
Architecture
Security

Beyond Entertainment

Health/exercise
Education/Training
Business
Advertising
Social Change
Usability beyond games

Platforms

Mobile/handheld
Computers
Consoles
Portable consoles
Cloud servers
Network servers
System architecture
Network architecture

User Experience

Playing experience
Behavioral impact
Social impact
Player modeling
Learning
Cultural impact
Lessons from games

Development and Production

Design of games
Tools
Interdependence of Software & Hardware
Graphics
Animation
Content generation
Artificial intelligence
Cinematography

Technology

Multi-core processors
Memory
Mobile SoC
Virtual reality
Storage
MEMS/Nano devices

Interfaces

Interoperability
Wearable devices
Biometrics
3D effects
Haptics
Gaze
Proximity
Audio
Gesture

3D Graphics
3D Display
Augmented reality
Game mechanics
Vision/imaging
Wireless/RF

Industry Track: This conference provides an opportunity to submit power-point presentations describing design and technology challenges that should be addressed in the short-to-medium term. These presentations are encouraged for sharing of development experience, with less focus on full-paper publication.

Special Panels, Workshops and Tutorials: IGIC 2011 is planning interactive sessions (120 minutes each) in the forms of panel discussions, workshops and tutorials focusing on the latest development in game technology, including hardware, software, content development and demonstrations. Topics of discussions on future issues, especially related to innovation in game technology, are welcome.



International Games Innovation Conference November 2-4, 2011

Chapman University – City of Orange, California 92866 USA (Near Disneyland and Newport Beach)

Keynote Speakers

Conference Opening



Trip Hawkins
*Founder, Electronic Arts,
3DO and Digital Chocolate*

Reception Banquet



Robert J. Mical
SONY

Award Luncheon



Craig Hampel
Rambus

Conference Closing



Ohad Shvueli
PrimeSense

Committed Panel: Playing with Reality, Alternate Reality Games, Urban and Serious Play



Leader:
Patrícia Gouveia
Universidade Lusófona
de Humanidades
e Tecnologias

Darren O'Donnell
The Tendency
Group
Toronto, Canada

Jeff Watson
University
Southern CA
Los Angeles, CA
USA

Michael Liebe
Mediaboard
Berlin-
Brandenburg GmbH
Berlin, Germany

Flavio Escribano
ARSGAMES
Madrid-Seville,
Spain

For more information, go to <http://ice-gic.ieee-cesoc.org>, or
contact conference coordinator, Charlotte Kobert ckobert@ieee.org






International Games Innovation Conference November 2-4, 2011

More Committed Talks:

Rambus

 **CHAPMAN
UNIVERSITY**

dmw digitalmediawire

 **IEEE GameSIG**



 **IEEE**

ORANGE COUNTY SECTION

Technically Co-Sponsored by

 **IEEE
computer
society**



Tutorial Speaker:

Adrain David Cheok

**National University of
Singapore & Keio University**

Tutorial Topic:

**Culture, Learning, Play in Our Radically
Connected Era**



Panel Leader:

Tom Coughlin

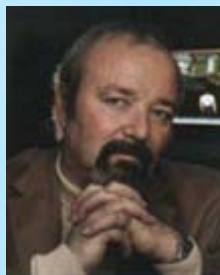
Coughlin Associates

Panel Topic:

No Storage – No Games:

The Role of Memory and Storage

Architectures in Game Design Performance



Panel Leader:

Jim Parker

University of Calgary

Panel Topic:

University Curriculum Development

Feeding the Games Industry



Advance Announcement



IEEE COMPONENTS, PACKAGING AND
MANUFACTURING TECHNOLOGY SOCIETY

The Institute of Electrical and Electronics Engineers, Inc.

Components, Packaging and Manufacturing Technology Society Orange County Chapter

Presents an All-Day Workshop on **3D Integrated Circuits: Technologies Enabling the Revolution**

Date & Time: **Friday, December 9, 2011 – 9:00am to 4:00pm**

Location: **Jazz Semiconductor Auditorium,**

[Conexant Systems, Inc. 4321 Jamboree Road, Newport Beach, CA 92660](http://www.conexant.com)

This one-day topical workshop will provide a comprehensive examination of the technologies, materials, manufacturing processes, equipment, advances in test methodology, and design tools that are enabling three-dimensional integrated circuits (3DICs). The remarkable progress in the electronics industry has been driven by technology advancements in semiconductors. Continued technology advancement driven by the relentless needs for lower cost, higher performance, lower power, and longer battery life in electronic devices has resulted in the requirement for 3D integration. Although there has been significant progress in development of 3D technologies it has not yet reached the high volume production mainstream. Join us for a unique one-day workshop that brings together experts from design, manufacturing, test, and materials to discuss the promise and technologies for 3D IC.

Featured Speakers

Dr. Phil Garrou

Microelectronic Consultants of North Carolina

Dr. Muhannad Bakir

Georgia Tech – Integrated 3D Systems Group

Ted Tessier

Chief Technical Officer, Flip Chip International

Dr. GS Kim

CEO & Founder, EPWorks, Seoul, Korea

Dr. Suresh Ramalingam

Sr. Director, Advanced Package Design & Development, Xilinx

Dr. Rose Guino, Dr. Betty Huang, Dr. Kevin Becker

Henkel Electronics Materials LLC.

Dr. Yeong Lee

Director, STATS ChipPAC

...and many others.

Vendor Exhibits and Sponsor Displays!

Gold Sponsors



Contacts for Inquiries:

Sponsorship: Dr. Lawrence Williams at l.williams@ieee.org

Vendor Exhibition: Mark Kuhlman at Mkuhlman@semtech.com

Registrations:

Early-Bird Registration Fees: IEEE Members - \$40; Non-Members of IEEE - \$50; Students - \$20
Prices will go up by \$20 for each category, after Nov 25, 2011.

Registration Instructions at http://meetings.vtools.ieee.org/meeting_view/list_meeting/8019

Workshop Organizing Committee:

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