March 2015

Tom Coughlin's Welcome to Region 6 - page 14

CHAPTER MEETINGS

SCV-CNSV - 3/3 | Data: The New Oil -- Producing Value for the Oil & Gas Industry - approaches for predicting drilling equipment function and failure, zero unplanned downtime ... (Agilent, 6 PM) [more]

SCV-CNSV - 3/3 | The World of the Expert Witness - Expert Witness, good career path, learn, understand, follow along a typical case ... (Agilent, 7 PM) [more]

SCV-SPS - 3/5 | Perceptual Audio Coding: An Overview of Basic Principles and Current Standards - perceptual audio coders that fit into pockets, technology employed in perceptual audio coding... (AMD Sunnyvale, 6:30 PM) [more]

SCV-REL - 3/5 | Reliability of Glass and Coatings- fracture mechanics, quantify the material reliability, glass coatings... (Agilent, Santa Clara, 5:30 pm) [more]

SCV-EMC - 3/10 | Using Absorbing Materials for high frequency EMI/EMC performance - EMI/EMC containment, tradeoffs from various materials ...(Agilent, Santa Clara, 5:30 pm) [more]

SCV-CPMT - 3/10 | From Development to Manufacturing: Insights into the Latest Activities of the Advanced Packaging Market - 3DIC, substrates, flip chip, embedded technologies ... (TI, 5:45 pm light dinner, 6:30 pm presentation) [more]

Career Development
Santa Clara University Grad School of Engineering Winter Open University Classes - Early-morning, evening, Saturday classes

Professional Skills Courses - Advanced Presentation Skills - Getting Things Done Across Organizational Borders -Managing Time & Priorities more

RF and Wireless Training
Besser Associates Winter Classes Digital Wireless, Cognitive Radios, Networks, more

FREE On-Line VIDEO COURSE ON CIRCUITS and SYSTEMS ISSCC Previews: Circuit and System Insight

CONFERENCE CALENDAR
March 2-4: Int'l Symposium on Quality Electronic Design (ISQED) - Santa Clara Convention Center
March 5-6: Internet of Things (IoT) Summit - Santa Clara Convention Center
March 9-11: WearablesTechCon - Hyatt Regency, Santa Clara
March 15-19: Semi-Therm - Doubletree Hotel, San Jose
March 17: Rock Stars of 3D Printing - San Jose CivicAuditorium
March 24: Startup Rock Stars - The Village, Market St, San Francisco
March 16-20: IEEE EMC & SI 2015 - Santa Clara Convention Center
March 22-26: Optical Network & Communication Conference (OFC’15) - Los Angeles Convention Center
April 14 through 16: Ethernet Technology Summit - Santa Clara Convention Center
May 10-15: CLEO: Laser Science to Photonics Applications - San Jose Convention Center

Subscribe to the twice-a-month e-GRID, to receive information on upcoming Chapter meetings, conferences, webinars, and other events in the SF Bay Area. We also provide an RSS feed, and you can subscribe to our Twitter feed, Google Calendar, and Android and iOS Apps (search: "IEEE GRID")

Visit www.e-grid.net/subscribe
SCV-PV - 3/11 | PACE is Back ... and Bigger Than Ever - PACE (Property Assessed Clean Energy), $300 million in solar and energy efficiency projects in CA alone, PACE policy and markets ... (PARC, Palo Alto, 6:30 pm) [more]

OEB-LMAG - 3/11 | Thoughts on Ocean Neutralization - pH of the ocean, pH variation and the impact of these changes, chemistry is a function of the life ... (Pyramid Alehouse, Berkeley, 6 pm dinner, 7 to 8 pm presentation) [more]

SCV-Comsoc - 3/11 | NFV series: Managing storage in the virtual world - virtualization, hidden challenges, infrastructure, highly performant cloud storage ... (TI, Santa Clara, 6:30 PM) [more][EventBrite]

SCV-MMT - 3/12 | Novel Microwave Pulser/Sampler ICs Enable Early Functional Neuroimaging Prototype - Imaging of brain function, microwave pulse-based portable functional neuroimaging, “radar-on-a-chip” ... (Agilent, Santa Clara, 6 pm) [more]

