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NOVEMBER 2003

***Official
ballot
inside***



ELECTION SPECIAL!

IEEE GRID.pdf

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IEEE-SFBAC 2003

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IEEE Grid is the monthly newsmagazine of the San Francisco Bay Area Council of the Institute of Electrical and Electronics Engineers, Inc. As a medium for both news and opinion, the editorial objectives of IEEE Grid are to inform readers in a timely and objective manner of newsworthy IEEE activities taking place in and around the Bay Area; to publish the official calendar of events; to report on IEEE activities on a national and international scope; and to serve as a forum for comment on areas of concern to the engineering community by publishing contributed articles, invited editorials and letters to the editor.

IEEE Grid is published as an Online Edition residing at www.ieee-sfbac.org and in this handy printable pdf edition, sent by email each month to more than 24,000 Bay Area members.



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From the editor . . .

Election of Officers

The first few pages of this issue contain brief profiles of the candidates for Section Excom officers. These are the members who are willing to contribute their time and talents to guide your IEEE Section for the year 2004.

Following these candidate profiles, you will find the Ballot for this election and instructions for its use. Please print this Ballot out and vote by putting an X by each candidate (or write in your own choice). Please follow the Ballot Instructions to mail the Ballot back to the Council Office via U.S. mail.

In 2002 the U.S. Post Office increased the cost for Return Postage to 97 cents per returned unit, making the cost prohibitive to subsidize. We are asking the members to add their own postage to submit the Ballot. The Council has been and are continuing investigate Internet voting for future elections, but could not establish the required infrastructure in a cost-effective manner for this year.

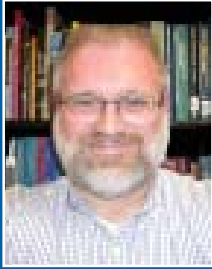
Please show your support to these volunteers by exercising your vote!

NOTE: IEEE 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 and interactive calendar for the latest information.

Section Excom Candidates for 2004

Oakland/East Bay Section

Chair:
Bill DeHope



Bill DeHope is an electrical engineer at the Lawrence Livermore National Laboratory. He holds a MSEE and Engineer degree from Stanford University, and has held positions at Hughes, General Atomics, Varian/CPI, and Physics International. His technical interests lie in particle accelerators, microwave generation, and pulsed power technology. He is a past chair of the OEB Nuclear and Plasma Sciences Society.

Vice Chair:
Joe Mauger

Joe Mauger is an electrical engineer within the Defense Sciences Engineering Division at Lawrence Livermore National Laboratory. He has spent the last 18 years at LLNL developing photonic instrumentation from infrared through hard gamma rays. Joe received his BS in physics from Duke University and his MSEE in quantum electronics from the University of Texas/Austin.

Secretary:
Alan W. Meyer



Alan W. Meyer is a research engineer at the University of California, Lawrence Livermore National Laboratory. He has held this position since 1998. In July of 2001 he received his commission in the USNR where he is currently an engineer with NAVSEA DET 620 and in the EDQ program. He earned his BSEE in 1983 from California State University, Sacramento and his MSEE from the University of Southern California in 1994. Prior to joining LLNL, Mr. Meyer was the manager of operations and a project engineer for GTT Industries. He Meyer is a senior member of the IEEE, chairman of the Santa Clara Valley Signal Processing Chapter, and a member of the signal processing technical committee for the IEEE Oceans Engineering Society.

Section Excom Candidates for 2004

Treasurer:
Victor Stepanians



Victor is a telecoms consultant with J&M Consultants, Inc., a telecommunications and computer consultancy firm located in San Francisco. He has over 25 years of experience in telecommunications systems including technical project management, analysis, design and implementation of voice and data networks for large multinational companies. He holds a BSEE and MSEE from UC Berkeley and is a long time member of the IEEE and the Communications Society. Most recently he has served as chair of the Oakland/East Bay Chapter of ComSoc.

PACE Chair:
Rosanna Lerma, PE



Rosanna Lerma is a principal partner with Salas O'Brien Engineers, Inc. with offices in San Jose and Oakland. She has a BS in electrical engineering from the University of the Pacific. Rosanna is an active member of the Industry Applications Society and the Power Engineering Society. Her focus with PACE has been pre-college education activities. She serves as a mentor for the national BeaMentor.Org program, as well as the on-line forum with the City Technology project out of New York. She is involved with the California Math Council as well as the Alameda County Library Foundation.

Section Excom Candidates for 2004

San Francisco Section

Chair:
Dan Sparks, PE



Dan Sparks is currently the vice chair of the San Francisco Section. He has previously served as its secretary and treasurer. He has also served as chair, vice chair, secretary, treasurer, and publicity chair of the San Francisco PES Chapter. Dan has twelve years of experience in the energy industry having held positions with Pacific Gas and Electric Company and PG&E Energy Services, and is currently a senior project manager with KEMA-Xenergy, Inc. Dan has BSEE and MSEE degrees from New Mexico State University. He is a registered professional engineer in California.

Vice Chair:
Ted Hudacko

Ted Hudacko holds BSEE, MSCpE, and MBA degrees and has over 14 years experience in software engineering and project management in the areas of image processing, visualization and commerce apps. He also has interests in embedded systems and bioinformatics.

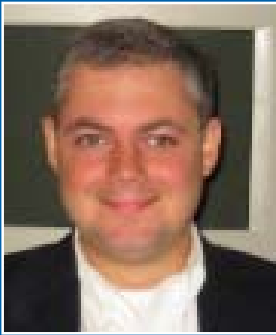
Secretary:
Robb Myer



Robb Myer is an applications engineer focusing on aerospace and defense customer measurements. Robb has worked in the Wireless Business Unit of Agilent Technologies since graduating from the University of South Florida with his BSEE in May of 2000. While at Agilent, Robb has written several application notes, developed training and published technical papers on a variety of topics including multiport and balanced filters measurements, distributed tests using the PNA series network analyzer in the .NET environment, advanced calibration topics for standard and frequency-offset network measurements and multi-emitter radar test simulations. Robb has presented papers at IEEE Autotestcon, the Wireless Broadband Forum and several Agilent symposium tours around the world.

