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IEEE San Francisco Bay Area Council   **www.e-grid.net**

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Conferences, Career Enhancement   Please **Post and Circulate** within your Company/Lab   Sept 15, 2004

Serving the San Francisco, Oakland-East Bay, and Santa Clara Valley Sections of the IEEE
For an online version of this Council announcement, with active links, visit   www.e-grid.net/announcements/grid0409b.html

Stories, in this issue:

Download the September GRID.pdf (750 kB)   Check for updated information during the month at our **GRID** website: www.e-grid.net/

Expand your knowledge base and get to know more professionals in your specialty. Highlighted this month: **talks on Nanotechnology**

Chapter Meetings for September:

SCV-PES/IAS - 9/15: "Review of Low Voltage Electrical Distribution Equipment" - low voltage panelboards and switchboards used in our industry - aimed at consultants, contractors and electrical facility engineers ... [more]

SCV-SSC - 9/16: "Next-Generation Compact Modeling" - Moore's Law scaling has led to ultra-short channel length devices with multi-GHz performance and a host of new challenges including a range of issues that face compact modeling of nano-meter scale technology ... [more]

SCV-CNSV - 9/21: "Reliability Tools and Integration for the Manufacturing Phase" - the majority of the reliability effort is spent in the design and prototype phase; what can be done to improve the reliability during the manufacturing phase? ... [more]

FREE Admission to Most Events at WESCON - Sept 21-23 [more]
You can get a free pass to the pavilions (Design & Analysis, Test & Measurement, Power Components, Supply-Chain Management, RFID), plenary talks, the autonomous-vehicle showcase, job fair, and much more -- everything except NANOWorld and the Tutorials. Spend a few days in Anaheim at WESCON this month and catch up on new developments and trends. See the two-page announcement in the **GRID.pdf** for more details and a copy of the registration form.

SCV-NANO - 9/21: "NanoGram's Nanomaterials Synthesis and Deposition Process" - use of industrial CO_2 lasers to create a high-energy chemical reaction zone where raw materials are combined at the atomic level ... [more]

OEB-IAS - 9/23: "Changes in Industrial Power Management Systems" - changes are being driven by PC operating systems: easier integration of power management into computer systems, the move away from the traditional human machine interfaces, the use of artificial intelligence to maintain power quality, and the technologies being implemented through the Web ... [more]

OEB-COM - 9/23: "Real-World Experience with a Mobile Broadband Network" - performance and deployment are evaluated under various radio conditions with stationary, pedestrian and vehicular mobility, with high spectrum efficiency achieved through adaptive modulation and coding, Hybrid ARQ, multiple user diversity and fast scheduling ... [more]

SCV-PSES - 9/28: "Central Office Power & Ground Requirements and Design Solutions" - a close look at bonding and grounding, from definitions to regional implementations; power considerations for different powering architectures; consideration of specific NEBS and ILEC requirements ... [more]

SF-IAS - 9/28: "Interrupting Capacity and Short-Time Current Ratings" - ratings of molded-case, insulated-case, and low-voltage power circuit breakers and their effect on time-current coordination ... [more]

SCV-CE - 9/28: "Advanced Video Codecs" - impact of advanced video compression on current and future digital video products; which operators and boxes will use advanced video compression and which will stay with MPEG-2 and why ... [more]

SCV-Rel - 9/29: "Analyzing Reliability Data: Difference between Repairable Vs. Non-Repairable Systems" - major distinctions between repairable and non-repairable systems; when MTBF is justified for modeling ... [more]

SCV-EMS - 9/29: before-dinner talk - "The Art of Commitment and The Science of Change" - a forum on conquering corporate change ... after-dinner talk - **Walking A Tightrope with Resilient Packet Rings - A Startup Story** - insights to guide developers in anticipating changes and planning workarounds in the midst of changing requirements; challenges faced in working with engineering teams distributed around the globe ... [more]

SCV-Education - 9/29: "Are we Ready for the "Nano World", Education-wise?" - the extent to which this emerging industry will impact our entire education system, and harnessing the energy and resources to improve and overhaul it ... [more]