SCV-CAS - 3/16 | EFLX: an FPGA IP core for SoCs - embedded FPGA core for SoC, 100 LUTs to more than 300K LUTs, specifications, software flow, and applications ... (Qualcomm, Santa Clara, 6:30 pm) [more]

SCV-EMC/SI - 3/16-20 | IEEE Electromagnetic Compatibility (EMC) and Signal Integrity (SI) Symposium - Wireless tutorials, Special sessions, Exhibit Halls, Special Events ... (Santa Clara Convention Center) [more]

NOTE: This PDF version of the IEEE GRID – the GRID.pdf – is a monthly publication and is issued a few days before the first of the month. It is not updated after that. Please refer to the Online edition, the QuickReference Calendar, or your GRID App for the latest information.
SF-Nano - 3/17 | Harnessing Nano for Drug Delivery - nanoscale biological interactions, nano drug delivery technologies, titania nanoporous membrane technology ...

SCV-CS - 3/17 | The ARM Processor Roadmap Deciphered - cortex™-M3, ARM 32 bit processors, new territory, roadmap, What do all the letters and numbers in the part numbers mean?...

SCV-EMBS - 3/18 | A start-up’s view of the challenges and opportunities in consumer healthcare - challenges in launching consumer medical products, healthcare landscape from the perspective of a medical device start-up founder ...

SF-PES - 3/18 | A Review of the IEEE Guide for Grounding System Characterization (Std. 81) and Application in Touch and Step Potential Estimation in the Event of an Electrical Short-circuit Fault - Dangerous levels of voltage, step potential, measure electrical characteristics, earth resistivity ...

SCV-SSCS - 3/19 | MEMS is Transforming Timing. Why? - MEMS-based oscillators, five drivers for the transition, advanced circuit architectures ...

OEB-IAS/PES - 3/19 | Switching Issues and Solutions for Reactive and Capacitive VAR - Reactive power compensation, remote generation and system interconnections, shunt reactor switching ...

SF-IAS - 3/24 | Review of the IEEE Guide for Grounding System Characterization (Std. 81) and Application in Touch and Step Potential Estimation in the Event of an Electrical Short-circuit Fault - IEEE Std. 81, measure electrical characteristics ...

SCV-IT - 3/25 | How to estimate mutual information with insufficient sampling - Shannon, estimation of mutual information, algorithms ...

SCV-PSES - 3/25 | IP ratings and test methods - Round table discussion - learn about what IP ratings are, and tips to pass IEC 60529...
REGISTER NOW & SAVE

ADVANCE REGISTRATION DEADLINE:
13 April 2015, 23:59 EDT

CLEO: 2015
Laser Science to Photonic Applications

EXPOSITION: 12-14 May 2015
SHORT COURSES: 10-12 May 2015
San Jose Convention Center
SAN JOSE, CA, USA

CLEO: QELS—Fundamental Science
CLEO: Science & Innovations
CLEO: Applications & Technology

FEATURING:
CLEO: EXPO | CLEO: MARKET FOCUS

www.cleoconference.org

The one conference for late-breaking and full-spectrum research, world-class engineering and market-ready applications presented by industry leaders and the next generation of optics innovators.

Sponsored by:

Managed by OSA
The World’s Leading Optical Network and Communication Conference and Exposition

Sponsored by:

IEEE photonics society OSA

Two ways to register:
Attend the 3-day Exposition for Free with Exhibit Pass Plus Registration

550+ Exhibitors – One stop for all of your business needs
- See New Products
- Meet with Vendors
- Attend 14 educational sessions on the show floor

For complete information visit www.ofcconference.org/exhibitpass

Or Register for the Full Technical Conference featuring the latest advances in the research and development of new technologies in optical communications
- High-quality technical program covers recent progress in research and technology
- Covers the latest near-term and long-term research
- 3 Symposia: Future of Integrated Optics, Enabling the Cloud, Future of Broadband Access
- Over 100 invited presentations by experts in the field
- 520 peer-reviewed technical presentations presented in a variety of formats
  - 1 hour in-depth tutorials
  - Interactive workshops
  - Panel discussions
  - Half-day short courses (separate fee required)
  - In-depth symposia on hot topics