Section Excom Candidates for 2004

Treasurer:
Seth Bromberger



Seth Bromberger is the manager for the Federal Reserve System's National Incident Response Team (NIRT) San Francisco office. The NIRT is an information security group responsible for protecting the U.S. central bank's critical information assets. Prior to joining the NIRT, Mr. Bromberger worked in both private industry and government organizations in network engineering and security, including seven years with the Federal Reserve Bank of New York. In addition to a Bachelor's degree in international relations from the College of William and Mary and a Master's degree in computer engineering from the University of Pennsylvania, Bromberger holds CISSP, IAM, and CCNA certifications. He has been a member of the IEEE for ten years, and has been a participant in both the Communications and Computer societies.

PACE Chair:
Pauline Tapia



Pauline Tapia is employed with Pacific Gas and Electric Company. She is currently a system protection engineer with the Utility Operations Department. Pauline is a member of the Power Engineering Society of San Francisco. She has held the office of PACE representative for SF PES, as well as PACE chair for the San Francisco Section.

Council Jr. Director:
Julian Ajello



Julian Ajello is a supervisor in the Utilities Safety Section of the Public Utilities Commission. He supervises the engineers who inspect utilities for compliance with the Commission's general orders governing the construction and maintenance of overhead and underground electric and communication lines. He also assigns engineers to investigate electrical accidents involving utility facilities. He holds a Bachelor's Degree in electrical engineering from California State Polytechnic University at San Luis Obispo, a Master's Degree in business administration from Golden Gate University in San Francisco, and is a registered electrical engineer in California. He is past chair of the San Francisco Chapter of the Power Engineering Society, treasurer of the San Francisco Section and a senior member of IEEE. He is also a member of the IEEE Standards Association and serves on Subcommittee 5 of the National Electrical Safety Code.

Section Excom Candidates for 2004

Santa Clara Valley Section

**Chair:
Rufino Olay**



Rufino is a marketing manager at Xilinx, Inc. in the Silicon Solutions Group. He has a BSEE from SJSU and has been an active member of IEEE for ten years. Rufino has served as chair of the SCV CPMT Society and has been a member of the SCV Executive Committee for 4 years.

**Vice Chair:
Lee Colby**



Lee Colby has been a member of IEEE since 1978, and a member of MTT, SSC and COMS Societies. His recent experience (till late 2001) was a CTO of OI'e Communication. Prior to that he worked five years as an independent consultant for numerous valley/US/world-wide firms and technical standards group activities. He also spent 36 years at Hewlett-Packard as an engineer and project manager.

**Treasurer:
Fred Jones**



Mr. Jones has 30 years of experience in the electrical industry. He is currently employed by DMJM Technology at their NASA Ames Research Center Office in Moffett Field. He has been the group lead of the Electric Power Office since 1997 and is responsible for nearly \$25M in medium- and high-voltage distribution system improvements presently under construction. He received a BA in 1971 and after seven years in electrical construction and sales, returned to school and obtained a BSEE with a specialty in power from the University of Colorado at Denver. He has been active in the IEEE for more than 20 years. He is a past chairman of the Denver Chapter of the Joint Power Engineering / Industry Applications Society and a past chairman of the Denver Section. He is currently the Silicon Valley Engineering Council representative for the Executive Committee of the Santa Clara Valley Section and treasurer for the Santa Clara Valley Chapter of the Joint Power Engineering / Industry Applications Society.

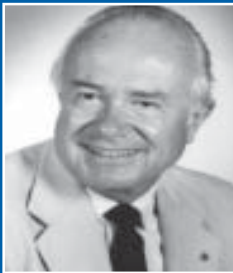
Section Excom Candidates for 2004

**Secretary:
Dan Oprica**

Dan Oprica engineering career spans 40 years. He holds a MSEE from Polytechnic Institute of Bucharest with major in radio communications and electron devices and a VLSI certificate from UC Santa Cruz.

In his early career Dan Oprica spent three years as a college professor and seven years as a lecturer paralleling industry activity. He has written two books, has published over 30 technical papers or reports and is the sole holder of a patent in semiconductors. During his long career he has worked for Synaptics, Cadence Design Systems, SGS-Thomson Microelectronics, Wangtech, Scientific Microsystems, Control Data Corporation, Memorex, and 3Phoenix Company. Dan has been a member of Magnetics Society, Circuits and Systems Society, Communications Society and Solid State Society. He has also been active in MTT Society and other IEEE societies. He encouraged starting of SCV SSC chapter, with which he has been active from its inception. He is 2003 vice chair of SCV SSC Chapter, and has also been active in the SCV Executive Committee serving as awards chair in 2002 and 2003.

**PACE Chair:
Frank Lord, PE**



Frank Lord is a licensed professional engineer in two disciplines – electrical and control systems. He has served in a variety of local and national IEEE offices including a two-year term as member-at-large to the IEEE-USA Board of Directors. He had previously chaired two major USA committees: manpower and communications. Frank received an IEEE-USA Division Professional Leadership Award “For sustained high quality contributions to the Vehicular Technology Society and as founder and first editor of IMPACT” presented at an Awards Ceremony during the IEEE-USA Leadership Workshop.

**PACE Chair:
Thomas M. Coughlin**



Thomas M. Coughlin is president of Coughlin Associates; a data storage consulting firm specializing in data storage components, systems, and software used in consumer electronic, enterprise, and entertainment applications. He has over 20 years of industrial experience in data storage engineering, product development, program management, and market and technology assessment at such companies as 3M, Polaroid, Seagate Technology, Maxtor, Micropolis, Nashua Computer Products, Ampex and SyQuest. His consulting work has included clients such as Ampex, Raychem, Network Appliance, PriceWaterhouseCoopers, several start-ups, as well as Venture Capitalist and financial clients. Tom has over 50 articles, reports, and technical presentations to his credit and 6 granted patents.

**IEEE - SAN FRANCISCO BAY AREA COUNCIL MEMBERS
SECTION EXCOM ELECTION**

**Oakland/East Bay Section
San Francisco Section
Santa Clara Valley Section**

The Election of the IEEE San Francisco Bay Area Section Excom Officers shall be by secret ballot of the IEEE-SFBAC membership. Those eligible to vote are Life Fellows, Life Senior Members, Life Members, Life Associates, Fellows, Senior Members, Members and Associate Members in good standing. Those not eligible to vote are Student Members and Affiliate Members.

