



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/grid0501a.html

Photonics West Conference and exhibits

SJSU Short Courses: VHDL, DSP, Sensors, Device Physics

Reliability Engng, Intelligent Control courses

Microlithography Symp. and Embedded Systems conf.

Subscribe

Download the new January GRID.pdf (500 kB) Select one of our Chapter meetings to learn about new developments and to network with fellow professionals -- choose a course or conference to master a new skill. Check for updated information during the month at our GRID website: www.e-grid.net/

Chapter Meetings for January:

SCV-CNSV - 1/10 & 1/24: Entrepreneurs SIG - this SIG is part of the Consultants' Network of Silicon Valley, and meets on second and fourth Mondays ... [more]

SCV-EDS - 1/11: Extremely Thin Fully Depleted SOI (ETSOI) Devices - a choice for 45nm (and beyond) technology nodes, with excellent short-channel control, though some problems are impeding large-scale experimental work ... [more]

SCV-PACE - 1/11: The Job Market in the Valley and its Career Implications - transitory and structural forces that change the job-search strategy ... [more]

SCV-CPMT/LEOS - 1/12: Optical Fiber Coatings: The State-of-the-Art and the Application of a New Nano-material - a newly developed nanoparticle material as an attractive substitute for existing optical fiber coatings ... [more]

SCV-Com - 1/13: Broadband Wireless Technologies and Standards - European broadband radio access networks and WiMax broadband wireless metropolitan area networks ... [more]

SCV-MTT - 1/13: Film Bulk Acoustic Resonators (FBAR) - the physics, development history, and role in future radio architectures ... [more]

SCV-Mag - 1/18: Moore's Law and Magnetic Recording Areal Density - A Processing Perspective - the growth of magnetic recording density from the perspective of thin film processing ... [more]

SCV-PSES - 1/18: Gateway to a New Thinking in Energy Management - Ultracapacitors - ultracapacitor technology, current applications and future opportunities ... [more]

SCV-CNSV - 1/18: Peering into the Network Industry's Future - the causes for the downturn, dynamics of the network industry, and future possibilities ... [more]

SCV-EMB - 1/19: The Diagnostic Potential of Airway Gas Analysis Using Cavity Ringdown Spectroscopy - description of a novel spectrometer-based health monitoring system ... [more]

SCV-PES/IAS - 1/19: Circuit Breaker Protection - covering a number of topics related to low-voltage circuit breakers ... [more]

SCV-SSC - 1/20: Design Considerations for Low-Power High-Sensitivity Integrated WCDMA Direct-Conversion RF Receivers - the move to higher integration, higher sensitivity, lower die area and lower power ... [more]

OEB-IAS - 1/20: A Technical Perspective on Hybrid Electric Vehicles -- Design, Technology, and Environmental Impact - key technologies behind electric-drive vehicle design: advanced batteries, electric traction, fuel cells, hybrid-electric powertrain, and energy management ... [more]

SCV-CE - 1/25: The Content of Storage - digital storage device requirements for key markets, with specs and a storage hierarchy ... [more]

SCV-REL - 1/26: Developments at the Int'l Symposium for Testing and Failure Analysis (ISTFA) - a panel discussion of selected papers from ISTFA ... [more]

SCV-CPMT - 1/27: Long Term Trends in Packaging Technology - The International Packaging Roadmap Update - research needs based on the new 2004 ITRS and NEMI Packaging Roadmaps: cost, thermal performance, electrical performance, size, pin count, reliability, and design ... [more]

Chapter Meetings for February:

SCV-Com - 2/9: Open Wireless Architecture (OWA) for Next Generation Wireless and Mobile Communications - integration of different evolving and emerging wireless access technologies in a common flexible and expandable platform ... [more]

SCV-Mag - 2/15 Spin Torque, and Nanorings - description of two new topics in magnetic nanostructures from inception to realization to potential applications ... [more]

SCV-SSC - 2/17: SiGe Heterojunction Bipolar Technology and Applications - HBTs can be easily integrated into a standard CMOS flow for full-fledged manufacturing ... [more]

The Council Marketplace

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

Save \$100--register by 7 January 2005!

