



# IEEE BUENAVENTURA SECTION

## March 2013 Newsletter

<b>Tue. 12 Mar.</b>	<b>ComSoc</b>	<b>MIMO as MAMA Would Explain It</b> <i>Dr. Bernard Sklar</i> 6:30pm dinner, networking, 7pm meeting Skyworks, Intersection of West Hillcrest and Lawrence Drive, Newbury Park, CA 91320
<b>Wed. 13 Mar.</b>	<b>Computer</b>	<b>Genomic Data Management</b> <i>Stas Freidin, Ceres Inc.</i> 6:30pm networking, refreshments, 7pm presentation Richter Lecture Hall, Ahmanson Science Center California Lutheran University
<b>Wed. 20 Mar.</b>	<b>LMAG MTTS</b>	<b>Transmit/Receive Module Design for Military and Commercial Applications</b> <i>Rick Sturdivant, President, Reliant Lab Systems Inc.</i> 6pm dinner (\$10, no RSVP); 7pm presentation (free) Ahmanson Science Center California Lutheran Univ.
<b>Wed. 20 Mar.</b>	<b>EMBS</b>	<b>Quality Management and Compliance for Small Biotech and Device Companies</b> <i>Jamie Colgin, Colgin Consulting</i> 6pm dinner (\$10, no RSVP); 7pm presentation (free) Ahmanson Science Center California Lutheran University
<b>Thu. 21 Mar.</b>	<b>AESS ED/CAS</b>	<b>Development of the Laser Centerline Localizer</b> <i>Dr. Alan Vetter</i> 6:30pm refreshments, 7pm talk Vitesse Semiconductor, Camarillo, CA
<b>Mon. 25 Mar.</b>	<b>OpCom</b>	<b>Operating Committee Meeting</b> 6:30 pm China Buffet, Thousand Oaks
<b>Mar.</b>	<b>PES RAS</b>	No local events planned this month. Check website for updates. Be sure to see the advertised positions on the web too.

<http://ieee-bv.org/>

## SECTION SPONSORS



Ciao Wireless, Inc.



Advanced Personnel Profiles



The IEEE

## Membership News

### *New Members*

Please join us in welcoming our new Section members:

- Michael Broussalian
- Scott M Camarena
- Connor Copeland
- Jade Florintine Coe
- Jason Thomas Collier
- Nicholas Fichtenbaum



*New Members:* please be sure to update and share your information at the IEEE Member Portal and set up your IEEE email alias. Please also introduce yourselves at meetings; networking starts here in the IEEE.

--- Bridge Carney, Section Chair

## Section News

### *Communications Society Officers 2013-*

The new officers of the Communications Society Chapter are

- David Pehlke, Chair
- Mike Markowitz, Vice Chair
- Victor Lin, Treasurer, Past Chair
- Doug Askegard, Program Chair
- Li Huang, Secretary

*Victor S. Lin  
Buenaventura Section ComSoc Past Chair*

### *Engineering in Medicine and Biology Officers 2013-*

The new officers of the EMB Society Chapter are

- Bob Rumer, Chair
- Abigail Parks, Vice Chair
- Richard Firth, Programs
- Steve Johnson, Treasurer
- Pat Jacobs, Secretary and Webmaster

*Abigail Parks  
Buenaventura Section EMBS Past Chair*

## Job Opportunities



### **TEST ENGINEER**

Alfred Mann Foundation ([www.aemf.org](http://www.aemf.org)) in Valencia is searching for an EE with both hardware and software. 5+ years of system test related experience with advanced knowledge of medical devices.

Contact

**Pat Jacobs**

805-579-0630

[pat.jacobs@advancedpersonnelprofiles.com](mailto:pat.jacobs@advancedpersonnelprofiles.com)

### **DIRECTOR – DESIGN ASSURANCE**

Premier Ventura County company – must have medical device experience.

Contact

Pat Jacobs

805-579-0630

[pat.jacobs@advancedpersonnelprofiles.com](mailto:pat.jacobs@advancedpersonnelprofiles.com)

### **MECHANICAL AND ELECTRICAL ENGINEERS**

Pasadena medical device company searching for EE with 3-5 yrs experience. Need analog and digital circuit design experience. Able to write basic code for device control and Labview. Mechanical engineer to develop tooling.