SCV-LEOS - 10/5: "Nanomaterials for Photonics" - guest speaker is Dr. Ephraim Suhir [more]

SCV-CPMT - 10/13: "A Novel X-ray Microtomography System with High Resolution and Throughput For Non-Destructive Imaging of Advanced Packages" and "uCT Techniques In Combined 2D/3D High Resolution X-ray Systems" - two approaches to 3-D X-ray inspection for failure analysis, with practical examples and images ... [more]

The Council Marketplace

Do you require someone with special skills -- RF, reliability, communications, design, patent consultations? ... PCB layout, thermal measurements, SCSI, SANs? See our **Council Marketplace** page. Thank you for supporting our advertisers.

SCV-MTT - 10/14: "The Design of WCDMA Zero-IF Receivers: System and Circuit Issues" - direct-conversion receiver architecture allows integration of the radio section on-chip, for lower cost and smaller radio solution ... [more]

SF-PES - 10/16: "Congestion Management in Power Systems" - one-day Workshop: primer, FERC market design basics, the California market, and software demonstrations ... [more]

SCV-EMB - 10/20: "Cochlear Implants for Profound Hearing Loss - Signal Processing Considerations" - overview of the auditory system, then focus on signal processing in cochlear implants from early models to current multichannel implants and impact on speech perception and sound quality ... [more]

SCV-SSC - 10/21: "Power-Performance Optimization Methods for Digital Circuits" - in deep-submicron technologies, targeting the ultimate performance usually results in prohibitive power consumption ... [more]

SCV-CPMT - 10/26: "Transitioning From Individual Contributor to Manager" - one-day class at HP in Cupertino for prospective or new managers in a technical environment - critical concepts and skills ... [more]

SCV-CPMT - 10/27: "Getting Things Done Across Organizational Borders" - one-day class at HP in Cupertino: innovative practices for dealing with people who do not report to you - but whose assistance and support are critical ... [more]

SCV-CPMT - 10/28-29: "Breakthrough Project Management" - two-day class at HP in Cupertino: a common methodology, terminology and tools for projects that produce more efficient results ... [more]

SCV-CPMT - 10/28 Lunch: "The Nanotechnology Frontier: Applications of Nano to Materials and Packaging" - the engagement between the Engineer and Nanotechnology, the technology readiness level, achievements to date, and why only the Engineer can grow the Nanotechnology Frontier into an Industry ... [more]

SF Power Engineering Society Chapter One-Day Workshop:
Congestion Management in Power Systems [more]

Date & Location: Saturday, **October 16**, 2004 (8 AM to 5 PM) at San Francisco State University, Science Building, Room 101 (SCI-101)

Congestion management in power systems is a topic of great interest for all players in the energy business -- more specifically for IPPs, ISOs, RTOs, IOUs, FERC, the PUC and ultimately all of us, the ratepayers. This in-depth course, provided by industry stalwarts, is designed to provide a detailed description of various aspects of congestion management in power system operations. The day-long course consists of units, each geared toward addressing specific aspects of congestion management. The first part provides a primer, followed by market design basics as envisioned by the FERC approach. Having learned about the FERC approach to market design and congestion management, the focus shifts to the California market. As a final step, a comprehensive overview of currently used, state-of-the-art software tools and technologies is provided followed by software demonstrations.

This intensive one-day course will provide participants an in-depth understanding of the basics of congestion management in power systems. Participants will learn about congestion, how to deal with it, its financial impacts, its impact on market design as envisioned by FERC and the CAISO and learn about all the state-of-the-art software tools and technologies of the

One-Day IEEE Short Course:
"Mandated Pb-Free Solder Assemblies: Exploring the Transition's Impact on Product Reliability" [more]

- Tuesday, October 5, 2004
- At Hewlett-Packard Co, 10435 N. Tantau, Cupertino (map)
- 8:00 AM Registration; 8:30 AM - 4:30 PM Symposium
- Fee: $125 (IEEE Members), $150 (non-Members) thru Sept. 22
- For managers, engineers, program/production mgrs