For complete technical conference information visit www.ofcconference.org

49 Short Courses include:
- High-Speed Semiconductor Lasers and Modulators
- Quantum Cryptography and Quantum Information
- Optical Transport Networking (OTN)
- 100 Gb/s and Beyond Transmission System Design
- Passive Optical Networks (PONs) Technologies
- Datacenter Networking
- Energy-Efficient Cloud Networks and Services
- Wireless Backhaul
- Metro Networks
- Cloud Computing and Dynamic Networks
- Safety in Fiber Optics
- Test and Measurement of High-Speed Communications Signals
- Reliability and Qualification of Fiber-Optic Components
- Parametric Preprocessing in Optical Networks
- Circuits and Equalization Methods
- Microwave Photonics
- Forward Error Correction Systems
- Space-Division Multiplexing in Optical Fibers
- Modeling and Design of Fiber-Optic Communication... (and many more)

Still Time to Register!

For more information:

www.ofcConference.org
ISSCCx: Circuit and System Insights

ISSCC Previews: Circuit and System Insights is a class offered by the IEEE International Solid-State Circuits Conference (ISSCC). The course introduces several key circuit concepts and trends in a tutorial fashion, allowing participants to understand and appreciate the broad themes covered in the ISSCC conference. Topics covered include wireless and wireline communication, analog, digital, and memory.

These Previews are in the form of eleven 10-to-18-minute modules taught by leading experts that establish the current state-of-the-art in several fields, including wireless and wireline communication, analog, digital, and memory. Each module will have a few optional questions to test the students understanding of the material covered.

Topics:
- How Far Can We Go With Electrical I/O?
- Exascale Computing — Fact or Fiction?
- Voltage Scaling Limits: How Low Can Vmin Go?
- Millimeter-wave and Terahertz Integrated Circuits in Silicon Technologies: Challenges, Solutions
- Creating Energy Efficient Digital Systems
- Innovation Trend of Semiconductor Memories
- Techniques and Trade-offs in Low Power Wireless Transceivers
- A/D Converter Figures of Merit, Performance Trends
- N-Path Filters
- Impact of Scaling on Analog Design
- How to Extract Power from a Solar Cell

VISIT WWW.ISSCCx.ORG
TO ENROLL IN THE FREE ONLINE COURSE

FREE ONLINE VIDEO COURSE ON CIRCUITS & SYSTEMS
Have you ever wanted to continue your education in engineering while you continued working? Santa Clara University’s School of Engineering offers graduate degree and non-degree programs to both full-time students and working professionals. Simplified registration for the Winter Open University. Graduate-level instruction. Up to 16 units may be transferred to a graduate-degree program.

**Early-morning classes:**
- Probability  - Database Systems  - Linear Control Systems  
- Analog ICs - Energy Transmission and Distribution  
- Active Microwave Devices  **(and more)**

**Evening classes:**
- Linear Algebra - Intro to Nano-Bioengineering - VLSI Design  
- Computer Architecture - Network Management  
- Logic Design using HDL - Robotics  **(and more)**

**Saturday classes:**
- Secure Coding in C and C++ - Project Risk Management  
- Gender and Engineering  **(and more)**

Prepare for that next project or assignment!

To remain competitive in Silicon Valley's changing environment, engineers need to update their knowledge base. The School of Engineering offers professional Certificates and Open University programs, as well as graduate degrees, for those who are driven to become leaders in their fields.

- **Spring Registration opens Feb. 27**
- **Classes begin March 30, 2015**

Located in the heart of Silicon Valley, with easy parking

Review fall quarter Open University courses:
[www.scu.edu/engineering/graduate](http://www.scu.edu/engineering/graduate)

**Presentation Skills for Engineers**
- **Date/Time:** Tues, Feb 3, 9 AM - 5 PM  
- **Location:** Synopsys, Sunnyvale  
- **Fee:** $650 for IEEE Members; $725 non-members  

"This class is top notch! The instructor was very experienced and provided me with lots of good tips I can use on all my presentations. Definitely worth while."  
TIBCO Software

**Effective Communication**
- **Date/Time:** Monday, Feb 9, 9 AM - 5 PM  
- **Location:** Qualcomm, Santa Clara  
- **Fee:** $450 for IEEE Members; $550 non-members  

"Very knowledgeable instructor; very clear goals and instructions."  
Maxim Integrated Products, Business Manager

