

Welcome to the Buena Ventura IEEE Section for September, 2010

Sep 8th **Testing the Smart Grid**
Computer Dave Gelotta, President and CEO of Quality Logic
Overton Hall, California Lutheran University, Thousand Oaks
6:30 reception, pizza, & networking; 7:00 presentation

Sep 14th **Overview of Broadband Wireless Access Standard & Applications**
ComSoc Dr. Arthur Wang, LinQuest Corporation
ITT Force Protection Systems, Westlake Village
6:30 reception, pizza, & networking; 7:00 presentation

Sep 15th **The Story Behind The Juno Metal Patch Antenna Arrays**
MTTS Neill Chamberlain, JPL
Ciao Wireless, Camarillo
6:30 reception, pizza, & networking; 7:00 presentation

Sep 23rd **Robotics After-School Outreach Program**
AES-LMAG Rich Borgioli, Real Time Solutions
Vitesse Semiconductor, Camarillo
6:30 reception, pizza, & networking; 7:00 presentation

Sep 29th **Rebuilding the Terminator! – Biomimetic Strategies for Dexterous Robots and Prosthetic Limbs**, Dr. Gerald Loeb – USC
EMBS Overton Hall, California Lutheran University, Thousand Oaks
6:00 reception, dinner, & networking; 7:00 presentation



I'm attending the annual IEEE Engineering in Medicine and Biology Conference in Buenos Aires, along with 2,000+ other people in the engineering field. Brrr – it's winter down here!

Congratulations to our Region 6 award winners, two of whom are from the Buena Ventura Section:

- Dr. Charles Seabury, for his leadership contributions to the robotics teams of Conejo High Schools
- Geoff Lenart, for his leadership contributions to reorganize and rebuild the IEEE Los Angeles Council over the years 2007-2009

Region 6 has over 60,000 members from Arizona to Alaska and Hawaii – quite an honor for Chck and Geoff. Congratulations!

They will receive their awards at our annual Section dinner/speaker event in October, **Personal Security: Keeping Your Life Private on the Internet**. This year's event will be held at Los Robles Greens on October 14th. Our new venue and pricing will make this event much more accessible than in years past.



Our neighbors are busy this month as well. The San Fernando Valley Section is holding "DR to EPS Interconnection" on September 2nd, and Cal State Channel Islands is sponsoring "Stem Cell Science – A Revolution in Medicine" on Tuesday, September 7th. I've included their flyers in the newsletter.

IEEE Region 6 is sponsoring a live webcast of "[IEEE Smart Grid Workshop: From Appliance to Generator and Back](#)," an extensive, all-day Smart Grid seminar, on Wednesday, September 8. Click on the hyper-link for workshop information and registration information.

Steve Johnson, 2010 Section Chair



Testing the Smart Grid

6:30-8:30pm Wednesday, 8 September

Overton Hall, California Lutheran University



Utilities across the US continue to roll out smart meters as well as a wide range of smart grid infrastructure projects. The Department of Energy is funding numerous regional demonstration projects under the American Recovery and Reinvestment Act. Smart grid technologies enhance power delivery and use through intelligent two-way communication. The technology includes everything from interactive appliances in homes to substation automation and sensors on transmission lines. Electricity generators, suppliers and consumers are all part of the equation.

QualityLogic, a 25-year-old testing products and services company headquartered in Ventura County with facilities in Idaho and Oregon, is part of the largest smart grid demonstration project in the US – the Pacific Northwest Smart Grid Demonstration Project (<http://www.pnwsmartgrid.org/>).



The five-year project will cover a diverse five-state region and involve more than 60,000 metered customers. QualityLogic's role is to create interoperability tests and certification for the Project's transactive control system and advise Project participants on interoperability issues. Transactive control technology will allow transaction-based collaboration to occur over complex networks, where intelligent devices negotiate with each other, their users and the energy supplier to increase efficiency and reduce costs.

Dave Jollota, QualityLogic President and CEO, will provide an overview of the Pacific Northwest Smart Grid Demonstration Project, as well as other key smart grid technologies in which QualityLogic is involved.