Contact

**Pat Jacobs**

805-579-0630

[pat.jacobs@advancedpersonnelprofiles.com](mailto:pat.jacobs@advancedpersonnelprofiles.com)

## ***“Plugged In” Debuts***

Our [first feature column](#), “Plugged In”, appears in *The Ventura County Reporter* 14 February issue. This feature is a monthly column about local tech companies. These articles will appear in print in the paper and on the paper’s web site. We will also feature these items on our BV website.

We have a great opportunity to gain publicity for both the IEEE and your business. Please contact Karl Geiger or Bridge Carney if you have ideas about interesting companies or wish to learn more.

- *Karl Geiger, Section Secretary*

## ***2013 Fall Event Topics***

Fellow BV Members:

As you know, for the past two years we have had the Energy Efficiency Symposium at the Westlake Village Inn. This has a really prestigious and excellent venue for us. It included prominent and local speakers as well as local technology companies, involved in various ways, around energy efficiency solutions.

We certainly know how the process to putting on the event with our core event team. For 2013 we are open to your suggestions about any other technology sectors around which we can focus for this year’s Fall Event. We would like ideas that are both interesting and broad enough for all our IEEE members to be interested to see as well as non members who would be interested to attend.

Please send your ideas to me at [bcarney@ieee-bv.org](mailto:bcarney@ieee-bv.org) or call me at 805-558-5097.

Think about it and let me know!

-- *Bridge*

*Chair, IEEE-Buenaventura 2013*

## ***2013 Ventura County Science Fair***



Judges needed!

## **SR. ELECTRICAL ENGINEER**

**Bioness** ([www.bioness.com](http://www.bioness.com)) in Valencia is searching for EE with medical device experienced preferred. Must be hands on and have project mgmt. skills. 20% travel required including some international.

Contact

**Pat Jacobs**

805-579-0630

[pat.jacobs@advancedpersonnelprofiles.com](mailto:pat.jacobs@advancedpersonnelprofiles.com)

## **SR. ELECTRICAL ENGINEER**

**Congratulation to Second Sight ([www.2-sight.com](http://www.2-sight.com)) in Sylmar who were awarded FDA approval 14 Feb 2013!** SSMP is looking for a very experienced EE with RF and communication protocol experience. Medical device preferred.

Contact

**Pat Jacobs**

805-579-0630

[pat.jacobs@advancedpersonnelprofiles.com](mailto:pat.jacobs@advancedpersonnelprofiles.com)



As part of the IEEE's STEM and Pre-University Education outreach, IEEE Buenaventura Section is once again judging Science Fair and awarding special prizes to projects that fall within the IEEE's areas of interest.

Please see the [Science Fair Announcement online](#) for details or contact [Momin Quddus](#), Science Fair Program Coordinator, for more information about volunteering and how to help.

-- Momin Quddus

### *National E-Week Winners*



At the 2013 National Engineering Week Banquet February 21, IEEE Buenaventura Section recognized David Gulbransen, Chief Systems Engineer at Teledyne Imaging Sensors, as Engineer of the Year and the project team of the XT-3200 tracker for Usage-based Auto Insurance.



**David Gulbransen 1**

For details, see

- [David Gulbransen, IEEE BV Engineer of the Year](#)
- [XT-3200, IEEE BV Project of the Year](#)



**XT-3200 1**

Many thanks to Doug Askegard and Momin Quddus for organizing both NEWC and our Section's participation.

-- Bridge Carney, Section Chair

## Looking for Academic, Scientific, or Engineering Talent?

**Advertise with the IEEE Buenaventura Section**

Placement ads are \$25/month and appear in both newsletter and online.

Sponsorships available for website and Section.

Contact [newsletter@ieee-bv.org](mailto:newsletter@ieee-bv.org) or see our [Ad Placement information](#) to advertise or sponsor the Section.