**Transitioning from Individual Contributor to Manager**
- **Date/Time:** Tuesday, March 3, 9 AM - 5 PM  
- **Location:** Cypress Semiconductor, San Jose  
- **Fee:** $450 for IEEE Members; $550 non-members

For complete course information, schedule, and registration form, see our website:
[www.EffectiveTraining.com](http://www.EffectiveTraining.com)

**IEEE Professional Skills Courses**

SCV Chapters, Technology Management & Components, Packaging and Manufacturing Technology Societies

**Project Management: A Team Approach**
- **Date/Time:** Tue/Wed, Mar 24-25, 9:00AM – 5:00PM  
- **Location:** – Netgear, San Jose  
- **Fee:** $675 for IEEE Members; $750 non-members  

"Definitely recommend! This course will help any non-manager or project leader to create a sound project plan and to enhance or improve the plan to complete a project."  
Netgear Test Dev Engineer

SCV Chapters, Technology Management & Components, Packaging and Manufacturing Technology Societies

**SCU Spring Open University**

Email Stacey Tinker with inquiries: stinker@scu.edu

**IEEE Professional Skills Courses**

Presentation Skills for Engineers
- **Date/Time:** Tues, Feb 3, 9 AM - 5 PM
- **Location:** Synopsys, Sunnyvale
- **Fee:** $650 for IEEE Members; $725 non-members

“This class is top notch! The instructor was very experienced and provided me with lots of good tips I can use on all my presentations. Definitely worth while.”  
TIBCO Software

Effective Communication
- **Date/Time:** Monday, Feb 9, 9 AM - 5 PM
- **Location:** Qualcomm, Santa Clara
- **Fee:** $450 for IEEE Members; $550 non-members

“Very knowledgeable instructor; very clear goals and instructions.”  
Maxim Integrated Products, Business Manager

Transitioning from Individual Contributor to Manager
- **Date/Time:** Tuesday, March 3, 9 AM - 5 PM
- **Location:** Cypress Semiconductor, San Jose
- **Fee:** $450 for IEEE Members; $550 non-members

For complete course information, schedule, and registration form, see our website:
[www.EffectiveTraining.com](http://www.EffectiveTraining.com)

Specializing in Training for Engineers, Managers, Project Teams

Upgrade your skill set – prepare for future challenges
KEYNOTE SPEAKERS
George Zafiropoulo - Vice President of Solutions Marketing in the AWR Group, National Instruments
Mike Ballard - Sr. Manager, Home Appliance Solutions and Smart Energy Groups, Microchip Technology
Jay Muelhofer - Director of Software Defined Portfolio Marketing, IBM

Panel Discussion
Industry Panel on Hardware and System Security
Rob Aitken - ARM
Ettore Brickell - Intel
Lawrence Case - Freescale
Surge Leaf - Mentor Graphics
Richard Neuwoll - Micronsemi
Brandon Wang - Cadence Design Systems

ISQED Awards
ISQED Award ceremony will be held during Tuesday March 3 luncheon. Best papers will also be announced during the same session.

TUTORIALS/WORKSHOPS
The Frontiers of Robust Circuit Design in Sub-28nm Process Technologies
Jim Doddett - ARM
Secure Hardware in the Nano Era: Some New Directions
Prof. Swarup Bhunia - Case Western Reserve University
Security and Validation in SoC Designs: Cooperation, Conflicts, and Trade-offs
Dr. Sandip Ray - Intel Corporation
Computational Intelligence and Neuromorphic Computing
Dr. Robinson E. Pinto, US DOE
Reliability Challenges in Sub 20nm Technology
Dr. Tanya Nigam, GLOBALFOUNDRIES

TECHNICAL SESSIONS
ISQED Technical sessions start on Tuesday March 3, and continue until the afternoon of Wednesday, March 4. Beside the above plenary sessions, and workshops, the program consists of 19 technical sessions featuring over 100 papers on various challenging topics. A partial list of topics is shown below. Detail program would be available on the web at www.isqed.org

REGISTRATION
Please refer to ISQED web site at www.isqed.org for information regarding the tutorials, conference, and hotel registration. Direct all conference inquiries to info@isqed.org Early registration is recommended to take advantage of the discounted registration fee.

