GRID.pdf

June 2013

CHAPTER MEETINGS

SF-IAS - 5/28 | **Modern Instantaneous Selectivity, The Code, Arc Flash and System Reliability** - protection, techniques ... [more]

SCV-PSES - 5/28 | **Tour of SIEMIC Test Labs** - renovation: design reviews, compliance testing, certification ... [more]

SCV-CE - 5/28 | **3D Printing - Prototype to Pilot Line in Your Office** - capabilities, tradeoffs, replacement parts, materials ... [more]

OEB-Mag - 5/29 | **Magneto-Optic Analysis of Magnetic Micro-structures** - nano-scale, hysteresis, energy, noise, applications ... [more]

SCV-GOLD+PACE+WiE - 6/3 | **Unraveling Your Professional Network: The Secrets to a Successful Career** - expert tips, demo[more]

SCV-Phot - 6/4 | An **Overview of the Many Sciences Used to Perform SMRT Sequencing** - genetic analyzer, sequencing, real time ... [more]

SCV-CSS - 6/5 | **Actuators and Control in Hard disk Drives: 1980 to 2013** - position, velocity, torque factor, inertia, configuration ... [more]

SCV-TMC - 6/6 | **Improving Drug Development Success Rates With Evidence-Based Descision Analysis** - savings, better insights ... [more]

SCV-CAS - 6/10 | **Chip Design and System Building Techniques: Enabling New Wireless Sensors** - resonators, healthcare ... [more]

SCV-CNSV - 6/11 | **Innovating Products Faster: 45 Ideas** - trust, cultural changes, check-ins, lean, agile ... [more]

SCV-CS - 6/11 | **Benchmarking with Futuremark** - industry standards, 3DMark, setup, stability tests ... [more]

SCV-Phot - 6/11 | **Quantum Cascade Lasers: Pushing the Frontier between Optics and Electronics** - limitations, infrared, uses ... [more]

SCV-CPMT - 6/12 | **NanoCopper Materials Platform for Electronics Packaging and Printed Electronics** - solder replacement ... [more]

SCV-ComSoc - 6/12 | **ATT's Innovation Platform, Palo Alto Foundry and Wireless Network Infrastructure** - mission, purpose ... [more]

SCV-RAS - 6/13 | **Imaging the Antikythera Mechanism** - artifacts, ancient Greek technology, mathematical gears ... [more]

SCV-Rel - 6/13 | **Mechanical Design for Reliability: Beating the Tough Problems!** - dropping, abuse, simulation, analysis ... [more]

SCV-GOLD - 6/18 | **Lead Yourself to a Successful Future: Leadership Advice for the Aspiring Engineer** - tips, tricks ... [more]

SCV-Nano - 6/18 | **Energy Harvesting from Waste Heat and Sunlight with Mesoscopic Materials** - nanocomposites, thermoelectrics ... [more]

SCV-EMB - 6/19 | **The Magellan Robotic Catheter System** - flexible robotics, intravascular, future ... [more]

SF-PES - 6/19 | **Advanced Inverter Trends & Distributed Energy Resource Standards** - stability, efficiency, interoperability ... [more]

OEB-IAS - 6/20 | **Tour of Anchor Brewing Company, San Francisco** - history, traditions, in-depth, flight ... [more]

SCV-GOLD - 7/14 | **Hike at Villa Montalvo Arts Center** - trails, views, networking after ... [more]

SCV-PACE - 7/15 | **Short Course: Low-Power Design Essentials** - established techniques, trends, applications, energy-reduction ... [more]

CONFERENCE CALENDAR

June 2-4: **IEEE RF Integrated Circuits Symposium (RFIC)** - Seattle Convention Center [more]

June 9-14: **Conference on Lasers and Electro-Optics (CLEO 2013)** - San Jose Convention Center [more]

July 15-17: **Int'l Energy Conversion Engng Conference (IECEC)** - San Jose Convention Center [more]

July 16-18: **Packaging and Integration of Electronic and Photonic MicroSystems** - Hyatt SF Airport [more]

- July 24-26: **IEEE Int'l Conference on Digital Eco-Systems & Technologies** - Menlo Park/Stanford [more]

- August 12-14: **Complex Aerospace Systems Exchange (CASE)** - Hyatt Regency, Los Angeles [more]

Santa Clara University Grad School of Engineering
Summer Open University [more]
- Early-morning, evening, Saturday classes

Career Development
Professional Skills Courses [more]
- Transitioning from Individual Contributor to Manager
- Managing Time - Collaborative Negotiating - Influential Communication - Project Management: A Team Approach
- Clear Writing … *and more*

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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 news for technologists, managers and professors, the editorial objectives of IEEE **GRID** are to inform readers of newsworthy IEEE activities sponsored by local IEEE units (Chapters, Affinity Groups) taking place in and around the Bay Area; to publicize locally sponsored conferences and seminars; to publish paid advertising for conferences, workshops, symposia and classes coming to the Bay Area; and advertise services provided by local firms and entrepreneurs.

IEEE GRID is published as the **GRID** Online Edition residing at www.e-GRID.net, in a handy printable **GRID.pdf** edition at the end of each month, and also as the **e-GRID** sent by email twice each month to more than 30,000 Bay Area members and other professionals.

Common Excuses That Prevent an Employee From Being Great

John Hall outlined 7 reasons leaders don't acheive success, or get the assignments they want, in **FORBES** *Magazine. I outlined two of his reasons last month. Here are two more:*

"It's not possible"

Very rarely do I come across something that isn't possible. It just takes some critical or outside-the-box thinking. Great employees don't give this excuse because they don't give up when they hit a barrier. Sometimes the difference between "impossible" and "possible" is just an email, phone call, or Google search away.

"It's a common mistake"

Some employees think mistakes like typos, grammatical and logistical errors, and email errors are okay because they're so common. The best employees aren't "common," so don't make "common" mistakes. It pays to double-check your work and make sure it rarely needs correcting. It will put you a step above the rest in a world full of people who are bad at spelling, forming complete sentences, and responding to emails coherently.

I'll share some additional ones in a future issue.

Best regards, Paul

NOTE: This PDF version of the IEEE GRID – the **GRID.pdf** – is a monthly publication and is issued a few days before the first of the month. It is not updated after that. Please refer to the Online edition and Interactive Calendar for the latest information.

Tracks at DEST deal with large-scale virtualized infrastructures, hosted ecosystem services and processes, smart planet and complex cyber physical systems, energy systems, and healthcare systems. The tracks identify domain requirements, research challenges and systems solutions -- scalability and availability, heterogeneity, elasticity, utility, mobility, integrity and evolvability.

Tracks: Foundations of Digital Ecosystems and Complex Environment Engineering ● Cyber-Security Ecosystems ● Convergence of Technologies for Sustainable Infrastructures ● Digital Humanities ● Cyber-Physical Energy Systems ● Hybrid Biological-Digital Systems ● Healthcare and Sustainable Living ● Platforms for Social and Community Involvement/Engagement ● Fuzzy Semantic computing in digital ecosystems ● Collaborative Platforms for Sustainable Logistics and Transportation ● Big Data Ecosystems

Innovation Adoption Forum: Achim P. Karduck, Curtin University; Sinan Tumer, SAP Labs

The transfer/adoption of innovation into practice, consisting of distinguished presentations by participants from academia, industry and the public sector.