Photonics West [more]

- 22-27 January 2005
• San Jose Convention Center
• Conferences -- Courses -- Exhibition

-- Biomedical Optics -- Optoelectronics -- Lasers and Applications -- MOEMS-MEMS

- BIOS 2005 - Biomedical Optics
• OPTO 2005 - Integrated Optoelectronic Devices
• LASE 2005 - Lasers and Applications in Science and Technology
• MOEMS-MEMS 2005 - Micro & Nanofabrication

Coming to the SF Bay Area, Photonics West is North America's largest event focused on optics, lasers, biomedical optics, optoelectronic components, and imaging technologies. This year there are 68 Short Courses, over 70 complete conference tracks, and 800 exhibitors.

Register by January 7th to get the \$100 preregistration discount! No-cost admission to the exhibits and keynotes. For Symposium and registration information, please access the Photonics West website to download the printed Advance Program and registration forms.

Short Courses and Seminars for January, February:

Reliability Engineering [more]

Date/Time: 8 Tuesday evenings, Jan 11 - March 1

Location: Santa Clara

Overview: Reliability is a key attribute of the successful and profitable product.

Understanding reliability disciplines and metrics and applying them during design, validation, test, and production yields big rewards. Key Topics: Reliability Management - Probability and Statistics - Modeling and Prediction - Maintainability and Availability - Reliability

Testing - Product Safety and Liability

Full course description and registration details.

Intelligent Control & Soft Computing -- Neural Networks, Fuzzy Logic, Genetic Algorithms [more]

- Dates: February 1-3, 2005

- Location: NASA Research Park, Moffett Field

- Instructors: Lotfi Zadeh, Ph.D., UC-Berkeley; Kevin Passino, Ph.D., Ohio State Univ;

Hamid Berenji, Ph.D., IIS Corp.

Soft Computing is a subfield of artificial intelligence that is tolerant of imprecision, uncertainty, and partial truth. Soft Computing and Computational Intelligence methods have provided important practical tools for constructing intelligent systems. At the completion of this course you will have a full understanding of the benefits of intelligent control, neural networks, fuzzy logic inference, and genetic algorithms. You will have learned significant details about their successful applications and you will have developed the necessary knowledge to design and apply these techniques to your particular applications.

Registration and more information: On the class website

- 27 February - 4 March 2005
- San Jose Convention Center

Six Conference Tracks:

- Emerging Lithographic Technologies
- Metrology, Inspection, and Process Control
- Advances in Resist Technology & Processing
- Optical Microlithography
- Data Analysis & Modeling for Process Control
- Design and Process Integration for Microelectronics Manufacturing

Sunday half-day courses: Introduction to Electron-Beam Lithography -- Basics of Optical Imaging in Microlithography: Hands-on -- Nano-Scale Patterning with Imprint Lithography -- Instruments and Methodologies for Accurate Metrology -- Pushing the Limits: Optical Enhancement, Polarization, and Immersion Lithography -- 157-nm DUV Lithography -- Optical Lithography Modeling -- Intellectual Assets for Micro/Nanolithography -- (Plus 17 others) -- Students Save 50% on Courses; Group discounts available.

Admission to the Exhibits -- no charge: The SPIE Microlithography Exhibition brings together all aspects of IC design, fabrication, processing, and manufacturing. You'll see the latest tools, instruments, components, and devices in lithographic technologies, along with expert representatives from over 130 companies.

Register by **February 15th** to get the \$100 preregistration discount. No-cost admission to the exhibits and keynotes. For Symposium and registration information, please [access the Microlith'05 website](#) to download the printed Advance Program and registration forms.

Winter Short Courses On the SJSU campus (*easy parking*)
All classes start on **January 18th!** Register now.