ISQED 2015 corporate sponsors are IBM, Synopsys, InnovoTek and Silicon Valley Polytechnic Institute
March, 2015
RF Design: Applied Techniques Mar 2-6
Antennas & Propagation for Wireless Communications, Mar 2-4
EMI/EMC and Signal Integrity Boot Camp Mar 9-13
April, 2015
RF Modem: RF Transceiver from Antenna to Bits and Back, April 20-24
RF Power Amplifier Techniques, April 20-23
RF Measurements: Principles and Demonstrations, April 27-May 1
Introduction to Data Converters: ADC & DAC, April 29-May 1
May, 2015
RF and High Speed PCB and EMI Design Fundamentals, May 4-5
Understanding Digital Signal Processing (DSP), May 6-8
Phase Noise and Jitter, May 13-15

Upcoming Courses for Engineering Professionals

Headquartered in Mountain View since 1985, we have delivered theory with hands-on practical training to professionals working with analog, RF, wireless, digital, and networking technologies -- to over 45,000 people in these industries.

Use this QR code to access our schedule:

www.besserassociates.com/schedule.asp

Visit our website, for more details:
www.besserassociates.com

Besser Associates instructors are top luminaries in their field. Their work experience provides insights that help you avoid pitfalls on the job.

For these and other classes, or customized/private courses at your facility, visit the website

---

2015FLEX
Flexible & Printed Electronics Conference & Exhibition
Monterey Conference Center
February 23-26, 2015

The 14th Annual Flex Conference covers technology developments embedded in today’s electronics products:
- flexible displays & touch screens
- wearables & nano-bio products
- packaging & printing electronics
- internet-of-things & sensors

Special Offer for IEEE Members! Save 20% on a one-day pass or a Short Course

learn more at:
www.2015FLEX.com
March 9-11, 2015
Hyatt Regency, Santa Clara
For OEM builders, designers, and developers of wearable computing technology

33 CLASSES:
- Adding Context to the Web: Bluetooth APIs and Device Integration
- Hacking Android Wear and Google Glass
- Android Wear vs the Apple Watch for Developers
- Apple Watch Tells the Industry What Time It Is
- Beyond the Screen: Interaction Development in a Wearable World
- Building a Thought-Controlled Drone
- Connecting Wearable Devices to the Physical Web
- Developing Wearable Apps that Win User Loyalty
- Emotionally-Intelligent Wearables Using Artificially Intelligent Vision Sensing
- Extending Apps using Android Wear
- Getting Your Wearable to Market
- How Chat is Paving the Way for Wearables Tech
- Wireless Charging in Wearable Devices
- Battery Consumption on Wearables
- Geographically-Enabled Apps for Smartwatches
- plus 18 more!

"Wearables DevCon blew away all my expectations, great first year. Words can't even describe how insightful and motivating the talks were." - Developer, Isobar

9th Annual IEEE International Systems Conference
April 13-16, 2015
Vancouver, BC

Engineering of Complex Systems: Systems-of-systems, Systems Integration, Systems Thinking

SysCon facilitates interactions among communities of interest on system-level problems and applications, focusing on the total systems effectiveness of complex integrated systems of national and global significance.

Invited speakers, breakfasts, lunches, breaks, reception, Proceedings.

Tutorials:
- "Principles and Practice of Operational Resilience", Nader Mehravari, Carnegie Mellon Univ
- "Cyber Security", Don Gelosh & Robert Swarz, Worcester Polytechnic Institute

Two Technical Tracks:

Hardware and Design: Classes on product design, electronic engineering for wearable devices and embedded development. The hardware track is a 360 degree immersion on building and designing the next generation of wearable devices.

Software and App Development: Classes on designing software and applications for the hottest wearable platforms. Take deep dives into the leading SDK’s, and learn tricks and techniques that will set your wearable software application apart.

... plus many special events: Keynotes, Exhibits, Reception, Lightning Talks, Women in Wearables Luncheon, Panels on Ethics, Augmented Reality, Fitness Devices, Healthcare, SDKs, Hackathons

Topics:
- System Architecture
- Cyber Security Issues
- Engineering Systems-of-Systems
- Complex Systems Issues
- Modeling and Simulation
- Systems Engineering Theory
- Decision-Making Systems
- Research in Systems Engineering
- Model-Based Systems Engineering
- Systems Verification and Validation
- Autonomous Systems
- Sensors Integration and Applications
- Large-Scale Systems Integration

IEEE Members: $675 Non-members: $875 (USD)

Full program available February 20th

More information: www.ieeesyscon.org
ROCK STARS OF 3D PRINTING

3D Printing Will Actually Change the World! Are You Ready?