One-Day Workshop: "**Building a Digital Ecosystem for Societal Empowerment**"

Keynotes: ● The Meaning of Big Data ● Social Media for Sustained Digital Ecosystems ● SAP Co-Innovation, Envision the Future, Crossroots Innovation ● Human Space Computing and Cyber Physical System ● Massive Data Analytics for Smart Planet

For further information:

dest2013.digital-ecology.org

Complex Aerospace Systems Exchange

August 12-14, 2013   Los Angeles

This dynamic, engaging event tackles some of the most important system development issues facing aerospace chief engineers, program managers, and systems engineers today, such as minimizing cost overruns and delays and mitigating late test failures. Participants will have the opportunity to hear insights, best practices, and lessons learned from recognized practitioners in each of these areas.

Three Tracks:

Complex Systems Development: Large system development activities from the establishment of requirements through the conceptual, preliminary, and detail design phases.

Integration, Test and Verification of Complex Systems: Strategies for design, mature models, databases, simulations, and test equipment to support program needs that extend from bench testing of prototypes through flight testing on multiple ranges.

Program Management to Achieve Robust and Resilient Systems: Managing the technical and direct-support aspects in the development and operation of complex aerospace systems.

Workshops (Aug 10-11) ● **Protecting Intellectual Property** ● **Systems Engineering Verification and Validation** ● **Guidance of Unmanned Aerial Vehicles**

Sessions: ● Forensic Investigations: Problems Rooted in Design; Problems Rooted in Program Issues ● Elegant Design and Complex Systems Development ● Planning and Executing an Integration Test Strategy for a Complex Aerospace System ● Execution of Successful Programs ● Integration of Modeling and Simulation, Ground Test and Flight Test ● New Paradigms for Complex Systems Development ● New Acquisition and Regulatory Approaches ● Verification and Validation Issues ● Complex Systems Development ● Lessons Learned in Integration, Test, and Verification ● Workforce Issues

CASE is co-located with the **AIAA Aviation 2013 Conference & Exposition.** These events will complement each other, sharing some plenary sessions and networking activities such as luncheons and receptions. By registering for CASE, you can also attend AIAA Aviation sessions at no extra cost.

Save $100, through July 15th!

Visit **www.aiaa.org/case**

IEEE Professional Skills Courses

Transitioning from Individual Contributor to Manager

- Date/Time: Thursday, June 6, 9 AM – 5 PM
- Location: – Alera, San Jose

"…walked away with some practical tips even after years of management experience. New and old managers would definitely benefit from this class."
Synaptics Inc., Instructional Designer

Project Management: A Team Approach for Accountability & Results

- Date/Time: Thurs-Fri, June 6-7, 9:00 AM – 5:00 PM
- Location: – Cadence, San Jose

Definitely recommend! This course will help any non-manager or project leader to create a sound project plan and to enhance or improve the plan to complete a project.
NETGEAR, Sr. Test Dev. Engr.

Upgrade your skill set – prepare for future challenges

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

Coming in the Fall:

Transitioning from Individual Contributor to Manager

5 Habits of Intentional Leadership

Delegation and Coaching: The Winning Combination

Interviewing and Hiring the Best Talent

For complete course information, schedule, and registration form, see our website:

www.EffectiveTraining.com*

InterPACK 2013
July 16-18, 2013
Hyatt Regency
SF Airport

Conference and Exhibition on
Packaging and Integration of Electronic and Photonic Microsystems

The **InterPACK '13 Conference** promotes international cooperation, understanding, and development of efforts and disciplines in Microelectronics, Photonics, Microwave, MEMS and NEMS Systems Packaging and Integration. Emerging knowledge, research results, new developments, and novel thermal, mechanical, electrical, and materials packaging product concepts in Electronic Packaging Engineering will be presented in unique forums.

Focus of InterPACK '13:
• Advanced Packaging • Emerging Technologies • Modeling and Simulation • Multi-Physics Based Reliability • MEMS and NEMS • Materials and Processes • Thermal Management • Data Centers and Energy Efficient Electronic Systems ... plus Tutorials and Panels

Tutorials:
• 3D Packaging • Direct Liquid Cooling/Embedded 3D Cooling of 3D Chip Stacks • Nanoscale Heat Conduction and Thermal Characterization • Fundamental Concepts in Reliability & Mechanics of Electronic Packaging • Energy Efficient Server and Data Center Infrastructure for Cloud Applications

Keynotes:
Dr. Babak Sabi, Intel "**Moore's Law and the Impact on Package Scaling**"   Osamu Suzuki, Hitachi Research Labs "**Energy and Thermal Management in the Railway System**"   Tien Wu, ASE Group "**Semiconductors: Legacy of Our Times**"

All registrations include **complimentary admission** to the InterPACK tutorials.

Register early (by **June 1st**) to save $100.

For full program and registration information:

www.interpackconference.org

Register Now

CLEO: 2013
Laser Science to Photonic Applications

Laser image credit: Melissa Meister and Amy Sullivan

Technical Conference:
9–14 June 2013

Short Courses:
9–11 June 2013

Exhibit:
11–13 June 2013

San Jose Convention Center
San Jose, California, USA

CLEO: QELS – Fundamental Science

CLEO: Science & Innovations

CLEO: Applications & Technology

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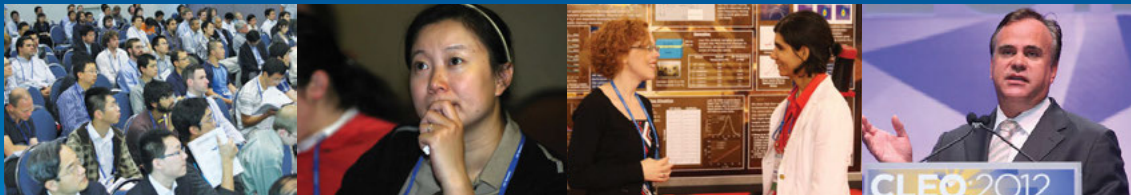
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Sponsors: APS physics   IEEE photonics SOCIETY   OSA The Optical Society

3D Printing - Prototype to Pilot Line in Your Office

Speaker: Erick P. Wolf, President, Airwolf 3D
Time: Networking and food at 6:30 PM;
           Presentation at 7:00 PM
Cost: none
Place: Microsoft Silicon Valley, 1085 La Avenida
           St., Mountain View
RSVP: from website
Web: www.ieee.org/scvce

Erick Wolf is co-founder of Airwolf 3D and leads the sales and research and development departments. He is an expert in the field of desktop 3D printers and rapid prototyping, having designed the AW3D v.4, 5, 5.5 and XL professional-grade 3D printers. Mr. Wolf earned his Bachelor of Science in Mechanical Engineering from Rensselaer Polytechnic Institute in 1997. He has 20+ of hands-on automotive mechanical experience to compliment his mechanical engineering degree.   Mr. Wolf is also an accomplished patent attorney and well versed in the field of intellectual property law as it relates to open source 3D printing technologies.

The availability of the desktop and office located 3D printer has revolutionized the prototyping and pilot line worlds. We will present the capabilities and tradeoff of the the different materials that can be used in 3D printers, and uses in prototypes, mechanical samples, 3D miniatures, and one-up designs through small pilot run products. For the prototypes, different printers offer different size a capabilities in the printed output that are possible. These include the creation of mechanical and industrial design for cell phone molds, replacement parts, mice, camera shells, sporting/health care products etc. A quick overview of the software available and its use for the creation of 3D designs, as well as the use of 3D scanners to input base designs will be presented.