Ballot Instructions:

1. Print the Ballot page (page 10)
2. Those that do not have an email address will receive a separate mailing with these instructions, the ballot and officer bio information.
3. Vote **ONLY** for the Section Officers of your Section.
4. Mark an X next to the name of the candidate of your choice. These names are listed in order of officer within each Section.
5. On the envelope, please address it to:

**IEEE SFBAC Election
540 University Avenue, #150
Palo Alto, CA 94301**

6. On the envelope, please provide in the upper left-hand corner:

Name

Return address

IEEE Member Number

Signature

Your member number will be used to validate your ballot. Your name and member number will be verified before the ballot is opened. The envelope will then be discarded before the ballot is read in order to maintain your anonymity.

7. On the envelope, please affix a first class postage stamp (37 cents) in the upper right-hand corner.
8. Please mail your ballot post-marked on or before December 15, 2003. Ballots received with the post-mark dated after December 15 will not be counted.

For the Term beginning January 1, 2004 and ending December 31, 2004:

For each Office, please place an X next to the name of the person who is your choice or write in the candidate's name of your choice on the blank line and mark an X denoting your vote for that person.

2004

Ballot - Oakland/East Bay Section

Here are the nominated candidates for the 2004 term. Please vote for each office and mail (see instructions). No fax or email ballots may be used. Ballots must be postmarked by Monday December 15 to be counted.

● **Chair: Bill DeHope**

● _____

● **Secretary: Alan Meyer**

● _____

● **Vice Chair: Joe Mauger**

● _____

● **Treasurer: Victor Stepanians**

● _____

● **PACE: Rosanna Lerma, PE**

● _____

2004

Ballot - San Francisco Section

Here are the nominated candidates for the 2004 term. Please vote for each office and mail (see instructions). No fax or email ballots may be used. Ballots must be postmarked by Monday December 15 to be counted.

● **Chair: Dan Sparks, PE**

● _____

● **Secretary: Robb Myer**

● _____

● **PACE: Pauline Tapia**

● _____

● **Council Jr. Director: Julian Ajello**

● _____

● **Vice Chair: Ted Hudacko**

● _____

● **Treasurer: Seth Bromberger**

● _____

2004

Ballot - Santa Clara Valley Section

Here are the nominated candidates for the 2004 term. Please vote for each office and mail (see instructions). No fax or email ballots may be used. Ballots must be postmarked by Monday December 15 to be counted.

● **Chair: Rufino Olay**

● _____

● **Treasurer: Fred Jones**

● _____

● **PACE: Frank Lord, PE**

● **PACE: Thomas M. Coughlin** ● _____

● **Vice Chair: Lee Colby**

● _____

● **Secretary: Dan Oprica**

● _____

FRIDAY NOVEMBER 7

SCV Power Engineering & Industry
Applications plus SF Industry Applications
Societies

Subject: **IEEE Short course: Successful
Design, Implementation & Testing of
Electrical Grounding Systems for
Facilities**

Instructor: Roy "Chip" Whitten (senior
applications engineer of Lyncole
Industries)

Time: 8:00 a.m. to 5:00 p.m.

Place: Square D Co., Suite 200, 6160
Stoneridge Mall Rd., Pleasanton

Fees: \$140.00 IEEE members, \$160.00
non-members

Contact: James Alvers, 925-730-3105,
alversj@squared.com or
Finn Schenck, 925-730-3148,
schenck@squared.com

**IEEE Short Course:
Successful Design,
Implementation & Testing
of Electrical Grounding
Systems for Facilities**

Proper grounding is of course essential for safety in electrical systems of industrial and commercial facilities. In addition, well-grounded systems are required to insure power-quality and reliability as well.

So, are you spending thousands of dollars to repair damage to your sensitive electronic equipment due to lightning strikes or power surges? Is your facility plagued by mysterious electrical problems? Are you designing new facilities?

The solutions all start with proper grounding. Please join us for a short course that addresses how to successfully design implement and test and electrical grounding system. Here's what you'll learn:

- Purpose/Definition of Grounding; Grounding Design Theory; Factors that Influence Results; Soil Characteristics; Soil Resistivity; and Effects of Moisture & Temperature.
- Characteristics of Ground Electrodes; Spheres of Influence; Rod Length vs. Resistance; and Number of Rods vs. Resistance Design Processes.
- Types of Grounding Electrodes; Water Pipes/Driven Rods & Grids; Ground Plates; Chemical Wells/UFER; and XIT™ Systems.

Continued on next page

- Design Processes; Site and Soil Survey; Design Calculations; Installation; and Final Inspection and Resistance Testing.
- Ground Resistance Testing; Fall-of-Potential Test; Clamp-On Resistance Testers; and Ground Resistance Monitor GRM 2000RS.
- Bonding; Coaxial Grounding Kits; Mechanical Connections; Exothermic Welding; and High Compression Crimps.
- Communications Applications; Exterior Grounding; Integrated/Isolated Grounds; and Raised Floor Grounding.
- Lighting Protection; Basic Theory of Protection; and NFPA Art. 780.
- National Electrical Code; Art. 250.
- Surge Protection Devices; Types of surges; and Methods of Protection.

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Short Courses offered by Effective Training Management

Tuesday November 11

Subject Short Course: **Transitioning From Individual Contributor to Manager**

Speaker: Andrew Oravets

Time: 8:30 a.m. to 4:30 p.m.

Place: TIBCO Software, 3307 Hillview Drive

Fee: \$325 IEEE Member, \$400 Non - Member

Register (408) 866-6516

Web: www.cpmt.org/scv/

Tuesday & Wednesday November 18-19

Subject: Short Course: **Breakthrough Project Management**

Speaker: Barry Flikcer

Time: 8:30 a.m. to 4:30 p.m.

Place: Hewlett Packard, 10435 N.

Tantau Avenue, Cupertino

Fee: \$550 IEEE Member, \$600 Non - Member

Register (408) 866-6516

Web: www.cpmt.org/scv/

Thursday November 20:

Subject: Short Course: **Process Metrics To Improve Results**

Speaker: Roxanna Dunn

Time: 8:30 a.m. to 4:30 p.m.

Place: Hewlett Packard, 10435 N.

Tantau Avenue, Cupertino

Fee: \$325 IEEE Member, \$400 Non - Member

Register(408) 866-6516

Web: www.cpmt.org/scv/

TUESDAY NOVEMBER 11

SCV EMS Product Safety Technical Committee

Subject: **Special Joint SCV PSTC and EMC Meeting**

Speaker: Prof. Todd Hubing (University of Missouri, Rolla.)