Every company needs to prepare and implement 3D printing in order to remain relevant in their industry! No one can sit this phenomenon out!

Get ready at Rock Stars of 3D Printing, a one-day event featuring the experts, early adopters, and visionaries that are driving this revolution.


Here’s a list of other Rock Star speakers for Rock Stars of 3D Printing:
- Paul Brody, Vice President and Global Industry Leader of Electronics, IBM
- Brian David Johnson, Futurist and Director, Future Casting and Experience Research, Intel
- Cliff Waldman, Senior Economist, Manufacture Alliance for Productivity and Innovation

17 March 2015
The Fourth Street Summit Center
San Jose, CA

REGISTER NOW
Early Discount Pricing Now Available!

computer.org/3dprinting

Extra $100 off, with code "RS3D-GRID"!

Park in the garage at 4th and San Fernando Streets; Center on top floor.
Everything You Ever Needed to Know About Startups from the Experts Who Have Made It Happen!

This March 24th event delivers everything entrepreneurs need to propel a successful business, from learning about key legal considerations to bullet-proofing your platform and infrastructure to getting the inside scoop on marketing and funding your startup...

All in One Place for One Action-Packed Day!

And You’re Invited.

Participate in our Pitchathon—Present your ideas to funders from Intel, HP, Indiegogo, RocketHub, and Crowdfunder, and an audience of potential VC’s, Angel Investors and Incubators.

24 MARCH 2015
San Francisco, CA

REGISTER NOW

Special pricing for early registration.
Check it out now before the event sells out!
Secure your spot—and your future.

Speakers and judges to include RockStars from: Intel, RocketHub, HP, Crowdfunder, Indiegogo, Leonardt Ventures, DRESR, Dreamitlive.com, Digioh, Honest Dollar and McDermott Will & Emery.

computer.org/Startup

Extra $100 off, with code “SRS-GRID”
969 Market St; Take BART to Powell Street station.
Message from the new IEEE Region 6 Director

IEEE Region 6 is a wide geographical area with diverse interests. As a consequence, we have many opportunities and challenges that face our members. We also have enormous resources, both physical and human, in Region 6. Over the last few years we have developed a series of annual conferences focusing on the IEEE motto of “Advancing Technology for Humanity.” These include our Global Humanitarian Technology Conference (GHTC) and the Technologies for Sustainability Conference (SusTech).

This year, as last year, Region 6 is hosting the IEEE Women in Engineering International Leadership Conference in San Jose and we plan a new Virtual Career Expo in June. In January 2016 we will have our second IEEE Conference for Young Engineers, the Rising Stars Conference.

Over the next couple of years we are considering expanding our collection of conferences to include an Industrial Technology Conference and a Patent and Intellectual Property Conference. We are interested in what sort of events would interest you, so please let us know. Also if you are excited about getting engaged in these events we are always looking for committee members to make them successful, so let the chairs of these Conferences know if you want to get involved.

In any case, please consider coming to these events and/or letting your friends and colleagues know about them. We hope that you can come to one or more of these events and participate in the growth and development of our IEEE Region 6.

Best wishes,

Tom Coughlin
IEEE Region 6 Director 2015-16
tom@tomcoughlin.com
Subscribe to the e-GRID, for information on electrotechnology meetings, conferences and events in the SF Bay Area. Twice a month, by email – simple!

(Also available as an RSS feed, a Google Calendar.)

IEEE Xplore® Digital Library

Access over 3 million top-cited, full-text technical documents for your research team.

Request a free 30-day trial.
Plans for small, medium, larger companies.

Contact: Jennifer Olarra LaPorte
IEEE Representative, Silicon Valley
E-mail: j.olarra@ieee.org • Phone: +1 702 269 9276
Mention code SFBA

2014 International Reliability Physics Symposium
June 1-5, 2014
Hilton Waikoloa Village, HI
Pass along this page to another engineer

Subscribe to the e-GRID today – no cost

Learn about electrotechnical activities in the SF Bay Area through our GRID.pdf Magazine, our e-GRID, Blog/RSS feed, Google Calendar, more!