Modern Instantaneous Selectivity, The Code, Arc Flash and System Reliability

Speaker: Marcelo E. Valdez, GE Energy Industrial Solutions

Time: Networking and social at 5:30 PM; Presentation at 6:00 PM; Dinner at 7:00 PM

Cost: $25 (at the door); $10 for IEEE student members

Place: Sinbad's Restaurant, Pier 2 The Embarcadero, San Francisco

RSVP: by email to Brandon Yee, byee@yeiengineers.com for reservations and to qualify for the drawing.

Web: www.e-grid.net/docs/1305-sf-ias.pdf

Marcelo E. Valdes graduated from Cornell University in 1977 with a BS in electrical engineering. Currently he is Global Applications Leader, Product Management & Innovations for GE Industrial Solutions. He has been with GE for over 34 years, in field engineering, sales, marketing, and application engineering. Mr. Valdes is past chair of the IEEE Power and Industrial Applications Engineering chapter in San Jose,, and the Industrial Applications chapter in San Francisco. Mr. Valdes has authored and co-authored over 20 papers for IEEE and other engineering forums, and holds 12 patents in the field of power systems protection and circuit breaker trip systems. Currently Mr. Valdes is chair of IEEE P1683, Guide for Safe Low Voltage Motor Control Centers and a member of several other IEEE standard working groups.

Designing safe and reliable electrical distribution systems consistent with the mission of the system and conscious of budgetary and schedule limitations has always been the intent of the good electrical systems designer. However, in recent years, increasing focus on arc flash and electrical safety as well as clauses within various codes have influenced the electrical designer to consider the compromise between protection and system reliability differently. Achieving selectivity at the expense of protection, or protection at the expense of selectivity is neither desirable, nor consistent with good engineering practice anymore. Luckily manufacturers have provided product solutions and associated analytical techniques that allow designers to offer excellent protection and significant selectivity simultaneously. Understanding how protective devices really work and how to implement them is the key to achieve the potentially competing goals of maximum protection and maximum selectivity simultaneously.

TUESDAY May 28, 2013

Tour of SIEMIC Test Labs

Time: Gathering at 6:00 PM; tour and
          talks following
Cost: none
Place: SIEMIC Labs, 775 Montague Expressway,
          Milpitas
RSVP: from website
Web: www.ewh.ieee.org/r6/scv/pses

Let's join our friends at SIEMIC in their newly renovated facility to help them celebrated their 10th Anniversary in business. Free gift bags from SIEMIC for all who attend this meeting!

Brief presentation from some of the Staff at SIEMIC as well as a tour of their newly expanded facility.

WEDNESDAY May 29, 2013

Magneto-Optic Analysis of Magnetic Microstructures

Speaker: Rudolf Schaefer, Leibniz Institute for Solid State and Materials Research, Dresden
Time: Presentation at 3:00 PM
Cost: none
Place: Lawrence Berkeley Natl Lab, Berkeley
RSVP: by May 27 with name, company to Peter Fischer, peter.fischer@ieee.org
Web: ewh.ieee.org/r6/oeb/mag

Rudolf Schaefer received the diploma degree in Materials Science and the Ph.D. degree in Engineering from the University of Erlangen-Nuernberg (Germany) in 1985 and 1990, respectively. He then joined the IBM Research Center in Yorktown Heights (USA) and the Forschungszentrum Juelich (Germany) as a Postdoc in 1991 and 1992, respectively. In 1993 Rudolf Schaefer moved to the IFW Dresden (now the Leibniz Institute for Solid State and Materials Research Dresden, where he became head of the department "Magnetic Microstructures" in 2002. In 2011, Dr. Schaefer was appointed honorary professor for Magnetic Materials at the Institute for Materials Science at Technical University Dresden. His areas of interest span magnetic materials with a focus on magnetic microstructures and domain imaging by Kerr microscopy. He has published more than 130 technical articles in peer-reviewed journals, including book chapters, and together with Alex Hubert he has coauthored the textbook "Magnetic Domains". Prof. Schaefer currently chairs the technical committee for "Magnetic Imaging" of the IEEE Society.

The rich world of magnetic microstructure or magnetic domains, extending from visible dimensions down to the nano-scale, forms the mesoscopic link between the fundamental physical properties of a magnetic material and its macroscopic properties and technical applications, which range from films for computer storage technology to magnetic cores for electrical machinery. Hysteresis phenomena, energy loss in inductive devices, noise in sensors, or the magnetoresistive properties of modern spintronic devices can be decisively determined by the peculiarities of the underlying magnetic microstructure, especially by irreversibilities in the magnetization process. Therefore any development and optimization of magnetic materials, which is usually accompanied by the measurement of magnetization curves, requires an understanding of the underlying domains and their reaction to magnetic fields, which, in most cases, can only be gained by direct imaging. The presentation will address different aspects of magnetic microstructure adapted, where possible, to the interest of the audience and supported by domain observation using Kerr microscopy. This may include domains and magnetization processes in bulk magnetic material like oriented and non-oriented electrical steel, amorphous and nanocrystalline ribbons or permanent magnets, as well as thin films and multilayers. Fast magnetization processes can also be considered. Most challenging is the analysis of hidden (internal) domains and processes in bulk material. They are relevant for material performance and their analysis requires surface imaging in combination with domain modeling and some volume-sensitive imaging method. Aside from their scientific and technical relevance, magnetic microstructures are also aesthetically appealing, an aspect that will be part of the presentation.

SCV Grads of the Last Decade (GOLD) with Professional Activities Committee for Engineers (PACE)

MONDAY June 3, 2013

Unraveling Your Professional Network: The Secrets to a Successful Career

Speaker: Krista Canfield, Sr Manager Public Relations, LinkedIn
Time: Networking and food at 6:00 PM; Presentation and demonstrations at 6:30 PM
Cost: $13 for members; $16 for non-members
Place: LinkedIn, 2025 Stierlin Ct, Mountain View
RSVP: from website
Web: scv-gold-linkedin.eventbrite.com

Krista Canfield passionately tells the story of LinkedIn and trains professionals to use LinkedIn as part of her day-to-day job as the Senior Manager of Corporate Communications for LinkedIn. As part of her role with LinkedIn, Krista owns two LinkedIn groups and uses LinkedIn every day to further her career. Aside from her day job Krista is an esteemed member of the board of advisors of Syracuse University where she helps lead the school to shape and realize it's vision, and a member of the career advisory board for DeVry University.

Krista has been published by many highly regarded media outlets such as "Expert Tips for Using LinkedIn" in Forbes, "Five Mistakes Online Jobhunters Make" in The Wall Street Journal, "The Do's and Don'ts of Jobhunting Online" on CNN, as well as many others.

Join us as we explore how to use LinkedIn effectively to build your professional network and thereby your career. As they say, "It's not what you know, but who you know." This rings particularly true in Silicon Valley where knowing the right people can get you in on the ground level of the next big company.

The event will consist of a highly interactive demo of how you can use LinkedIn to build your professional network. Please come prepared with questions to ask Krista about using LinkedIn. Prior to the presentation food will be served as well as time for networking with your fellow engineers (Don't forget to connect with them on LinkedIn).