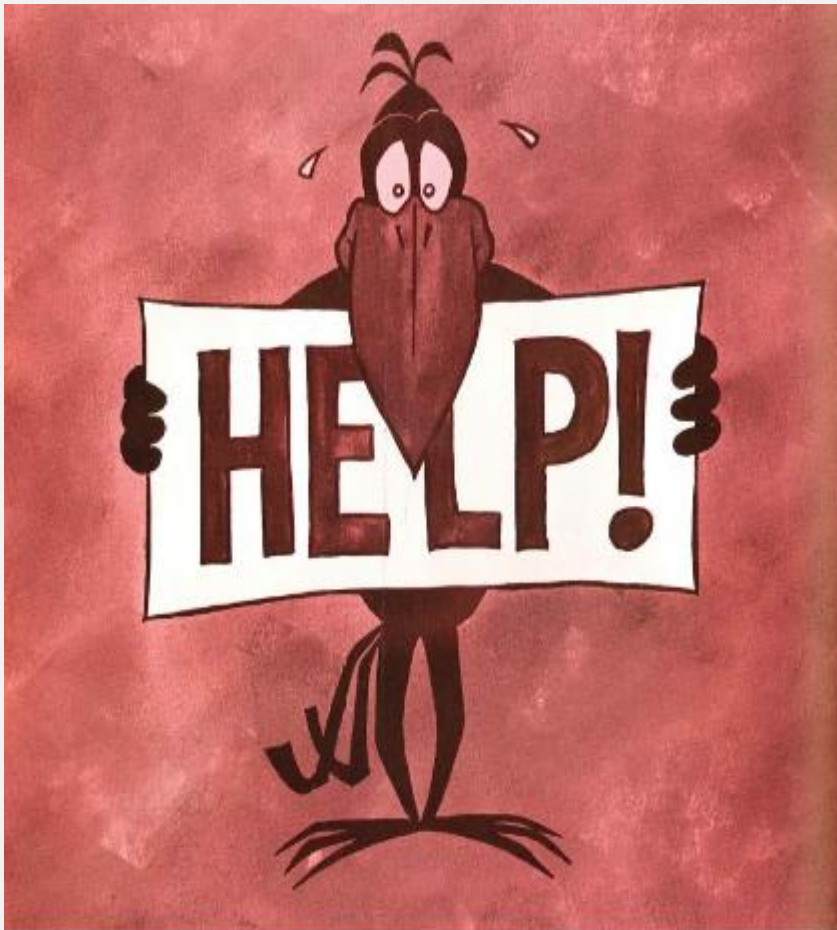
### ***Have News or Announcements?***

If you have an event or news, IEEE or otherwise, that is of interest to IEEE members please send it to Karl Geiger, [newsletter@ieee-bv.org](mailto:newsletter@ieee-bv.org), so it can appear in the newsletter and the website.

Details about submitting news articles, how to subscribe and unsubscribe are at <http://www.ieee-bv.org/news/>.

If you wish to write for the newsletter or website, please contact Karl or a Chapter chair.

*--Karl Geiger, Section Secretary*



**...me document Buenaventura Section history.**

If you have any photos or newsletters or other information about the early years of the Section, please send to me. I will return the items to you after copying them. Thank you.

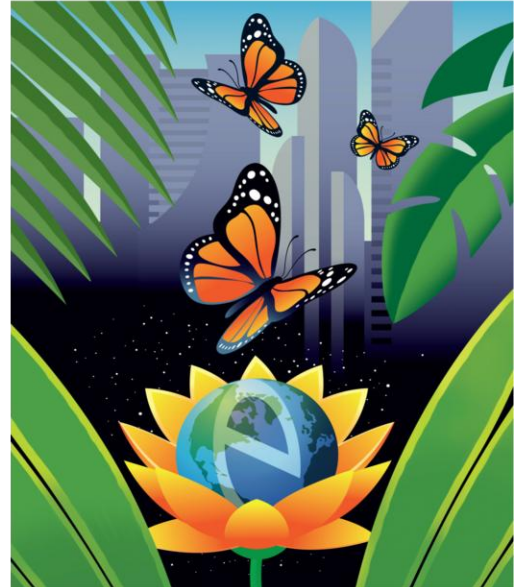
Doug Askegard, BV Section Historian  
[dougaskegard@ieee.org](mailto:dougaskegard@ieee.org)

\*I borrowed a drawing of my friend, the AOC Crow, as an attention-getter for this message.

# Engineers Week 2013

## IEEE Buenaventura Section

Your IEEE Buenaventura Section is a proud participant in the local Engineers Week celebration – a banquet and award event held annually for the past 39 years to honor engineers in Ventura and Santa Barbara counties. In addition to awards recognizing Engineer of the Year and Project of the Year, the highlight of the evening was the awarding of scholarships to 10 deserving engineering/computer science students.



2013 Scholarship winners waiting for presentation



Bridge Carney, Nathalie Gosset, Carol & Steve Johnson



Bridge Carney, Chair presents IEEE's Engineer of the Year award to David Gulbransen, Chief Systems Engineer at Teledyne Imaging Sensors



Nader Barakat, Project Engineer at Xirgo Technologies, receives IEEE's Project of the Year award on behalf of his team.