Time: 6:00 - 9:00 p.m.

Place: Applied Materials Bowers Café, 3090 Bowers Ave. Santa Clara

Web: www.scvemc.org/scv2003meetmap.gif

RSVP: Not required

Info: Jullia Luke, 408 616-2417 or email jluke@elliottlabs.com

Special Joint SCV PSTC and EMC Meeting

The IEEE EMC Society Board of Directors are in town this day holding a board meeting at UL. Immediately after the meeting, all members (approximately 25) will be attending the SCV EMC Chapter meeting.

This is a once-in-a-lifetime experience for a Chapter to be visited by the entire Board of Directors, for any Society. The speaker for that evening will be Mr. Todd Hubing, president of EMCS and professor at the University of Missouri, Rolla. His topic will probably be on advanced PCB research related to EMI.

Come to this special meeting and meet the EMCS Board, who helped establish our new Product Safety Engineering Society. In fact, one of our PSTC members, Mark Montrose is on the EMCS Board.

Important announcement:

Then PSTC Meeting Announcement is now being sent electronically only. To remain on PSTC distribution please send your email address to Julia Luke at jluke@elliottlabs.com.

WEDNESDAY NOVEMBER 12

IEEE SCV Communications Society

Subject: **Web Services Technologies**

Speaker: Dr. Meichun Hsu (Commerce One Inc.)

Time: Pizza and sodas at 6:30 p.m.,
presentation at 7:00

Fee: \$1 donation to partially cover food

Place: National Semiconductor Credit Union,
Bldg. 31, 955 Kifer Rd., Sunnyvale

RSVP: rsvp@comsocscv.org

Web: <http://www.comsocscv.org>

From Marketplaces to Web Services

To enable intra- and inter-enterprise application integration, enterprises have invested heavily in EAI (Enterprise Application Integration) and B2B (Business to Business) technologies. However the first generation B2B technologies, represented by the Marketplace platform and its associated tools and applications offered in mid to late 1990's, have left much to be desired.

Recent momentum in Web Services based on the SOAP, WSDL and UDDI specifications promises a standardized connectivity at a lower cost that would transform the business connectivity paradigm.

Meichun Hsu, vice president of engineering at Commerce One Inc., will address this topic at the November 12 meeting of the Santa Clara Valley Communications Society. In his talk, he will provide an anatomy and diagnosis of the B2B technologies. He will also analyze the current web service specifications and technologies from the perspectives of protocol layers, service descriptions, and business service registries. He will describe a next generation Web service-based platform stack that enables the vision of dynamic business process integration within and across enterprise boundaries.

Mei is currently vice president of engineering at Commerce One Inc. She is responsible for all product development at Commerce One, and has led the design and development efforts for the Commerce One Conductor 6.0, a web service-enabled application integration platform.

Prior to joining Commerce One in 2001, She held positions with Hewlett-Packard Company, A.T. Kearney, EDS, and Digital Equipment Corporation. She has authored numerous publications about database systems, transaction processing, and business process management systems, and, in September 2001, received the VLDB Ten-Year Paper Award in recognition for her work in Long-Running Transactions, published in 1991.

She currently serves as an associate editor for International Journal of Web Services (IJWS). She was a member of computer science faculty at Harvard University where she received the prestigious Phi Beta Kappa Teaching Award in 1990. Mei received a BA from National Taiwan University, an MS from University of Massachusetts at Amherst, and a PhD in management information systems from Massachusetts Institute of Technology.

MONDAY NOVEMBER 17

SCV Circuits and Systems Society

Subject: **Modeling in Verilog AMS**

Speaker: To be announced (Cadence Design Systems)

Time: Refreshments at 6:30 p.m.,
presentation at 7:00

Place: Cadence Design Systems, Bldg. 5,
2655 Seely Ave., San Jose

RSVP: 408 894-2646 (leave a message) or
cas_scv_rsvp@yahoo.com
for email reminder subscribe to
cas-chpt-scv@majordomo.ieee.org

Web: www.ieee.org/scv/cas

Modeling in Verilog AMS

In ASIC design, a large portion of the engineering work is making sure that the chip will perform as required, a discipline known as Functional Verification. With the increasing analog content in SOC's, making sure that the Analog and Digital interact correctly is a difficult challenge using Hardware Description Languages and simulators designed for digital circuits. While analog HDL's have been available for several years, they had initially been targeted at the analog designer. In the last couple of years the digital HDL's have been extended to support analog behavior, and simulators supporting those have seen increasing use.

Verification of Mixed signal circuits with these tools requires adding some new skills and activities in the Functional Verification area. One of these is learning how to model analog behavior to the right accuracy to aid in design verification, which will be the focus of this tutorial presentation.

The speaker for the November 17 meeting of the SCV Circuits and Systems Society will be provided by Cadence Design Systems, which supports the entire spectrum of IC design from Verification to Digital Implementation, and full custom IC design from Schematics, simulation and Layout thru verification. Cadence Verification tools include NC-Verilog, NC-VHDL, NC-Sim (supporting both languages) and AMS Designer, a mixed signal simulator that supports both Verilog-AMS and VHDL-AMS, as well as the digital subsets Verilog and VHDL, and the Verilog-A analog subset.

TUESDAY NOVEMBER 18

IEEE Consultants Network of Silicon Valley

Subject: **On-line Privacy – An Impossible Dream?**

Speaker: Barak Engel (Engel & Associates Information Security)

Time: Networking at 7:00 p.m., presentation at 7:35

Place: Sheraton Hotel, 1100 North Matilda Avenue, Sunnyvale - (408-745-6000)

RSVP: Not required (seating is limited, so arrive early)

On-line Privacy - An Impossible Dream?

Hackers. Spammers. Script Kiddies. Identity Thieves.

Using a computer has never been so much fun - nor has it ever been as dangerous. With every on-line purchase, every transaction made, and every chat room visited, we put another little piece of ourselves out there for the taking.

Horror stories abound in the general media. A student buys used Bank of Montreal computers only to discover confidential client information. Scam ring harvests information from unsuspecting Bank of America and Ebay customers by sending them fake emails and links to fake websites. Viruses send random files from a user's hard drive to other users. The list goes on.