Come out and have Krista help YOU shape and realize your vision for a successful career.

An Overview of the
Many Sciences Used to Perform
SMRT Sequencing

Speaker: John Hejtmanek, VP, Product and
          Reliability Engineering, Pacific Biosciences
Time: Networking/light dinner at 6:00 PM;
          Presentation at 7:00 PM
Cost: none
Place: Intel Auditorium, Building SC-12, 3600
          Juliette Lane, Santa Clara
RSVP: from website
Web: www.ewh.ieee.org/r6/scv/leos

John Hejtmanek is the VP of Product and Reliability Engineering at Pacific Biosciences. After graduating from UC Davis with a BS in Physics, he spent 11 years in the biotech and medical industries as a systems engineer, working on a variety of products including: DNA and Peptide synthesizers, robots used to automate blood diagnostic tests, and whole blood diagnostics meters. John then switched to telecommunications, working for Lucent Technologies, Polycom and Extreme Networks. In July 2011, John was recruited back to biotech, joining Pacific Biosciences. John earned his MBA from Santa Clara University in 2010.

Pacific Biosciences launched the *RS*, a high resolution genetic analyzer in early 2011. The *RS* incorporates novel, single molecule sequencing techniques and advanced analytics to reveal true biology in real time. The *RS* conducts, monitors and analyzes biochemical reactions at the individual molecule level.

The *RS'* subsystems include high performance optics, automated liquid handling, and an environmental control center. The *RS* uses a state-of-the-art computer system to perform the primary data analysis (base calling), and requires a high performance computer cluster to assemble the DNA molecule. The company received the 2010 Advanced Sequencing Technology Award from the National Human Genome Research Institute, and Technology Review magazine included them in their list of the top 50 most innovative companies for both 2010 and 2011.

John Hejtmanek will provide updates on the latest genetic research activities, and then present an overview of the many sciences used at PacBio to produce a DNA analyzer capable of monitoring single molecule sequencing in real time.

WEDNESDAY   June 5, 2013

Actuators and Control in Hard Disk Drives: 1980 to 2013

Speaker: Art Wagner, San Jose State University
Time: Networking and light snacks at 6:30 PM; Presentation at 7:00 PM
Cost: none; $2.50 parking on Delmas Ave.
Place: Int'l Technological University (ITU), Room 103, 355 West San Fernando Street, San Jose
RSVP: from website
Web: sites.ieee.org/scv-css

Art Wagner taught full time at SJSU for 13 years, attaining full professorship with tenure, then he went into the disk drive industry. He designed in the areas of the magnetics and control of the actuator and the spindle motor for a multitude of disk drive companies, including Seagate, Maxtor, Maxoptics, Quantum, Conner Peripherals, IBM, ISS, Priam, Iota, StorCard, and Swan. Along the way, Art taught a series of short courses on the moving coil actuator, the disk drive spindle motor, and perpendicular magnetic recording. He also taught classes part-time at Santa Clara University on mechatronics. Presently he is teaching a class at SJSU. Art received a bachelor's degree from Santa Clara University, master's degree from the University of Arizona, and a Ph.D. from Oregon State University.

In computer systems, an important data storage medium, beginning in the 1950s until today, is the Hard Disk Drive (HDD). Using magnetic heads, the HDD reads and writes data on magnetic surfaces of spinning disks. A disk drive actuator positions the magnetic heads on data using a combination of position and velocity feedback control. An engineer configures an actuator from magnets, steel, a coil, bearings, and head arms. The presentation centers on the progression of actuator configurations. The talk pays attention to parameters important for control, such as the force factor or torque factor, mass or inertia, and coil resistance. In this presentation, we discuss configuration evolution from typical actuators c. 1980 to configurations prevalent in today's actuators and control. We answer the question, what has changed, what is the same?

SCV Technology Management

THURSDAY June 6, 2013

Improving Drug Development Success Rates With Evidence-Based Descision Analysis

Speaker: Dr. Leonard Wesley, Associate Professor, San Jose State University

Time: Networking at 6:00 PM; Mgmt Forum at 6:30 PM; Dinner at 7:15 PM; Presentation at 7:45 PM

Cost: IEEE member $11; Non-member $14 (through June 4th)

Place: Ramada Silicon Valley, 1217 Wildwood Ave., Sunnyvale

RSVP: from website

Web: www.ieee-scv-tmc.org

Dr. Leonard Wesley has a Ph.D. in Computer Science from the University of Massachusetts, Amherst. He is currently an Associate Professor and the director of the Master of Science Bioinformatics emphasis within the General Engineering Department at San Jose State University. Under his leadership, the bioinformatics curriculum was recently updated with guidance from a bioinformatics industry board consisting of senior management and technical staff from Roche-Genentech, Bristol-Myers Squibb, Genomic Health, and Merck . Since implementing the revised curriculum in 2012, the emphasis has grown over 25% in the last year.

Dr. Wesley came to SJSU from the Artificial Intelligence Center at SRI International in Menlo Park,, where he was a Senior Scientist. He has over twenty years experience and over 50 publications related to basic and applied R&D in the areas of computational decision analytics and evidential reasoning. During the previous seven years, his interests have focused primarily on bioinformatics and helping the pharmaceutical industry improve drug success rates.

Current literature reports that developing one successful drug compound takes ten to fifteen years and approximately one billion dollars. Fewer than five percent of all candidate drug compounds make it to market. Improving the drug success rate, even marginally, translates into saving between $200M to $300M per compound and saving hundreds of lives. To help improve the current success rate, we present an evidential-based approach to drug development decision making. The approach treats decision-related data as evidence for or against pursuing competing development alternatives as opposed to treating all data as probabilistic in nature. A benefit of the evidential approach is that decision makers are not forced to make unwarranted assumptions and approximations when complete statistical data are lacking. As a consequence, an evidential approach is able to give better insight into the impact of assumptions, approximations, and uncertainty on multi-million dollar drug development decisions. The insight provided by an evidential approach can help decision makers avoid making undesirable and costly choices. We will present a summary of results from using an evidential approach, in a blind retrospective study, that identified false positive drug compounds that were approved by the FDA and when released to market resulted in over hundred human deaths.

MONDAY June 10, 2013

Chip Design and System Building Techniques at the Interface: Enabling New Wireless Sensors

Speaker: Prof. Brian Otis, University of Washington
Time: Networking and light dinner at 6:30 PM;
           Presentation at 7:00 PM
Cost: none; $2 accepted for food
Place: QualComm, Building B, 3165 Kifer Road,
           Santa Clara
RSVP: from website
Web: sites.ieee.org/scv-cas

Brian Otis received the B.S. degree in electrical engineering from the University of Washington, Seattle, and the M.S. & Ph.D. degrees in electrical engineering from UC Berkeley. He is an Associate Professor of Electrical Engineering at the University of Washington and holds a position at Google, Inc. His research interests are low power chip design, micromechanical resonator based clocks, and wireless bioelectrical interface circuits and systems.

Advances in chip and system design will help define the next generation of wireless sensors. I'll discuss examples of our work that have enabled new collaborative science. We will then cover chip design techniques for body-worn/implantable systems and wireless sensors. Finally, I'll present examples of future mainstream constantly connected devices for improving healthcare. These areas present tough unsolved problems at the interface between the IC and the outside world that cannot be solved by transistor technology scaling alone. Several future applications will demand thin-film realization and biocompatibility of complex systems. Novel power sources, microscale resonator technologies, and new system integration techniques will be enabling technologies for these emerging systems.