About the Presenter

Dave Jollota has been with QualityLogic for 20 years and has served as its president and CEO since 2008. He has led QualityLogic into many new ventures during his tenure, most recently into the smart energy arena. Prior to joining QualityLogic, he held several operations positions at Dataproducts Corporation. He holds a Bachelor of Science degree from the Graziadio School of Business and Management at Pepperdine University.

See our Meeting Information page (<http://www.ieee-bv-cs.org/meetings/>) for location details, maps, and parking.

MEETING NOTICE

Buenaventura Section's ComSoc Chapter

Date and Time: Tuesday, September 14, 2010

Location : ITT-Force Protection Systems, 3500 Willow Lane, Thousand Oaks, CA

Directions: take the Hampshire Rd. exit off Hwy 101, facility is east on the south side of 101
http://maps.yahoo.com/maps_result?addr=3500+Willow+Lane&csz=Thousand+Oaks%2C+CA&country=us&new=1&name=&qty=

Agenda: 6:30 p.m. Reception, Pizza, & Networking
7:00 p.m. Meeting & Presentation

RSVP Requested: xwang97@yahoo.com

NOTE: The presentation takes place in a company that is involved in Government work. Therefore, please note that you will be asked for Government issued picture ID (Drivers License or better). Non-US Citizens will need to bring Right-To-Work documentation.

An Overview of Broadband Wireless Access Standard and Applications

Speaker: Dr. Arthur Wang

This talk will provide:

- A historical review of IEEE 802.16 standard evolution, technical achievement, and commercial applications
- A comparison of technologies addressing mobile broadband wireless access solutions, from past to future



Bio: Dr. Arthur Wang has been a member of IEEE 802.16 WG since 2000. He was a Director of System Integration of Proxim Inc. from 2000 to 2003, and is now a Corporate Engineer of LinQest Corp. from 2004 to 2010. He has participated in the development and promotion of IEEE 802.16 standards for more than 10 years; a few of the 802.16 standards led the creation and the growth of WiMAX success worldwide.



MEETING NOTICE **Buenaventura MTT-S Chapter**

Date and Time: Wednesday, September 15th, 2010 (6:30PM)

Location : Ciao Wireless

4000 Via Pescador, Camarillo, CA 93012

Agenda: 6:30PM Reception & Networking;

7PM Presentation

Presenter : Dr. Neil Chamberlain

Jet Propulsion Laboratory

The Story Behind The Juno Metal Patch Antenna Arrays

This presentation will talk about the setbacks and successes along the way to delivering two antennas for the Juno Microwave Radiometer (MWR) instrument. These antennas feature a new type of element called a *metal patch*. Metal patches contain no dielectric. This makes them attractive for antenna applications where dielectrics are problematic, including environments with extreme temperature changes, environments prone to electrostatic discharge (such as Jupiter) and very high frequency applications where dielectric losses can become appreciable. Surprisingly, metal patch antenna elements can be made with lower mass than conventional dielectric honeycomb patch antennas and at lower cost. Eliminating dielectric also results in very precise frequency tuning. A sketch of the design, analysis, fabrication, and measurement of the MWR metal patch arrays will be presented, along with some background on the circumstances that lead to their conception. The metal patches for MWR instrument are linearly polarized antenna elements operating at 600 MHz and 1250 MHz for each antenna, respectively. However, the design readily scales to other applications and frequencies, including telecom (circular polarization and dual-frequency) and radar polarimetry (dual polarization). A brief summary of other potential applications concludes this presentation.

Bio : Neil Chamberlain was born in the UK, went to undergraduate school in London, and then came to the US in the early 80s to pursue graduate studies. He graduated with a Ph.D. in electrical engineering from the Ohio State ElectroScience Laboratory, majoring in communication systems and doing most of his research in radar cross-section analysis and target identification. Between 1990 and 2003, Neil was a faculty member with the Electrical and Computer Engineering Department at the South Dakota School of Mines and Technology. His research focused on antenna arrays for ground penetrating radar. In 2003 (while on sabbatical at JPL) Neil decided to leave the wide open spaces of South Dakota for a different kind of space, and he has been with the Spacecraft Antennas Group since. Neil has worked mainly in the areas of antenna arrays at JPL, including the AFRL space-based radar antenna, the UAVSAR active electronically-scanned antenna, and the Juno Microwave Radiometer patch antennas. He is currently working on the development of the DESDynI array-fed reflector antenna.