The privacy of our online transactions will be the subject of the meeting of the IEEE Consultants' Network of Silicon Valley on Tuesday November 18. Barak Engel, president of Engel and Associates in Vallejo, will use shocking, real-life examples to outline the most common dangers lurking in the background when working online. He will also present effective self-protection strategies.

Topics will include email, web, data classification, reliability, and wireless security. For each topic, Engel will detail one or more recent actual instances of things gone wrong. Under wireless security, he will share the details of an afternoon drive that resulted in a surprise visit to a financial institution's client database. Under web privacy, the audience will be shown the results of a careless server configuration at a retailer that exposed thousands of records containing confidential client information. Discussing these and other examples, Engel will explain how to avoid becoming part of one of his future presentations!

Continued on next page

Barak Engel grew up in Israel and started his career at the age of six, when he broke open the cover of his new Atari 2600 console. In 1995 he joined Netvision, where he eventually became chief architect while it went on to become the country's largest ISP.

After moving to the U.S. in 2001, Engle worked to create the information security practice for WebEx Communications, the leader in web conferencing. In this role, he worked with Fortune-500 firms to satisfy their information security requirements from the WebEx platform.

He later founded an information security-consulting firm, and has been working as an advisor to the board of Vela Global, a bay area technology venture firm. He is an active participant in several community security awareness programs, such as Walnut Creek's Think Security First.

During the years, Mr. Engel has broken the covers off of many other devices, electrocuting himself only occasionally, and managing to never fry a motherboard. He considers this to be strong evidence for the existence of miracles.

UNIVERSITY OF CALIFORNIA, SANTA CRUZ Information Systems and Technology Management Assistant Professor

The Information Systems and Technology Management Program at the University of California, Santa Cruz invites applications for a tenure track (Assistant Professor) faculty position. Due to the multidisciplinary nature of this program, we seek outstanding applicants with diverse backgrounds, and a combination of undergraduate and graduate degrees in business/economics and engineering/computer science is suggested. UCSC is the University of California campus closest to "Silicon Valley," and we have many ties with local industry, in research, startups, and consulting.

The emphasis of the program is systems at the boundary between technology and business, including but not limited to IT Management, e-business, supply chain management, multi-agent systems, mechanism design; stochastic optimization in enterprise management, financial engineering, new product development, knowledge management, data warehousing and data mining; decision support systems, network management; Internet and intranet tools; distance learning; computer-based process reengineering and the competitive use of information systems.

Applicants should submit a CV, a statement of research plans and teaching interests, and copies or URLs of selected reprints. Applicants should ensure that at least **three** confidential letters of recommendation are sent directly. Screening will begin with applications received by **December 1, 2003** or earlier and continue during academic year 2003-04; to ensure full consideration, applications must arrive by the deadline. Early applications are encouraged. **We strongly encourage electronic submission of your materials.** Directions are provided at <http://www.soe.ucsc.edu/jobs/>. All letters will be treated as confidential documents; please direct your references to UCSC's confidentiality statement at <http://www2.ucsc.edu/ahr/policies/confstm.htm>). Alternatively, application materials may be mailed to: Information Systems and Technology Management Search Committee, Baskin School of Engineering, 1156 High Street, University of California, Santa Cruz, CA 95064. For further details about the Baskin School of Engineering at UCSC, see <http://www.soe.ucsc.edu/>. Please indicate clearly that materials are for position #587.

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WEDNESDAY NOVEMBER 19

SCV Engineering in Medicine & Biology

Subject: **Road to a new Medical Device:
A Tortuous Path**

Speaker: John B. Simpson, MD, PhD

Time: Dinner at 6:00 p.m., presentation at 7:30

Place: Dinner in the Stanford Hospital
Cafeteria, presentation in Room M114 of
the Stanford Medical School

RSVP: Not required

Road to a New Medical Device: A Toururous Path

John B. Simpson, MD, PhD is the featured speaker at the November 19 meeting of the Santa Clara Valley Engineering in Medicine & Biology Society. In his presentation he says:

“I believe that there are two fundamentally different approaches, either of which can lead to the invention of a new medical device. The first and surely the most remarkable method occurs when a person of clearly superior intellect is placed in just the right setting, and that person working alone through some almost mystical event (never to be disclosed to the common man) invents a new medical device. I have as yet not had any experience with this approach.

“The second approach occurs when a very curious, persistent, and perhaps desperate inventor of average intellect, surrounds him or herself with talented engineers and business people. Over a period of year, an enormous number of designs are tried and money is spent demonstrating all the most promising designs of the initial inventor are clever, but unmanufacturable. Then a recently hired junior engineer with no experience in medicine makes a ridiculous proposal, which fortunately provides the required breakthrough. The original inventor gets all the credit and his previously flawed concepts and designs are forgotten. I personally have extensive experience with this approach.”

Continued next page

What evidence confirms that I best fit the second model? Average intellect is a certainty, having graduated in the middle of every class from kindergarten through medical school, without having once receiving an academic honor or being named to any honor society. Although I am of average intellect, I am very curious, can recognize medical problems that are desperate for solution, and have an insatiable appetite for help. I am willing to listen to almost any design proposal, without being seduced to the exotic. In addition, I can admit when I am wrong, although not too easily or quickly.

The trait of dogged persistence makes it possible for me to raise money, find polymers, hire engineers, participate in device design, supervise clinical trials, and aid in the federal regulatory process without any formal training in these areas. Success comes from the commitment of countless people. The issue for Advanced Cardiovascular Systems (ACS) is a movable guidewire through the balloon catheter; for Devices for Vascular Intervention (DVI) is a plaque removal from the coronary arteries; for PerClose is remote suturing of femoral artery

SAN JOSE STATE UNIVERSITY ELECTRICAL ENGINEERING DEPARTMENT

Applications are invited for tenure-track faculty positions in Electrical Engineering. Analog electronics, Mixed-Signal design, VLSI and Communication areas are emphasized. However, consideration is given to all related areas.

Rank is open and salary is commensurate with qualification.

Earned doctorate in Electrical Engineering or related disciplines is required for tenure-track positions. Employment is contingent upon proof of eligibility to work in the United States. Research, consulting and summer employment opportunities are available. The university is the oldest and one of the largest in the California State University System. It is located in the heart of Silicon Valley, the southern end of the San Francisco Bay Area.