TUESDAY June 11, 2013

Innovating Products Faster:
45 Ideas

Speaker: John Carter, TCGen, Inc.
Time: Networking and no-host bar at 6:00 PM;
Full Buffet Indian Dinner at 7:00 PM;
Presentation at 7:45 PM
Cost: $27
Place: Turmeric Restaurant, 141 S Murphy Ave, Sunnyvale
RSVP: from website
Web: www.CaliforniaConsultants.org

John Carter is co-author of the new book **Innovate Products Faster**. He has been a CEO, CTO, company founder and inventor, and currently serves on the Board of Directors of Cirrus Logic. As Principal of TCGen, Inc., he has advised technology firms such as Apple, Cisco, Dolby Labs, HP, IBM, and Xerox on their strategy and operations.
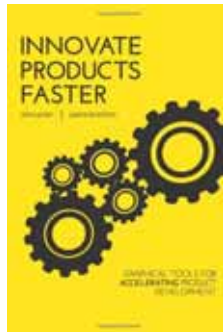
John has raised private equity to successfully execute a rollup in the Consumer Electronics sector. He was the co-inventor of the Bose Noise Cancelling Headphones, and shares the original patent with Dr. Bose.

While managers often believe that it is not possible to innovate on a timeline, this is not true. This talk will discuss many of the 45 ideas for innovation that are described in the new book **Innovate Products Faster**, including the following:

- a new product development system that values trust and leverages cultural changes
- a process that eliminates reviews and substitutes check-ins
- methods that draw from lean principles and agile software development
- tools that map individuals on a grid that can help innovators navigate around internal politics
- ways of prioritizing defects through the customer's eyes
- case studies of application of these methods

BONUS: The talk will also cover the process used to write the book, an innovative 13-month process which used a virtual team from Egypt, the Philippines, Romania and the US who assisted with editing, design, graphics, cover art, indexing and marketing. Copies of the book will be available for sale, and speaker and co-author John Carter will do a book signing.

TUESDAY June 11, 2013

Benchmarking with Futuremark

Speaker: Oliver Baltuch, President, Futuremark
Time: Networking/refreshments at 6:30 PM;
          Presentation at 7:00 PM
Cost: none
Place: Cadence, Bldg 10, 2655 Seely Ave, San
          Jose
RSVP: from website
Web: sites.ieee.org/scv-cs

Futuremark develops industry standard benchmarking software (such as 3DMark) that measures hardware performance of PCs, tablets, and smartphones. Running benchmarks during the product development process can highlight setup and stability problems. Comparing scores from similar systems can help you choose between upgrades and new components.

This talk will center on how Futuremark and the companies that are working in its programs are involved in benchmarking the new generation of processors. These range from GPUs to CPUs to APUs and power the latest electronic devices. Futuremark's benchmarks are the most authoritative performance tests and are widely used by the world's leading software publications and enthusiasts review sites when testing the latest devices.

Oliver Baltuch is a 25-year Silicon Valley veteran of several companies including National Semiconductor, Vadem, Standard Microsystems, NVDIA, NetCell, Chartered Semiconductor, and Furturemark. With a B.Sc. in Theoretical Physics from Concordia University in Montreal and a Masters of Engineering in Physics Engineering from Cornell University, Oliver started out as a Yield Improvement Engineer in a 3-micron bipolar wafer fab and then proceeded into marketing after working in the Fairchild Research Center in the late 1980s. He has then worked in various marketing roles from Staff Strategic Marketing Engineer at National up to his current position as VP Sales and Marketing Worldwide for Futuremark Oy (Finnish Company) and President of its North American subsidiary Futuremark Inc. He is also a member of the Board of Directors of the Dian Fossey Gorilla Fund International working to preserve the last remaining Mountain Gorillas and their habitat.

TUESDAY June 11, 2013

Quantum Cascade Lasers: Pushing the Frontier between Optics and Electronics

Speaker: Prof. Jerome Faist, ETH Zurich
Time: Networking/light dinner at 6:00 PM; Presentation at 7:00 PM
Cost: n one
Place: Intel, Building SC-12, 3600 Juliette Lane, Santa Clara
RSVP: from website
Web: www.ewh.ieee.org/r6/scv/leos

Quantum cascade lasers have opened up many new opportunities in quantum electronics, by freeing us from previous limitations in material wavelength limitations. They have opened up a wide range of wavelengths in the mid and near infrared. We will discuss how QCL's work, how they are used, and what new developments are being pursued.

Jérôme Faist was born in Geneva, and obtained his Bachelor and Ph.D. in Physics, in the group of Prof. F.-K Reinhart from the Swiss Institute of Technology in Lausanne in 1985, 1989 respectively. After a post-doc in IBM Rueschlikon (89-91), he joined F. Capasso's group in Bell Laboratories in 1991 where he worked first as a post-doc and then as a Member of Technical Staff. From 1997 to 2007, he was professor in the physics institute of the University of Neuchâtel. In 2007, he became professor in the institute for quantum electronics of the ETH Zurich. His present interests are the development of high performance QC lasers in the Mid and Far-infrared and the physics of coherence in intersubband transitions in the presence of strong magnetic fields

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NanoCopper Materials Platform for Electronics Packaging and Printed Electronics with 200ºC Processing Temperature

Speaker: Alfred Zinn, Senior Scientist, Lockheed Martin Space Systems Company ATC
Time: Optional dinner at 6:00 PM; Presentation at 6:45 PM
Cost: $20 for dinner ($10 for students, unemployed); no cost for presentation
Place: Biltmore Hotel, 2151 Laurelwood Rd, Santa Clara
RSVP: from website
Web: www.cpmt.org/scv

Dr. Alfred Zinn received his Doctor of Science degree in Chemistry in 1990 from the Philipps University, Marburg, Germany. Following completion of his graduate studies, Dr. Zinn spent five years at UCLA as a lecturer and conducting postdoctoral research on low-temperature CVD for interconnect, diffusion, and migration barrier deposition, as well as magnetic nanomaterials design and synthesis.   In 2004, he joined Lockheed Martin Space Systems Company Advanced Technology Center in Palo Alto, developing high-temperature materials systems, nanostructured functional materials (electrical, thermal, thermoelectric), modeling quantum/superlattice structures and devices, high performance energy conversion devices (solar, high & low quality heat conversion).   He holds seven patents in materials, structures and processing, two THz technology patents, with ten additional patents pending (multiple international filings) as well as four trade secrets. He has authored or co-authored over 20 archival journal publications, including book chapters in "The Chemistry of Metal CVD" as well as the "Encyclopedia of Inorganic Chemistry".

The Advanced Technology Center of the Lockheed Martin Corporation has developed a nanocopper-based material that can be fused to bulk copper around 200ºC taking advantage of the rapidly decreasing fusion temperature with decreasing particle size at the nanoscale.   The nanocopper material has the potential to replace tin-based solder to eliminate whisker growth and mechanical reliability concerns encountered with current lead-free solder. Fully optimized, the fused copper is expected to exhibit 10-15x electrical and thermal conductivity improvements over tin-based materials currently in use.   The materials platform is enabled by our scalable Cu nanoparticle fabrication process employing a low cost solution-phase chemical reduction approach.   A proprietary mixture of surfactants controls particle size and size distribution as well as stabilizing the particles preventing particle growth and oxidation, which would otherwise degrade its activity. We have demonstrated assembly of fully functional LED test boards using a paste formulated with nanocopper that exhibits a consistency very similar to standard tin-based solder paste. To date, we have demonstrated 26-pin through-hole connector assembly and a variety of surface mount components. We demonstrated feasibility of drop-in solder replacement using standard stencil and pick & place packaging equipment as well as demonstrated feasibility of using the material for printed electronics applications.