The focus in this special one-day event is on the technical engineering impact of the transition from tin-lead solders to lead-free solders. What do we know, what do we not know, and where are the remaining significant risks? Will our computers, wireless devices, and other products show considerably lower reliability over the next few years? What are the risks for which we must be planning?
Lectures:

- **"Lead-Free Solder Joint Reliability"** - Jean-Paul Clech, Solder Reliability Solutions
- **"Managing Compatibilities for Lead-Free Transition and Environmental**

trade. Software demonstrations by leading vendors will provide a grand finale for driving the concepts home.

Congestion Management, A Primer - Ali Amirali, CALPINE
Market Design – The FERC Approach to Congestion Management – Stephen Lee, EPRI
Congestion Management Issues at CAISO - Lorenzo Kristov, CAISO
Overview of Software Tools dealing with Congestion Management - Tom Q. Zhang, SJSU
Software Demonstrations - Rajat Deb, LCG Consulting and Stephen Lee, EPRI

Fee includes Continental Breakfast & Lunch.

Get more information about the Workshop and speakers.
Register Today!

Compliance" - Dr. Dongkai Shangguan, Flextronics

- **"Failures at the Customer and the Influence of Pb-Free"** - Dr. Craig Hillman, Univ of Maryland

Plus panel discussions based on attendee concerns and experiences.

Lunch and refreshments provided by sponsors **Ops ALaCarte** and **Qualmark**. Register Today!

CQE EXAM PREPARATION COURSE [more]

If you need a good, in-depth course in quality engineering, this class can benefit you substantially. In addition, the in-depth course contents prepare you for the Certified Quality Engineer exam.

Course Starts October 12th

Instructors: Fred Schenkelberg, CRE, CQE; Jurek Zarzycki, CRE, CQE
Schedule: Eight consecutive Tuesdays 6 - 10 PM from October 12 thru November 30, 2004
Location: Santa Clara
Registration: This course fills up quickly and seating is limited. To register, or for full information, please email ASAP to: cqeprep@opsalacarte.com or call (408) 472-3889

IEEE Professional Development Courses:
Transitioning From Individual Contributor to Manager [more]

Date/Time: Tuesday October 26, 8:30AM-4:30PM
Instructor: Roxanna Dunn, HP (retired)
Location: HP Training Center, Cupertino
Fee: $350 for IEEE Members; $425 non-members

The transition from individual contributor to manager can be the most challenging shift in a person's career. This program is designed to introduce prospective or newly promoted managers in a technical environment to the concepts and skills critical to a successful assumption of leadership.
"The class exceeded my expectations! It helped me understand my role and how my own skill set affects the way I lead. This course was very worthwhile."
    Full course description and registration details.

Getting Things Done Across Organizational Borders [more]

Date/Time: Wednesday October 27, 8:30AM-4:30PM
Instructor: Dr. Andrew Oravets
Location: HP Training Center, Cupertino
Fee: $350 for IEEE Members; $425 non-members

This seminar introduces you to innovative practices for dealing with people who do not report to you -- but whose assistance and support are critical.
"Great techniques for getting clear agreements and commitments. Andrew provides a mechanism to better understand and interpret personalities which we deal with daily"
    Full course description and registration details.

Breakthrough Project Management [more]

Date/Time: Thurs-Friday, October 28-29, 8:30AM-4:30PM
Instructor: Richard Simonds
Location: HP Training Center, Cupertino
Fee: $575 for IEEE Members; $625 non-members

This 2-day course provides participants with a common methodology, terminology and tools that produce more efficient results and increased buy-in through improved visibility, reliability and consistency.
Key Topics: - Project Barriers & Breakthroughs - Team Development & Leadership - Define POS & Scope - Use the Trade-Off Flexibility Matrix - Make Fact-Based Decisions - Define Tasks - Create Work Breakdown Structure - Analyze Risks & Contingency Plans - Diagram Dependencies (CPM,PERT) - Manage the Project: Step-by-Step - Effective Meetings
"The methods and processes used for this class were not just tools and packages. They were a way to approach, manage and think, as well as communicate and deliver projects with less firefighting. I particularly liked the flexibility matrix, POS, risk analysis and critical path analysis."