Resume, names and addresses of three references should be submitted to:

**Dr. Masoud Mostafavi, Chair
Department of Electrical Engineering
San Jose State University
San Jose, CA 95192-0084**

San Jose State University is an Equal Opportunity/Affirmative Action Title IX employer, committed to creating a Community in which a diverse population can learn and work in an atmosphere of inclusion and respect for each individual.

WEDNESDAY NOVEMBER 19

SF Power Engineering Society

Subject: **The California Energy Action Plan**

Speaker: Barbara Hale (California Public Utilities Commission)

Time: 12:00 Noon

Place: PG&E Building, 245 Market St.,
Conference Room A, San Francisco

RSVP: Not required (Info: Chuck Magee,
415 703-4683)

The California Energy Action Plan

Electric Blackouts. Gas Shortages. High Electric and Gas Prices. We've experienced all of these recently in California. How could this happen? Isn't anyone planning for the future? What is our state government doing about this? If these questions are bothering you, this presentation is for you!

On May 8, 2003, the California Public Utilities Commission (PUC) approved a first-of-its-kind Energy Action Plan for California that was proposed by a subcommittee of the PUC, the Consumer Power and Conservation Financing Authority (CPA), and the Energy Resources Conservation and Development Commission (CEC).

The plan establishes shared goals and proposes specific actions to ensure that adequate, reliable, and reasonably priced electrical power and natural gas supplies are achieved and provided through policies, strategies, and actions that are cost-effective and environmentally sound for California's consumers and taxpayers.

What's in this plan? Will it solve our problems? What role will PG&E, SCE and SDG&E play? On November 19, The San Francisco Power Engineering Society welcomes as speaker, Barbara Hale, director of the California Public Utilities Commission's, Division of Strategic Planning. Ms. Hale will explain the plan and answer questions.

THURSDAY NOVEMBER 20

OEB Communications Society

Subject: **Technology and Architecture Trends in Optical Networking**

Speaker: Dr. Nim K. Cheung (Telcordia Technologies)

Time: Pizza at 6:30 p.m., presentation at 7:00

Place: Bishop Ranch 1, 6101 Bollinger Canyon Road, San Ramon (just off I-680)

<http://www.comsoc.org/oeb/Directions.htm> for directions

RSVP: oeb@comsoc.org or call Victor Stepanians, 925-968-0979 (by 11/19) for pizza order

Web: <http://www.comsoc.org/oeb/>

Technology and Architecture Trends in Optical Networking

Despite the recent economic downturn, research in optical communications technologies continues to progress at an unprecedented rate. Significant advances have been made in demonstrating a large number of DWDM channels at 40 Gb/s or higher data rates, and high capacity (e.g. 1000 x 1000-port) optical cross-connects with low insertion losses. Great strides have also been made in combating chromatic and polarization dispersion adaptively over long distances.

Considerable R&D and standardization efforts are needed to transform the experimental results into cost-effective and deployable solutions. Dr. Nim K. Cheung, Telcordia Technologies, will address this topic at the November 20 meeting of the OEB Communications Society. He will review some of the trends in transmission and switching technologies and examine how they impact the practical implementation of the core, metro, and access optical networks.

Dr. Cheung will illustrate such trends by using examples from the following three areas: emerging protocols for adapting data networking formats more efficiently in the carriers' SONET/SDH infrastructure; tunable lasers, filters and receivers; and optical packet and burst mode switching. He will then discuss some of the network control and management issues and review recent demonstrations in internetworking and interoperability.

Dr. Nim Cheung is a Telcordia Fellow and an executive consultant for Telcordia Technologies, a subsidiary of Science Applications International Corporation (SAIC). He received his BSc degree from University of Hong Kong and PhD degree from California Institute of Technology. He was formerly vice president of applied research government program in Telcordia

Continued on next page

Technologies and has held different research and management positions at AT&T Bell Labs, Bellcore and Telcordia in optical networking and network management.

Dr. Cheung has conceived and helped create many gigabit and optical networking test beds sponsored by the U.S. Government. He is a fellow of IEEE and a recipient of the Bellcore Award of Excellence. He has held numerous leadership positions in the IEEE Communications Society, serving as vice president of technical affairs from 1996-97 and is currently chair of the Emerging Technologies Committee and a Distinguished Lecturer of the Society.

We will continue our feature at the meeting of providing some networking time for those that want to stand and make a brief announcement. If you're looking for a new position, have a position to fill, want to let us know that your new start-up is ready for business or have a similar announcement, bring your resumes, job descriptions or company brochures and be prepared to make a match. Please keep your statements brief, so we'll have time for everyone. There will be time after the meeting for one-on-one discussions.

UNIVERSITY OF CALIFORNIA, SANTA CRUZ

Assistant Professor Computer Engineering

The Computer Engineering Department of the Baskin School of Engineering at the University of California, Santa Cruz (UCSC) invites outstanding candidates to apply for a tenure-track Assistant Professor position starting Fall 2003, with the following areas of research interests: (1) embedded systems, (2) computer networks, (3) computer system design, and (4) robotics. The campus is especially interested in candidates who can contribute to the diversity and excellence of the academic community through their research, teaching and service.

UCSC is the UC campus nearest to Silicon Valley and has close research ties with the computer industry. Applicants should submit a CV, a statement of research plans, a statement of teaching interests, and ensure that at least three confidential letters of recommendation are sent directly, by the deadline of December 12, 2003. We strongly encourage electronic submission of your materials. Directions are provided at <http://www.soe.ucsc.edu/jobs/>.

All letters will be treated as confidential documents; please direct your references to UCSC's confidentiality statement at <http://www2.ucsc.edu/ahr/policies/confstm.htm>). Alternatively, application materials may be mailed to:

**Computer Engineering Search,
Baskin School of Engineering,
University of California, Santa Cruz, CA 95064.**

Please check our web site regularly to see if a potential tenured position is approved for hiring.

UCSC is an EEO/AA/IRCA Employer.

THURSDAY NOVEMBER 20

OEB Industry Applications and Power Engineering Societies

Subject: **Electricity Market Integration of Distributed Energy Resources**

Speaker: Ms. Angela Chuang, PhD (ALSTOM EAI)

Time: Social at 5:00 pm, presentation at 5:30, dinner at 6:30

Menu: Charcoaled chicken, fried rice, chow mein, salad, soft drinks and coffee) NO charge.