AT&T's Innovation Platform, Palo Alto Foundry and Wireless Network Infrastructure

Speakers: Jacob Saperstein, Director of Strategic Innovation Alliances; Shiyama Clunie, Area Manager, External Affairs; Michael Caniglia, AT&T Mobility -- all at AT&T

Time: Networking and Refreshments at 6:30 PM; Presentations at 6:45 PM

Cost: $5 donation for food

Place: Texas Instruments Building E, 2900 Semiconductor Dr., Santa Clara

RSVP: from website

Web: www.ewh.ieee.org/r6/scv/comsoc

Jacob Saperstein is the Director of Strategic Innovation Alliances for AT&T Public Affairs. In this role, Jacob works with start-ups, venture capitalists, trade groups and the rest of the technology ecosystem on innovation programming and public affairs. Prior to joining AT&T, Jacob was the Chief Operating Officer for Ground Floor Public Affairs, where he worked for political campaigns and corporations throughout the Bay Area. He has an MBA from UC Berkeley and Bachelor's Degree from Stanford University.

Shiyama Clunie is an Area Manager for AT&T's External Affairs department, covering Santa Clara County and Southern San Mateo County. She has been with AT&T for 12 years, and has enjoyed a variety of roles at the company. As Area Manager, External Affairs, Shiyama is charged with creating and sustaining a positive public policy environment for AT&T, connecting AT&T with technology initiatives and communities that align with its innovation and growth goals, maintaining AT&T's position as a good corporate citizen in the communities it serves, and partnering with internal business units to meet their objectives in the communities they serve. Shiyama holds a B.A. in Sociology from UC San Diego and a J.D. from U.C.L.A.

Michael Caniglia has been working for AT&T Mobility for the past 15 years in the Radio Frequency group, Northern California. He has worked domestically for AirTouch and internationally for Omnitel Pronto Italia -- the first private cellular network in Italy. He currently leads the San Francisco RAN design department. He holds MBA and BSEE degrees.

Jacob Saperstein and Shiyama Clunie will describe the mission and purpose of AT&T's Palo Alto Foundry and its role in the Silicon Valley ecosystem. A progress report and use cases will also be presented. AT&T's Innovation Platform will be defined and related to the Foundry.

Michael Caniglia will review AT&Ts wireless network infrastructure and recent deployments in the Bay Area. AT&T invested nearly $7 Billion in California between 2010 and 2012 and is expected to invest in the range of $21 billion nationwide in 2013. The crux of this investment is the newly announced Velocity IP Plan to expand and enhance wireless and wireline broadband networks over the next three years. Michael will outline AT&T's Wireless Network infrastructure, in particular the components of the network and the design and deployment of 4G LTE and HSPA+. In particular, he will focus on the Bay Area and discuss the preparations for America's Cup as an example of planning for high volume usage.

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THURSDAY June 13, 2013

Imaging the Ancient Greek Antikythera Mechanism

Speaker: Tom Malzbender, Research Scientist and
Independent Consultant
Time: Presentation at 7:00 PM
Cost: none
Place: Carnegie Mellon University-Silicon Valley,
Room 118, Moffett Field
RSVP: not required
Web: ewh.ieee.org/r6/scv/ras

Tom Malzbender is a senior research scientist who just ended a 31 year career at Hewlett-Packard Laboratories in March and is now an independent consultant. Tom works at the intersection of computer graphics, computer vision and signal processing and has developed the techniques of Reflectance Transformation, Polynomial Texture Mapping (PTM) and Fourier Volume Rendering. He also developed the capacitive sensing technology that allowed HP to penetrate the consumer graphics tablet market. His PTM methods are used by the National Gallery in London, the Tate Gallery and in the fields of criminal forensics, paleontology and archeology. Tom is on the program committees for several 3D graphics and vision conferences.

In 1900, a party of sponge divers chanced on the wreck of a Roman merchant vessel between Crete and mainland Greece. It was found to contain numerous ancient Greek treasures, among them a mysterious lump of clay that split open to reveal 'mathematical gears' as it dried out. This object is now known as the Antikythera Mechanism, one of the most enlightening artifacts in terms of revealing the advanced nature of ancient Greek science and technology. In 2005 we traveled to the National Archeological Museum in Athens to apply our Reflectance Imaging methods to the mechanism in the hopes of revealing ancient writing on the device. We were successful, and along with the results of Microfocus CT imaging, epigraphers were able to decipher 3000 characters compared with the original 800 known. This led to an understanding that the device was a mechanical, astronomical computer capable of predicting solar and lunar eclipses along with other celestial events. This talk will overview both the imaging methods as well as what they reveal about the Antikythera Mechanism.

THURSDAY June 13, 2013

Mechanical Design for Reliability: Beating the Tough Problems!

Speaker: T. Kim Parnell, PhD, PE, Parnell
Engineering & Consulting
Time: Networking and snacks at 6:30 PM;
Presentation at 7:00 PM
Cost: none
Place: Agilent, 5301 Stevens Creek Blvd,
Santa Clara
RSVP: not required
Web: www.ewh.ieee.org/r6/scv/rl

T. Kim Parnell, PhD, PE is Principal & Founder of Parnell Engineering & Consulting (PEC). Kim holds PhD and MSME degrees in Mechanical Engineering from Stanford University, a BES from Georgia Tech, and is a registered Professional Mechanical Engineer in the State of California. Kim is a Fellow of ASME, a Senior Member of IEEE, and a Member of SAE and ASM. Kim was the 2011 Chair of the IEEE Santa Clara Valley Section (IEEE-SCV) with over 12,000 members, 2010 Vice-Chair, and Chair of the IEEE Consultants' Network of Silicon Valley (IEEE-CNSV) in 2008-2009. He is currently Vice Chair of the IEEE-VTS (Vehicular Technology Society).

Dr. Parnell provides engineering consulting services through PEC. He applies nonlinear simulation to solve issues in a variety of fields and applications. He currently participates as a Lecturer in the Stanford Composites Design Program. He works extensively in composite material issues including Damage, Delamination, and Failure. Dr. Parnell is active in areas such as alternative energy, finite element analysis, robust design, and the use of computer simulation to achieve better designs in shorter time. He frequently works on medical devices and is an expert in the areas of failure analysis and accident investigation. He has extensive experience in the analysis and simulation of structures, heat transfer, and fluid flow using finite elements and other numerical procedures. Dr. Parnell is often called upon to serve as a testifying Expert Witness in a range of matters where he has deep expertise including: Medical Devices, Smart Phones, Patents and Intellectual Property, and Heavy-Truck Crashworthiness.

In our highly electronic, highly connected world, some of the biggest reliability problems are Mechanical in nature! Why? Because humans are decidedly mechanical and analog beasts!!

They drop things, they misuse and abuse products. Succesful companies go the extra mile to make their products highly robust and they gain a reputation for reliability.