Full course description and registration details.

Summary of Upcoming Bay Area Conferences & Classes -- find one in your technical specialty

SEPTEMBER:
Sept 21-23: **IEEE Wescon/2004,** Anaheim Convention Center   **[more]**
... Includes **NANOWorld**, **Enterprise Integration EXPO**, the Autonomous Vehicle Technology Showcase, exhibits -- owned by engineers and run by engineers to benefit engineers. Most events are **no-cost**. See the two-page flyer and registration form in the **GRID.pdf**, or visit **www.e-grid.net/conf /wescon.html**.

Sept 27-30: **GSPx: the International Embedded Signal Processing Conference and Exhibition,** Santa Clara Convention Ctr   **[more]**
... Includes **Executive Summit**, Technical sessions and workshops, exhibits. Visit **www.e-grid.net/conf /gspx.html**.

No-cost IEEE Professional Development Workshops - [more]
Tuesday, Sept 28 -- from IEEE-USA:
- **"Taking Charge of Your Destiny: The New Rules for Career Success"** (2 hours)
- **"Networking for Success"** (2 hours)
- **"Project Management"** (4 hours)
Organized by IEEE*USA and PACE, attendance at these PD Workshops is **no-cost** with the (**free**) admission pass to the GSPx Expo at the Santa Clara Convention Center. Sign up today! See www.e-grid.net/conf/gspx.html

OCTOBER:
Sept 30 - Oct 2: **Engineers for a Sustainable World National Conference ,** Stanford Univ Campus   **[more]**
... "Solutions for a Shrinking Planet: Sustainable Engineering and Enterprise for Human Development" - the interface between technologies and social/cultural concerns, environmental issues, and local and global market forces.

Oct 4-7: **SECON'04: IEEE Int'l Conf on Sensor and Ad Hoc Communications and Networks,** Santa Clara Marriott   **[more]**
addressing the new generation of inexpensive mobile devices, sensors and actuators, and a broad range of applications.

Oct 5: **"Mandated Pb-Free Solder Assemblies: Exploring the Transition's Impact on Product Reliability",** one-day Symposium, Cupertino   **[more]**
... new component materials and unknown life models all increase the risk to low product reliability

Oct 12: **CQE EXAM PREPARATION COURSE,** 8-week class, Santa Clara   **[more]**
... a good, in-depth course in quality engineering

Oct 18-21: **IRW'04: IEEE Int'l Integrated Reliability Workshop,** Stanford Sierra Camp, near Lake Tahoe   **[more]**
... ensuring semiconductor reliability through component fabrication, design, characterization, and analysis tools, including Cu interconnects & low-k dielectrics, NBTI, ultra-thin gate oxide reliability, the reliability of deep sub-micron, SOI devices, reliability modeling and simulation, and the reliability of future technologies such as high-k gate dielectrics.

Oct 25-29: **BroadNets'04: First International Conference on Broadband Networks,** San Jose Hilton and Towers   **[more]**
... next-generation networks with ultra-high bandwidth - Optical and Wireless broadband networks.

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Technologists who are not members of IEEE are **encouraged to subscribe, at no cost, to this e-GRID Newsletter**, to find opportunities to "network" with the electrical engineering community and hear about Chapter events through our twice-monthly emails. This is a controlled list (ie, no spam) -- get more information. You provide your own subscribe/unsubscribe services and can join and leave this IEEE DList when desired. To update the list, send an email message to:
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e-GRID@listserv.ieee.org.

Please invite other non-Member technologists in the Bay Area to join this list, to receive notification of Chapter meetings, tutorials, workshops, conferences, and other news within the San Francisco Bay Area Council, IEEE. See **http://www.e-grid.net/**

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