IEEE BUENAVENTURA SECTION
Aerospace & Electronics Systems Chapter
&
Life Members Affinity Group

**Robotics “after-school”
Outreach program**



Date: Sept 23, 2010

Time: 6:30 pm Refreshments and Networking,
7:00 pm Talk

Venue: Vitesse Semiconductor Corp.
741 Calle Plano,
Camarillo, CA 93012

This talk will describe what was involved in starting a Robotics after-school program at a private school, Pinecrest Schools in Thousand Oaks, and the material developed and presented to the elementary school children to explore and encourage an interest in science and technology. The talk will include videos of the children building and operating their robots in various design challenges and competitions.

Please RSVP to Sunil Pai (paisunils@ieee.org) if you wish to attend this meeting.

Speaker: Rich Borgioli, Real Time Solutions.

Richard C. Borgioli is owner of Real Time Solutions, a technical consulting company focused on introducing applied science, technology, engineering, and math (STEM) studies at the elementary school level. During the past year he developed and presented an after-school program in robotics at Pinecrest Schools in Thousand Oaks. The program included both an introductory course and an advanced course presented during the regular school year, followed by a summer camp program. He has held various engineering positions in a 40 year career with major focus in DSP applications in aerospace and telecommunications. Before starting RTS, he served as a Senior Applications Engineer at Vitesse after holding both internal and field engineering positions at Motorola, Blue Wave Systems, Image & Signal Processing, CSPI, and RCA Aerospace Systems.

He is a Senior Member and Life Member of the IEEE, Vice Chair of the Buena Ventura Aerospace Chapter and holds BS and MS degrees in Electrical Engineering from Northeastern University. He has authored or co-authored a number of conference and journal papers in communications networks and signal processing, and authored a chapter in the Computer Engineering Handbook, edited by CH Chen, published by McGraw-Hill in 1992. He was recently awarded IEEE-USA PEC funding for developing the robotics program at Pinecrest.

Rebuilding the Terminator! Biomimetic Strategies for Dexterous Robots and Prosthetic Limbs,

Dr. Gerald Loeb – USC

Wednesday, September 29, 2010 - 7 PM
Overton Hall, California Lutheran University

Dr. Loeb's research group at USC is focused on reanimating or replacing paralyzed muscles and amputated limbs. This involves development of interface technologies (sensors, stimulators, etc.) and biomimetic control systems based on physiologically realistic mathematical models of muscles, proprioceptors and spinal cord circuitry. Such modeling builds on their many years of experimental research studying those structures in animals. His group is also enhancing the haptic capabilities of mechatronic prosthetic limbs and industrial robots by incorporating biomimetic tactile sensors that we have developed and commercialized.



Gerald E. Loeb, M.D.

Dr. Loeb was born in New Brunswick, NJ, received his B.A. ('69) and M.D. ('72) from Johns Hopkins University, and trained in surgery at the University of Arizona. He spent 15 years in the Laboratory of Neural Control at the National Institutes of Health and 12 years at Queen's University where he was Professor of Physiology and Director of the Bio-Medical Engineering Unit. He served as Chief Scientist (consulting) for Advanced Bionics Corp. of Sylmar, California, from 1994-1999. Dr. Loeb moved to USC in September, 1999. He has published over 200 journal articles and chapters, a book on electromyography, and holds 43 patents.

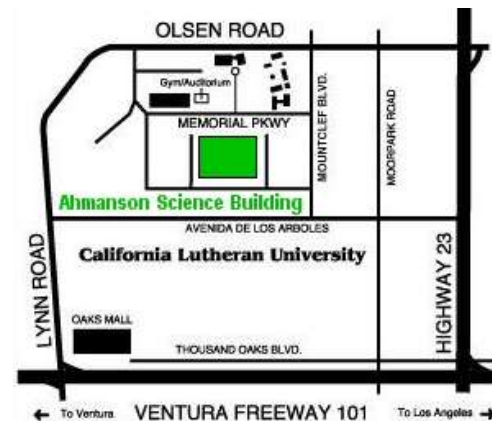


Meeting Site: Overton Hall, California Lutheran University,
Across from Ahmanson Science Building, 60 West Olson Road, Thousand Oaks
Meetings are free, open to the public

Dinner: Available at 6 p.m. for \$10 payable at the door, no RSVP needed. Visitor Parking is no longer permitted before 7 p.m. on Memorial Pkwy and adjacent street without a pass, downloadable from the EMBS web site.