Dr. Kim Parnell will address these issues and more during this presentation on Mechanical Design for Reliability (MDfR). He will cover some of the fundamentals and highlights of consulting applications for MDfR. He will also recap some recent cases where mechanical simulation and analysis were critical in successfully addressing reliability issues.

Show & Tell time will be included with some actual hardware!

Dr. Parnell served on the Mechanical Engineering faculty at Santa Clara University (SCU) from 2010-2012 teaching materials, design, composites, FEA, and manufacturing applications. In 2011-2012, Dr. Parnell was the lead faculty advisor for the SCU SAE Formula Hybrid Team of over 20 students as they designed, built and competed with a Hybrid (Electrical/Bio-Diesel) Vehicle. Dr. Parnell was previously at MSC Software Corp. as Senior Manager in the Product Management group and was the MSC Product Manager for Fatigue and Wind Energy. Before starting PEC, Kim was at Exponent Failure Analysis Associates (Senior Manager), Rubicor Medical (R&D Director), SST Systems, ATT Bell Labs, Stanford University and General Motors. He also held an appointment at Stanford University as a Visiting Associate Professor in the Mechanical Engineering Department, teaching graduate courses in Mechanics.

WEDNESDAY June 19, 2013

Advanced Inverter Trends and Distributed Energy Resource Standards

Speaker: Wendy al-Mukdad, PE, California Public Utilities Commission

Time: 11:30 AM (for pizza lunch) - 1:00 PM

Cost: $5 for non-members, for pizza; $0 for IEEE members

Place: Golden Gate Room, California Public Utilities Commission, 505 Van Ness Avenue, San Francisco

RSVP: By June 17 to Charles Mee, charles.mee@cpuc.ca.gov 415-703-1147

Web: www.e-grid.net/docs/1306-sf-pes.pdf

Wendy al-Mukdad, PE, is an Electrical Engineer who has worked for the CPUC as an Utilities Engineer since the 2001 California Energy Crisis. In the last four years, Wendy has had the opportunity to be a member of the newly formed Smart Grid Interoperability Panel (SGIP). As a member of the SGIP, Wendy was actively engaged in the Transmission and Distribution Domain Expert Working Group and the Distribution, Renewables Generation & Storage Domain Expert Working Group. Wendy also has had the opportunity to be involved with many other standards development working groups including the IEEE 1547 committee. She has a wide spectrum of regulatory and engineering experience as she also worked on CPUC natural gas regulatory work and for the U.S. General Services Administration and U.S. Navy. Wendy has an BSEE in Electrical & Computer Engineering from the University of California-Davis and is a UC Regents Scholar and Tau Beta Pi member.

In January 2013, the CPUC released a staff report entitled "Advanced Inverter Technologies Report". This presentation will provide an overview of this report which examines the present and evolving capabilities of advanced inverter technologies for both primary and secondary distribution applications. Inverters are widely used in conjunction with a range of Distributed Energy Resources (DER), particularly photovoltaic and wind turbine generators and energy storage resources. Advanced inverter functionalities represent a significant opportunity to improve the stability, reliability, and efficiency of the electric power distribution system, particularly as DER become incorporated onto the grid at higher penetration levels. Despite proof of concept by national electric power systems in Europe, implementation of these functionalities is not presently supported by the standards which govern inverters in the United States, preventing both widespread adoption of these functions and realization of the corresponding benefits to the distribution network. In addition, there is a lack of consistent U.S. interoperability and performance standards for inverters and inverter controllers to communicate with utility distribution management systems. This discrepancy will make full realization of the potential benefit of advanced inverter functionalities difficult, especially in the context of safely and reliably enabling higher penetrations of distributed energy resources.

TUESDAY June 18, 2013

Energy Harvesting from Waste Heat and Sunlight with Mesoscopic Materials

Speaker: Prof. Nobuhiko P. Kobayashi, Dept. of Electrical Engineering, UC Santa Cruz
Time: Networking, Pizza & drinks at Noon, with presentation following
Cost: IEEE Members: $5, Non-members: $10
Place: TI Auditorium E-1, 2900 Semiconductor Dr, Santa Clara
RSVP: from website
Web: sites.ieee.org/sfbanano

Nobuhiko "Nobby" P. Kobayashi is a professor at the University of California Santa Cruz (UCSC) and the Science Director of Advanced Studies Laboratories, a strategic partnership between UCSC and NASA Ames Research Center. Current research projects include synthesis and characterization of nanometer-scale materials and devices with emphasis on solid-state energy conversion funded by DARPA, ONR, NSF, NASA, DOE, SRC, and ARPA-E. Prior to joining UCSC in 2008, Prof. Kobayashi was involved in developing electronic materials for memristive devices to build memories and logics required for future computing systems at Hewlett-Packard Laboratories. He also led semiconductor nanowire photonics for optical interconnect necessary for advanced computing systems. Prior to Hewlett-Packard Laboratories, Prof. Kobayashi worked at Lawrence Livermore National Laboratory, where he was involved in developing semiconductor materials for both ultra-high speed diagnosis systems required for the National Ignition Facility and the optical code division multiple access funded by DARPA. From 1999 to 2001, Prof. Kobayashi was at Agilent Laboratories, developing light emitting diodes, vertical cavity surface emitting lasers, and hetero bipolar transistors for ultra-wide band fiber-optics and high-speed wireless communications. Prof. Kobayashi earned his M.S. and Ph.D. degrees in materials science from University of Southern California in 1994 and 1998.

Designing solid-state devices is essentially restricted by choosing available chemical elements found on the Periodic Table and forming various stable solids made of these chemical elements. A key to developing novel solid-state devices is, therefore, to find a route to combine a variety of such solids often physically and/or chemically incompatible with each other to benefit from resulting combined material platforms. In this talk, specific examples of "Mesoscopic Materials" will be presented with the view toward solid-state devices for energy harvesting from waste heat and sunlight. The talk is divided into the following two sections.

1. Semiconductor nanocomposites for energy harvesting from waste heat: thermoelectric.

2. Metal oxide thin films for high-power solar energy collection and transmission: Sun to fiber.

TUESDAY June 18, 2013

Lead Yourself to a Successful Future: Leadership Advice for the Aspiring Engineer

Speaker: Pirooz Parvarandeh, CTO, Maxim Integrated
Time: Networking/food at 5:30 PM; Presentation at 6:00 PM
Cost: IEEE Members $10; Non-IEEE Members $13
Place: Maxim Integrated HQ, 160 Rio Robles, San Jose
RSVP: from website
Web: scv-gold-leadership.eventbrite.com

Pirooz Parvarandeh became Chief Technology Officer of Maxim in 2009. He has been a Group President of several of the company's analog business units since 2005. Mr. Parvarandeh joined Maxim in 1987 and brought Maxim several years of design experience.

As the Chief Technology Officer (CTO), Mr. Parvarandeh champions efforts to stimulate technical innovation throughout Maxim. He manages the company's Technology Development and Innovation Group which comprises Process Technology R&D, Electronic Design Automation (EDA), Modeling, and ESD. Mr. Parvarandeh also oversees Maxim Labs, an organization chartered to deliver fundamental innovative, breakthrough technology for the company. Under his leadership, selected engineers have the opportunity to focus for long periods of time on difficult problems without interruptions. In recent years Maxim has seen a significant rise in the number of its patent applications.