Place: East Bay Municipal Utility District (EBMUD) Headquarters, 375 Eleventh Street, Second Floor Conference Room, Oakland (near 12th Street BART station)

RSVP: Required for food service arrangements. Limited to 60 attendees due to security reasons, call Tonhu Le, 510 267- 0441 or e-mail: NHULE@DTNEngrs.com

Electricity Market Integration of Distributed Energy Resources

OEB PES/IAS

Electricity Market Integration of Distributed Energy Resources

OEB PES and IAS are very pleased to feature this month's speaker, Ms. Angela Chuang, PhD, product manager of ALSTOM EAI. She will discuss electricity market integration of distributed energy resources. This hot topic is closely related to the concept of distributed generation and the deregulation of the power industry both of which presently create so much interest as well as controversy.

Regional wholesale electricity markets have spread across the country as a result of electric power industry restructuring. Regional market rules and tariffs at the wholesale and retail level drive business opportunities for distributed energy, which in turn impact product requirements, including communication and control requirements for enabling coordinated utilization of distributed energy resources (DER). A vision for how to integrate distributed resources in regional electricity markets and specific examples of values to be captured will be provided.

Beyond the benefit of an individual end-use customer, DER can also be operated for the benefit of the electric power system. Distributed energy resources such as curtailable load, distributed generation, and pump storage can provide valuable services when made available for dispatch by regional market and grid operators. For example, through coordinated utilization DER can be applied to relieve transmission congestion, provide ancillary services, and defer substation and grid expansion. Various regional market operators and electric utilities are already utilizing DER as an integral part of power system operations, to support system reliability and to mitigate electricity costs.

The presentation will highlight system-level benefits and other drivers encouraging integration of DER in electric power system operations. A multi-market perspective will be provided spanning across the various regional electricity markets. Market opportunities for end-use customers, necessary equipment, and operational procedures that generally impact participants will also be discussed.

Continued on next page

The speaker, Angela Chuang, PhD, has more than eight years of experience in formulating and developing solutions for new applications in the electric power industry. At ALSTOM, she is responsible for product strategy and product management of software that enables intelligent utilization of Distributed Energy Resources (DER) in a restructured electric power industry.

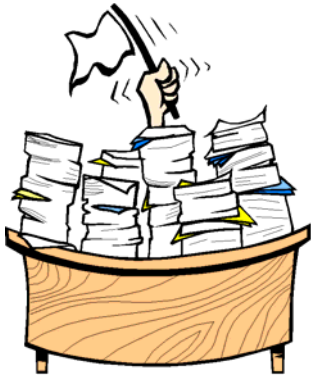
She has also consulted for a number of companies in the energy industry on business strategy in a deregulated environment, and has participated by invitation of the U.S. Department of Energy in several technology roadmap workshops to define the national research, development, and

demonstration priorities for distributed energy system technologies over the next 30 years.

Angela graduated from UC Berkeley with a BS, MS, and PhD in electrical engineering and computer science in 1992, 1995, and 1999, respectively. She holds a Management of Technology certificate from Berkeley's Haas School of Business, and has been a member of the IEEE Power Engineering Society since 1995. She has also served on the board of the Peak Load Management Alliance, an industrial trade organization that promotes and educates suppliers and end-users on the value of distributed resource management in response to market price signals and as a risk management tool.



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WEDNESDAY DECEMBER 3

SCV Section

Subject: **Annual Banquet**

Speaker: Brian Fuller (EETimes)

Time: 6:30 p.m.

Place: Faz's Restaurant, Sheraton Hotel, Hwy 237 and North Mathilda, Sunnvale -

408 752-8000

Cost: \$40 per person

RSVP: (by 11/29) ma.turner@ieee.org or 650 327-6622 or Rufino Olay, 408 879-7741 or r.olay@ieee.org

**Signal-to-Noise:
Getting the most from
information sources in
an age of information
overload.**

The Santa Clara Valley Section annual banquet will be held on December 3 in lieu of the regular business meeting. Guest speaker is Brian Fuller, editor-in-chief of EETimes who will be speaking on Signal-to-Noise: Getting the most from information sources in an age of information overload. We'll also be honoring new IEEE Fellows, special awards recipients and student science fair winners.

This year's dinner will be a buffet followed by the program. The executive committee encourages chapter officers and chapter members as well as their spouses to attend this year's affair. The SCV section is subsidizing this activity and the cost to attendees is \$40.

Brian fuller says the amount of information available to the average computer user in a day exceeds that available to people in entire lifetimes not too long ago. The kept promise of Moore's Law has left us with an unintended consequence of having to sift through mounds of data and avoid info-distraction as we navigate projects in a timely manner. Clearly the firehose is drowning us. What's worse, a hierarchy of information has emerged in which the least-valuable is the most plentiful; the most valuable the hardest to find. How do high-tech publishers grapple with this overload and adapt to an ever-changing landscape of media choices while trying to maintain and expand their traditional audiences? (Hint: it takes a lotta antacid pills).

Brian Fuller has been a professional journalist for 20 years, 10 years more if you count from the time he printed his own newspaper in junior high school, complete with horse-racing results. He began officially in 1983 as a general assignment reporter in Indiana for United Press International.

WEDNESDAY DECEMBER 10

SCV Engineering Management Society

Forum Subject: **Program Planning: Avoid the Titanic that Could be Hidden in Your Project**

Speaker: Carla Bolden (Management Consultant)

After Dinner Subject: **Managing across Company and Country Borders - The Sea Launch Approach**

Speaker: John Steinmeyer (Sea Launch Company)

Time: Forum at 6:00 p.m., dinner at 7:00, after dinner presentation at 7:45

Place: Wyndham Garden Hotel, 1300 Chesapeake Terrace, Sunnyvale - near Lawrence Expressway and Hwy 237