Contact: Harry Croner, croner@earthlink.net

Our Sponsors: California Lutheran University, IEEE EMB Society, Alfred Mann Institute, MicroJoining Solutions, IEEE Buenaventura Section, Amgen Foundation





Personal Security: Keeping Your Life Private on the Internet

**Annual IEEE Buenaventura Section
Dinner / Speaker Event**

Thursday, October 14
Los Robles Greens,
299 South Moorpark Road,
Thousand Oaks CA 91361

**Speakers from Internet Search,
Law Enforcement, Defense,
Health Care, and Government**

IEEE Members: \$40 Non-Members: \$50

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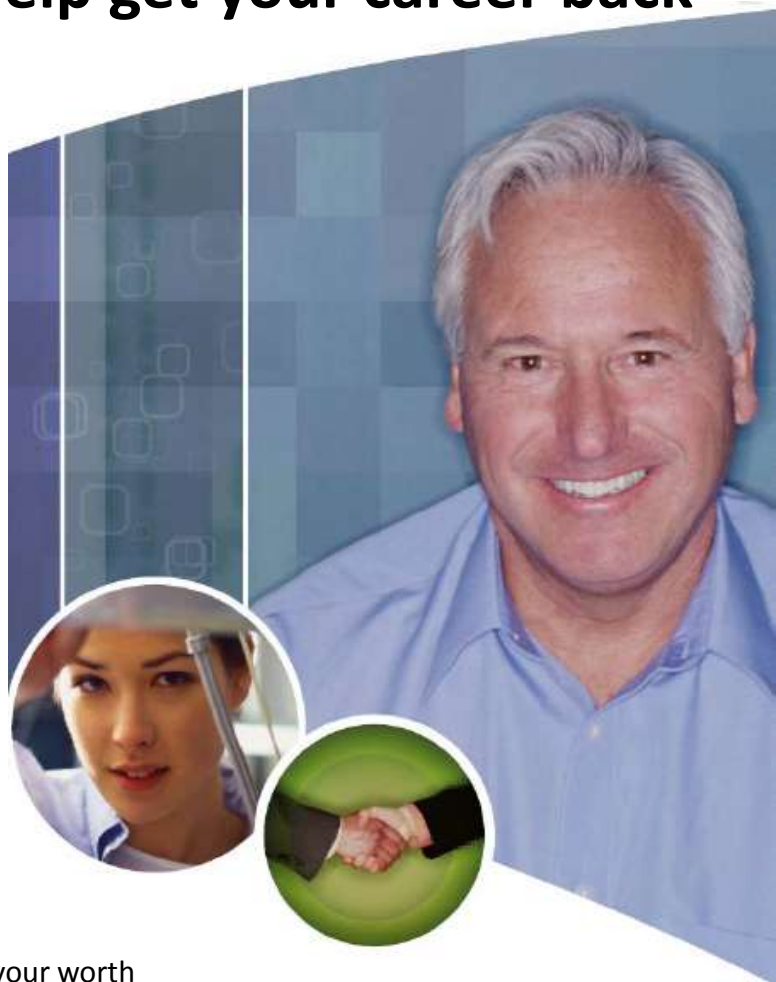
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Welcome you to the inaugural presentation on:

DR to EPS Interconnection Issues

By Mr. Hrand Avanesian



**Date: Thursday, September
02, 2010**

Time:
06:00 PM – Pizza &
Networking
07:00 PM – Presentation

Location:
ITT Technical Institute
12669 Encinitas Avenue
Sylmar, CA 91342

**No Cost - RSVP to
emerida@ieee.org by
08/31/2010**

Information: Mr. Milenko
Bistic at
milenko.bistic@us.abb.com

Description

Centralized large scale electric power generation will be shy of resources in the near future. Public awareness of undesirable emissions and climate change is forcing the market to move towards green power generation. The alternative or renewable energy sources are the future of the power generation. One of the major difficulties in implementing alternative or renewable generation sources is that the smaller scale renewable generation units are distributed in different locations and utility EPSs (Electrical Power Systems) were not traditionally designed to be connected to such generation sources at the distribution level.