Digital Signal Processing -- 4-day class with labs:

DSP System Design and Implementation [\[more\]](#)

Date/Time: January 18-21, 8:30AM-4:30PM

Instructor: Professor Avtar Singh, Electrical Engineering, SJSU

Digital System Design -- 4-day class with labs:

FPGA DSP System Design [\[more\]](#)

Date/Time: January 18-21, 8:30AM-4:30PM

Instructor: Professor Chen Choo, Electrical Engineering, SJSU

Digital Design -- 4-day class with labs:

VHDL for Synthesis and Verification [\[more\]](#)

Date/Time: January 18-21, 8:30AM-4:30PM

Instructor: Professor Tri Caohuu, Electrical Engineering, SJSU

Microelectronic Device & Technology -- 4-day class:

Device Physics and VLSI Technology [\[more\]](#)

Date/Time: January 18-21, 8:30AM-4:30PM

Instructor: Professor Lili He, Electrical Engineering, SJSU

Networking Engineering -- 3-day class:

Sensor Network Technology [\[more\]](#)

Date/Time: January 18-21, 8:30AM-4:30PM

Instructor: Professor Nader F. Mir, Electrical Engineering, SJSU

For full class outlines, prerequisites, fees, and lecturer biographies, see the Course Flyer:

www.e-grid.net/docs/sjsu.pdf

Circulate within your department.

The Largest System Design Event in North America

EMBEDDED SYSTEMS CONFERENCE [\[more\]](#)

- March 6 – 10, 2005
- Moscone Convention Center
- San Francisco

The Embedded Systems Conference offers an exciting line-up of special events. All are no-cost to registered attendees and range from keynote addresses and networking opportunities, to receptions and panel discussions, all designed to enrich your event experience.

Keynote Address: Cartoonist Scott Adams: "From Cubicles to Comics"

Panel Discussions: The Future of Processors for Signal Processing Applications -- After the Storm: How the Industry has Changed Forever -- Engineering Humanity: Managing the Chaos -- Moving Beyond 3G: Where Do We Go From Here? -- The Transformation of the TV -- Silicon Support at Layer 7: XML, SOAP, and Vertical Protocols -- The Future of Wireless Networking

Ride BART or MUNI to the Powell Street station

Sunday full-day tutorials: -- User Interface Design -- Migrating from a Legacy RTOS to Embedded Linux -- Scaling System Design -- Embedded Linux Jumpstart -- Embedded C Programming -- Introduction to Real-Time Operating Systems -- Real-Time UML
Monday full-day tutorials: -- Real-Time Kernels -- System Architecting and Tradeoffs -- Managing Embedded Projects -- Real-Time Design Guidelines and Rules of Thumb -- Embedded GNU Jumpstart -- Crafting Embedded Systems in C++ -- Architectural Design of Device Drivers -- TCP/IP Networking
Plus **132 three-hour and 90-minute Technical Classes** on Tuesday through Friday.

Flexible Registration Packages:

- 1-day, 2-day, 3-day, full 5-day, or the ePass value
- No-cost Exhibits Pass (includes Keynotes and Panels)

Register by **January 11th** for early-bird rates! Get complete information at www.e-grid.net/conf/embed05.html

SUBSCRIBE yourself to this IEEE Council e-GRID DList

IEEE Members in the San Francisco Bay Area automatically receive this Announcement at their IEEE "email address of record." Members may unsubscribe from (or re-subscribe to) this mailing list at www.ieee.org/ra/e-notice/sfbac-enotice.html; be sure to include your IEEE member number. Members wishing to **also** subscribe an alternate email address (eg, Hotmail, or at work), or who live outside the Bay Area, may follow the instructions below.

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:

listserv@listserv.ieee.org

...with the following choices in the BODY (not Subject) of the message:

to SUBSCRIBE:

subscribe e-GRID FirstName LastName

to UNSUBSCRIBE:

unsubscribe e-GRID

Or, to receive a text-only notification email, use the following in the BODY (not Subject) of the message:

to SUBSCRIBE:

subscribe e-GRID-text FirstName LastName

to UNSUBSCRIBE:

unsubscribe e-GRID-text

Maintain your current DList records at our IEEE LISTSERV website: <http://listserv.ieee.org/>

You may need to "whitelist" our email addresses in your spam filter to allow our Council news to reach you; I suggest whitelisting my email address, plus that of the DLIST: 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/>

Correspondence to [Paul Wesling](#), Council Communications Director