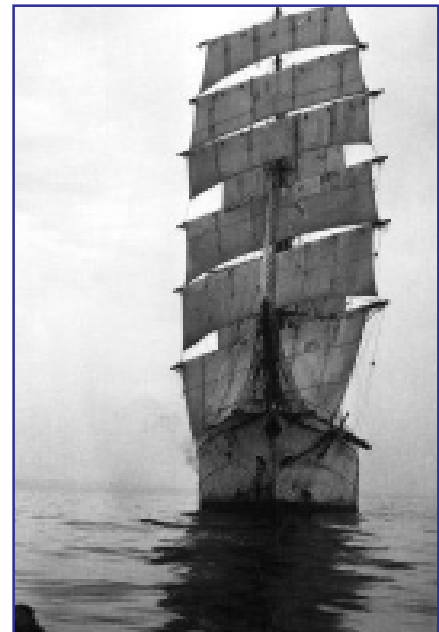
RSVP: <http://www.ieee-scv-ems.org/>

Cost: (with reservations Dec 5 or before) \$20 (IEEE member), \$25 (non member), \$5 surcharge thereafter. (Cash or check at the door). Student IEEE members - \$5

Info: Rich Hendrickson at, 408 203-3462

**Program Planning
and Management on
the High
Seas**

The Santa Clara Valley Engineering Management Society presents its between-the-holidays meeting December 10 with a forum on planning your program so it doesn't sink. Following networking and a sit-down dinner, the after-dinner topic will be on managing across international partnerships: Sea Launch owned by Boeing of USA (40%); RSC-Energia of Russia (25%); Kvaerner of Norway (20%); and Yuzhnoye Yuzhmash of Ukraine (15%).



See next month's GRID for details, or go to the EMS Society SCV website for details when available:

<http://www.ieee-scv-ems.org>

IEEE and AEE have been recently joining efforts for both technical talks and student chapter activities. In an effort to integrate and overlap on similar topics and interest the IEEE Oakland East Bay Section has joined forces with the Silicon Valley AEE section. The following press release highlights some of the work AEE is recognizing in the Bay Area. IEEE congratulates Lindsay Joye in her efforts and accomplishments.

ASSOCIATION OF ENERGY ENGINEERS AWARD BAY AREA PROFESSIONAL FOR LEADERSHIP IN ENERGY EFFICIENCY

Ms. Lindsay Joye of City of Palo Alto Recognized As Environmental Professional of the Year for Seven Western States

The Association of Energy Engineers (AEE), an organization of professionals in the energy and environmental industries, has honored Ms. Lindsay Joye, PE, currently a marketing engineer for the City of Palo Alto Utilities, as the “2002 Environmental Professional of the Year” for Region V (Seven Western States), for her creation and management of the City of Palo Alto’s “PV Partners” renewable energy program.

“Efficiency and renewable energy play a significant role in our efforts to support sustainable practices in industry, businesses and homes. This was an important year in the energy industry and we had a difficult time selecting from among many wonderful candidates,” says Virginia Waik, AEE vice president for Region V and the local AEE Silicon Valley Chapter Advisor. “We’re hoping that recognition of these outstanding individuals and their work will inspire others to explore options for their businesses & communities.”

Ms. Joye received this honor for her key management support to ensure that the Palo Alto program set a stellar example of proactive renewable energy system adoption in schools, businesses, and homes.

“Don’t ever let me hear one person can’t make a difference,” said Tom Auzenne, manager of marketing services for the City of Palo Alto Utilities. “Under Ms. Joye’s direction, the City of Palo Alto Utilities successfully implemented one of the most successful solar programs in California.”

Highlights of the PV Partners development and implementation include:

• Through Ms. Joye’s program management, the PV Program has helped CPAU customers install 63 photovoltaic systems totaling 214 kilowatts. The percentage of peak electric demand provided by customer owned PV systems in Palo Alto is also one of the highest in the nation.

• Palo Alto was awarded the 2002 Solar Electric Power Association (SEPA) Award for Business Program Achievement in the “Development of a Solar Community”.

• Palo Alto was one of the first municipal utilities in the nation to offer incentives for photovoltaic systems.

• Palo Alto was the first in California to offer tailored workshops for training building inspectors on photovoltaic systems.

• Two schools PV system installations have been completed. In addition Ms. Joye provided solar education training to interested public schools teachers.

• Annual Solar Homes Tours events in Palo Alto have been conducted for years. Last October’s event included 20 homes seen by 400 attendees from 37 cities.

With a currently installed base of 63 PV systems totaling 214 kilowatts, the City of Palo Alto has one of the highest rates of community adoption of PV in the United States. The percentage of peak electric demand provided by customer owned PV systems in Palo Alto is also one of the highest in the nation.

The BioScience Forum and BioE2E jointly present a Biotech Career Fair on November 18, 2003. Due to overwhelming popular demand, we are holding our “First Annual Career Fair.” This is a FREE event and RSVP is required to attend. Go online to submit your name and resume.

www.bioe2e.org/2003/careerfair



Jim V. Leonard, PE
2003 IEEE-USA President

Engineer Mentors Sought for Future City Competition

U.S. EE Unemployment Moves Upward As Thousands of Non-U.S. Workers Continue to Flood the Job Market

Although the unemployment rate for all workers fell slightly in the third quarter, the rate moved in the opposite direction for U.S. electrical and electronics engineers (EEs), according to data compiled by the Department of Labor, Bureau of Labor Statistics (BLS).

The jobless rate for EEs rose from 6.4 percent in the second quarter to 6.7 percent in the third, while the rate for all workers fell from 5.6 percent to 5.5 percent. At the same time, the number of employed EEs fell by 37,000 (from 386,000 to 349,000).

The 6.7 percent figure is more than six times as high as it was in 1997 (1.0), and more than five times as great as 2000 (1.2). The EE unemployment rate reached an all-time high of 7.0 in the first quarter of 2003.

Despite continuing high levels of EE unemployment, the government has issued more than 900,000 H-1B visas in new, renewal and exempt categories since FY 2000, many of them in high-tech fields.

“We’re pleased that Congress allowed the annual H-1B cap to drop to 65,000 earlier this month, but U.S. EEs are still competing for scarce jobs in an artificially saturated labor market,” IEEE-USA President-Elect John Steadman said. “In addition, demand is shrinking as high-tech jobs are outsourced overseas. Despite the bleak employment outlook, some H-1B proponents are still calling on Congress to increase the number of visa exemptions.”

Among other high-tech professionals, the unemployment rate jumped for computer hardware engineers (5.7 percent to 6.9), computer software engineers (4.1 to 4.6), and network and computer systems administrators (5.6 to 7.6). The rate fell for computer scientists and systems analysts (5.6 to 4.8), computer programmers (7.5 to 7.1), and network systems and data communications analysts (5.5 to 5.0).

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