This presentation focuses on distribution resources (DRs), electrical area systems (EPSs), DR to EPS interconnection issues and solutions, SCE Rule-21 and IEEE 1547 development and among other topics.

Speaker Bio

Hrand Avanesian has 37 years of experience in power system engineering after graduation from Paharvi (Shiraz) University in Electrical Engineering (MSEE). Hrand holds a PE in California and Nevada as well as being a LEED Associate. His expertise is in the field of power system studies. Hrand has been an active member of IEEE for many years, serving at the capacities of Secretary of IEEE Iran Section in Region 8 (1998-1999) and Chair of IEEE IAS LA Chapter (2005-2007). Hrand has also been Senior Member of IEEE since 1999. He presented the "Distributed Generation" topic in an IEEE IAS LA Chapter meeting in 2005. Hrand has worked for ORSA Substation Consulting Engineers Co. (Fullerton), Hampton Tedder High Voltage Testing Co. (Montclair), and Parsons Inc. (Pasadena) and at this time is with WorleyParsons Inc. (Arcadia).

SFV Section Upcoming Events

For events detail, please visit: <http://ewh.ieee.org/r6/sfv/>

STEM CELL SCIENCE

- a revolution in medicine -

a talk by **Alan Trounson, Ph.D.**

President of the California Institute for Regenerative Medicine

DATE: TUE, SEPT 7th, 2010

LOCATION: CSU CHANNEL ISLANDS (space TBA)

RECEPTION: 5:30pm – 6:00pm

SPEAKER: 6:00pm – 7:00pm

R.S.V.P. to:

Jennifer Ormond at jennifer.ormond@csuci.edu

or (805) 437-3203 by August 13th.

space is limited - reserve today



Channel Islands
CALIFORNIA STATE UNIVERSITY

Buenaventura Section Profile

The Buenaventura Section is one of the most active in the western United States, with over 100 speaker events in the last two years, and global recognition for our Chapters and Affinity Groups. We welcome your attendance and participation in Section events!

EMBS: Chapter of the Year 2006 and 2008

LMAG: Life Member Affinity Group of the Year 2009

Buenaventura Section Chapters

Aerospace Chapter provides speaker events to members interested in the design, integration, test, and analysis of large, complex systems consisting of major subsystems that contain dissimilar electronic devices. Most of our members work on sensor systems (radar, Sonar, optics, and navigation), communications systems, command and control centers, avionics, space systems, military systems, digital signal processing simulators, and software development. Some members work on robotics, energy, and transportation systems

Communication Society Chapter a community comprised of a diverse group of industry professionals with a common interest in advancing all communications technologies.

Computer Society Chapter chapter's vision is to be the leading provider of technical information, community services, and personalized services to the Ventura County's computing professionals.

Electronic Devices Circuits and Systems chapter places its interest in all aspects of the physics, engineering, theory and phenomena of electron and ion devices as well as looks at the theory, the analysis, the design (computer aided design), the practical implementation of circuits, and the application of circuit theoretic techniques to systems and to signal processing.

Engineering in Medicine and Biology Society chapter serving the needs of biomedical engineers in ventura county. Its leadership is striving to develop new ways to serve its members with modern information from remarkable speakers.

Life Member Affinity Group IEEE "Life" status is an automatic process which is based on an individual's membership record and age. The member must be at least 65 years of age and has been a member of IEEE or one of its predecessor societies such that the sum of age and years of membership equals or exceeds 100. The Buenaventura Section has the only Life Member Affinity Group in Southern California.

Microwave Theory and Techniques Society chapter promotes the theory and applications of RF, Microwave, Millimeter-wave, and Terahertz technologies.

Robotics chapter interested in both applied and theoretical issues in robotics and automation, including intelligent machines and systems used, for example, in space exploration, human services, or manufacturing, and the use of automated methods in factory, office, home, laboratory automation, transportation, and other systems to improve performance and productivity.

Buenaventura Section IEEE Officers

We welcome your involvement – We have several positions open!

Section Office –2010

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Please contact Steve Johnson, sfjohnso@ieee.org

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