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Serving the San Francisco, Oakland-East Bay, and Santa Clara Valley Sections of the IEEE
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| **Upcoming Chapter Mtgs** - summaries | **Conf's: AdHoc Networks, IC Reliability, Broadnets** in the SF Bay Area | **Courses: Pb-Free Reliability; Quality Engng; Management** | **Open Positions for Engineers** | **Subscribe** |

Download the newly posted **October GRID.pdf** (750 kB)   Select an opportunity to learn about new developments, master a new skill, and network with fellow professionals. Check for updated information during the month at our **GRID** website: www.e-grid.net/

Chapter Meetings for October:

SCV-SSC - 9/29: "Trends in High-performance Computer Aided Design" - the revolution in electronic design tools to meet the challenges of large transistor counts, high non-linearities, increased full-wave behavior of on-chip and on-board interconnects, GHz frequencies, Gb/s transmission rates and Gsps sampling rates ... [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-PACE - 9/30: "Career Defense in the Face of Globalization" - the development of the outsourcing movement, the growth in the movement of information technology work offshore, and methods that IEEE members can use to direct their careers ... [more]

SF-PACE - 10/2: "Career Defense in the Face of Globalization" - see description just above ... [more]

SCV-LEOS - 10/5: "Photonics CMOS Compatibility using Molecularly Engineered Materials" - on-chip integration of CMOS microelectronics with photonics is inevitable and benefits both technologies [more]

SCV-CPMT&Rel - 10/5: "Mandated Pb-Free Solder Assemblies: Impact on Product Reliability" - one-day symposium: what we know, what we do not know, and the remaining significant risks ... [more]

SCV-CSS - 10/7: "Shortcuts to Step Motor Selection" - step motor behavior; higher holding torque does not always give higher dynamic torque; eliminate the trial and error in motor selection [more]

SCV-SP - 10/11: "Converting MATLAB Algorithms to FPGA or ASIC Designs" - a new methodology is needed to convert algorithmic MATLAB to RTL that can be used by industry-standard synthesis and verification tools [more]

SCV-EDS - 10/12: "Myths and Truths about High-K/Metal Gate Stack Technology" - studies on instability of high-k devices indicate that the characterization methodologies with SiO2 gate dielectric may not be accurate enough for high-k devices [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]

SCV-Comm - 10/13: "Digital Rights Management for Mobile Content" - most rights-management solutions have been hard to use, easy to circumvent, or unnecessarily restrictive; a network of trusted devices will give consumers content portability ... [more]

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-CNSV - 10/19: "What an Engineer Needs to Know about Business" - all too frequently there is a gap in understanding between engineering and business, an often uneasy mix ... [more]

SCV-Mag - 10/19: "Is the Next Geomagnetic Reversal Imminent?" - the Earth's field has been decreasing for the past 2,000 years at a rate that would reach zero in 1200 years ... [more]

SCV-PES+IAS - 10/20: "Technical Issues and Practical Applications of Transient Voltage Surge Suppression (TVSS)" - a review of TVSS applications for electrical surge suppression for prevention of production and data loss, reduction in maintenance costs ... [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]

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

SF-IAS - 10/26: "Overview of IEEE Standard 1100-1999 - Recommended Practice for Powering and Grounding Electronic Equipment (Emerald Book)" - how it is organized, with highlights from chapters; it is now in the balloting process ...

SCV-WIE - 10/27: "How to Balance Career Goals and Time for a Family" - Panel and discussion: insight from successful women engineers on how to maintain technical skills without sacrificing the opportunity to have a family ... [more]

SCV-Rel - 10/27: "Reliability Horror Stories" - Halloween's truly ghoulish reliability horror stories from a career at Apple and elsewhere, then it's audience participation time ... [more]

SCV-EMS - 10/27: "Startups that Survived the Bust: The Silicon Valley Spirit" - What was unique about survivors of the dot-com bust that allowed them to rise from the ashes, prosper, and flourish? ... [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]

SCV-CPMT - 11/10: "Packaging Challenges in Micro-Optical Electromechanical Systems (MOEMS) Components: the DMD as a Case Study" - the digital micromirror device, at video bandwidths and increasing bit depths, is a successful product in spite of low volume, hard-to-hold, and hard-to-handle problems requiring surface chemistry control on the monolayer or nanometer scale ... [more]

SCV-SSC - 11/18: "Oversampling A/D and D/A Converters"
- ... [more]

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

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 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.

Keynote Speakers:
Dr. Vinton Cerf, Senior VP of Tecnology Strategy, MCI
   "Broadband Internet - what are the implications?"
Dr. Lawrence G. Roberts, CEO, Anagran Inc.

Panels:
Multi-Service Metro Optical Transport Technologies
Optical Networks and Grid Computing

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.

Broadband Wireless
Tutorials:
Broadband Metro and Access Networks (full day)
Wireless Broadband: Services, Networks, and Management (full day)
Optical Network Survivability - Fundamentals, Challenges, and Solutions (half day)
Advancements in Metro Optical Network Architectures and Technologies (half day)
Multimedia Transmission over Spectrum Agile Radio Wireless Networks (half day)
A Practical Perspective on the Role of Optical Layer Protection (half day)

... plus technical workshop "tracks" covering BaseNets, BroadWIM, BroadWise, OBS, PathNets, GridNets, and Traffic Grooming.

Review the **Advance Program and registration information.**

Short Courses and Seminars for October:

"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: $150 (IEEE Members), $175 (non-Members)
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?
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

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)

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

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

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.

SPECIAL -- FOR THE UNEMPLOYED ENGINEER
The following opportunities are suggested for any engineer, but especially for those currently without jobs. They are without charge.

Local Job Listings on the SCV Section's Website [more]
The Santa Clara Valley PACE committee, along with webmaster Linda Fong, are finding local jobs (many unposted) that IEEE Members are encouraged to review. In addition, specific individuals have been recruited within companies who will bring your resumé to the attention of the hiring managers. Visit the SCV Section website for details.

If you KNOW of jobs that are opening up, please email the job descriptions to webmaster **Linda Fong,** for posting.

Candidate Wanted -- Assistant/Associate Professor
The UNIVERSITY OF CALIFORNIA, SANTA CRUZ, is seeking an individual for a faculty position in Information Systems and Technology Management. Due to the multidisciplinary nature of this program, they expect applicants to have diverse backgrounds, and a combination of undergraduate and graduate degrees in business/economics and engineering/computer science is suggested. Professional experience in industry or close research contacts with industry is preferred.

Applications are being accepted through December 10th. For full position description, please see Page 3 of the **October GRID.pdf.**

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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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/**

Correspondence to Paul Wesling, Council Communications Director