Over the years Mr. Parvarandeh has been an industry leader in developing new technologies. In 2012 he joined the CTO Forum Advisory Board, a nonprofit organization dedicated to addressing industry's most important technical issues. He holds two patents in the U.S. and has nine other patents pending.

Mr. Parvarandeh holds BSEE and MSEE degrees from the California Institute of Technology.

Pirooz Parvarandeh, Maxim Integrated CTO, tells us about his career path and gives us tips and tricks to help build your leadership skills. Whether you are an Executive, Manager or even an Individual Contributor, leadership is important no matter what your role is within a company. Leadership can help you make impact on the company which will lead to your success. This is a rare opportunity to get leadership stories and advice from a successful executive that can make you more successful in your career.

Come out and have Pirooz entertain you with his leadership success stories and learn how to use them to improve your career.

Prior to the presentation food will be served as well as time for networking with your fellow engineers (don't forget to connect with them on LinkedIn). The presentation will last approximately 45 minutes, and will be followed by a chance to ask your leadership questions to Pirooz. Please come prepared with questions to ask!

The Magellan
Robotic Catheter System

Speaker: Frank Macnamara, VP, Hansen Medical Inc.

Time: Optional dinner at Stanford Hospital Cafeteria, 6:15 PM (no host, no reservations); Presentation at 7:30 PM

Cost: none

Place: Room M-114, Stanford University Medical School, Stanford

RSVP: not required

Web: www.ewh.ieee.org/r6/scv/embs

Francis Macnamara is vice-president of Advanced Technology at Hansen Medical Inc. in Mountain View. Before joining Hansen Medical five years ago, he was with Boston Scientific for the eleven years, serving in various R&D roles, first in Ireland and then in Boston. He has launched eight medical devices ranging from coronary stents and disposable endoscopes to robotic catheter systems. He is the named inventor on five patents. He holds an MBA from Santa Clara University and a degree in mechanical engineering from the University of Limerick in Ireland.

This talk will focus on the design and performance of the Magellan Robotic System, an intravascular catheter system that received FDA clearance in June 2012. The Magellan System is the successor to the company's Sensei X Robotic System, which has been used on more than 10,000 patients. The talk will begin with an overview of Hansen Medical Inc, a Mountain View company founded in 2002. It will then provide a background on flexible robotics, followed by a detailed presentation of the Magellan Robotic System. After a clinical review of intravascular cases to date, it will offer observations about the future of intravascular robotics.

THURSDAY June 20, 2013

Tour of Anchor Brewing Company, San Francisco

Time: Gathering at 5:00 PM; Tour from 5:30 PM to 7:30 PM, then pizza
Cost: $10; cash and personal checks accepted. Gourmet pizza provided after walking tour.
Place: Anchor Brewing Company, 1705 Mariposa, San Francisco
RSVP: by June 13 to Michael Nakamura, michael@mkireps.com (925) 330-6595
Web: www.e-grid.net/docs/1306-oeb-ias.pdf

Get a glimpse of centuries-old brewing traditions, a taste of San Francisco history, and a flight of selected Anchor beers. The normal walking tour of the brewery lasts about 40-45 minutes. During the total tour and tasting of about 1-1/2 - 2 hours, the tour guide will give us a brief history of the brewery and walk you through three floors of our building. Our tour will be a bit more in-depth and behind the scenes.

Anchor Brewing has been located in San Francisco since 1896 and claims to be America's first craft brewery, with roots dating back to the California gold rush. Today their beers are handmade from an all-malt mash in a traditional copper brewhouse. Their process combines the time-honored art of classical brewing with carefully applied, state-of-the-art modern methods.

Tour is limited to the first 45 signups!

SCV GOLD (Grads of the Last Decade)

SUNDAY July 14, 2013

Hike at
Villa Montalvo Arts Center

Time: Gathering by 2:00 PM; hike/event until
          5:00 PM
Cost: none
Place: Villa Montalvo Arts Center, 15400 Montalvo
          Rd, Saratoga
RSVP: from website
Web: scv-gold-hike.eventbrite.com

Visit www.montalvoarts.org/hike/

Come join IEEE SCV GOLD at Villa Montalvo Arts Center for a hike in the picturesque mountains above Villa Montalvo. The lookout point at the top of the trail has a breathtaking view allowing you to see the entire South Bay area from South San Jose, to Mountain View, Palo Alto and more. There will likely be a trip to a local bar/coffee shop after the hike for people to refresh themselves as well as to get a chance to network with more of your fellow Engineers!

We will meet at the Villa in the Montalvo Arts Center at 2PM sharp, feel free to park in any of the 4 parking lots, but make sure you are in front of the villa at 2PM sharp as we will leave promptly. We will try to have IEEE GOLD signs with us to make it easier to find us, but we should be an obviously large group.

SCV PACE (Professional Activities Committee for Engineers)

MONDAY July 15, 2013

Short Course:
Low-Power Design Essentials

Instructor: Professor Jan Rabaey, Scientific
Co-director, Berkeley Wireless Research
Center (BWRC)
Time: 5:30 PM to 8:30 PM
Cost: $50 regular admission; $40 for IEEE
members; $25 for students
Place: Maxim Integrated HQ, 160 Rio Robles,
San Jose
RSVP: from website
Web: pace-course2013.eventbrite.com

This course presents an overview of the basics as well as the more advanced techniques in low-power design. The first part of the lecture will focus on the fundamentals of low-power design and a number of well-established techniques will be reviewed. The second part of the lecture will shift towards more recent trends and applications, introducing some interesting techniques to reduce energy even more aggressively over the next decade.

Professor **Jan Rabaey** received his EE and Ph.D. degrees in Applied Sciences from the Katholieke Universiteit Leuven, Belgium, in 1978 and 1983 respectively. From 1983-1985, he was a Visiting Research Engineer at UC Berkeley. From 1985-1987, he was a research manager at IMEC, Belgium, and in 1987, joined the faculty of the Electrical Engineering and Computer Science department at UC Berkeley, where he is now holds the Donald O. Pederson Distinguished Professorship. He has been a visiting professor at the University of Pavia (Italy), Waseda University (Japan), the Technical University Delft (Netherlands), Victoria Technical University and the University of New South Wales (Australia). He was the Associate Chair (EE) of the EECS Dept. at Berkeley from 1999 until 2002 and is currently the Scientific co-director of the Berkeley Wireless Research Center (BWRC), as well as the director of the Multiscale Systems Research Center (MuSyC).

Professor Rabaey has authored or co-authored a wide range of papers in the area of signal processing and design automation. He has received numerous scientific awards, including the 1985 IEEE Transactions on Computer Aided Design Best Paper Award (Circuits and Systems Society), the 1989 Presidential Young Investigator award, and the 1994 Signal Processing Society Senior Award. In 1995, he became an IEEE Fellow. He has also be awarded the 2002 ISSCC Jack Raper Award, the 2008 IEEE Circuits and Systems Mac Van Valkenburg Award, the 2009 EDAA Lifetime Achievement Award, and the 2010 Semiconductor Industry Association University Researcher Award. In 2011, he was elected to the Royal Flemish Academy of Arts and Sciences (Belgium). He is past Chair of the VLSI Signal Processing Technical Committee of the Signal Processing Society and has chaired the executive committee of the Design Automation Conference. He serves on the Technical Advisory Boards of a wide range of companies.