Story by Doug Askegard

# Upcoming Buenaventura Section and Chapter Events

## Buenaventura Communications Society Chapter

<http://comsoc.ieee-bv.org/>

**Date and Time:** Tuesday, March 12th, 2013

**Location:** Skyworks, Intersection of West Hillcrest Drive and Lawrence Drive, Newbury Park, CA 91320 (not the main building, please use link below to green arrow that pinpoints building)

<http://maps.google.com/maps?q=34.187542,-118.930994&num=1&t=h&vpsrc=0&ie=UTF8&z=18&iwloc=A>

**Agenda:** 6:30 p.m. Dinner, & Networking  
7:00 p.m. Meeting & Presentation

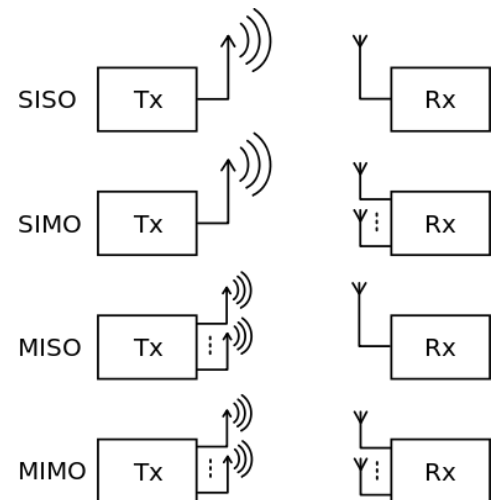
**RSVP Requested:** [https://meetings.vtools.ieee.org/meeting\\_view/list\\_meeting/17131](https://meetings.vtools.ieee.org/meeting_view/list_meeting/17131)

**Title:** MIMO As MAMA Would Explain It

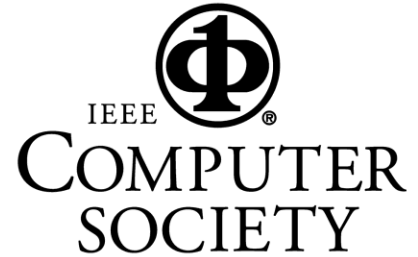
**Speaker:** Dr. Bernard Sklar

**Abstract:** The uniqueness of Multiple-Input Multiple-Output (MIMO) systems stems from complementing time with the spatial dimension obtained by using several spatially distributed antennas (at the transmitter and receiver). MIMO systems can be employed to improve error performance or increase capacity or both, without expending additional power or bandwidth. These unique and seemingly magical capabilities are achieved by exploiting a channel's multipath characteristics, and by invoking the specialized signal processing techniques known as spatial multiplexing and space-time coding. The presentation strives to explain things simply and intuitively.

**Biography:** Dr. Bernard Sklar has over 50 years of technical experience in industry and academia. He helped develop the MILSTAR satellite system, and was the principal architect for EHF Satellite Data Link Standards at the Aerospace Corporation, El Segundo, California. Currently, he is the Director of Advanced Systems at Communications Engineering Services, a consulting company he founded in 1984. He has taught engineering courses at UCLA and the University of Southern California, and has presented numerous training programs throughout the world. Dr. Sklar has published and presented scores of technical papers. He is the recipient of the 1984 Prize Paper Award from the IEEE Communications Society for his tutorial series on digital communications, and he is the author of the book, Digital Communications: Fundamentals and Applications, 2nd Edition, Prentice-Hall, 2001. He is past Chair of the Los Angeles Council IEEE Education Committee. He holds a Ph.D. degree in engineering from the University of California, Los Angeles.



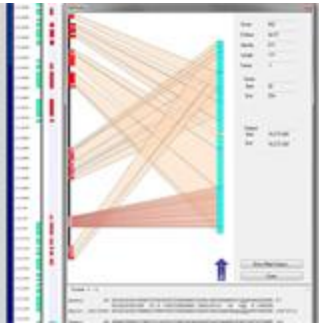
**Computer Society**  
<http://ieee-bv-cs.org/>



## Genomic Data Management in Persephone

Wednesday evening 13 March, please join us as Stas Freidin, lead programmer on Ceres Inc's Persephone project discusses the challenges faced when managing large genomic data sets and databases

### About the Project



Persephone (named after the Greek goddess of spring and seeds) is a thick-client application for visualizing a variety of biological data in a single unified view. Its main goal is to visualize massive datasets in an appealing way, thus allowing the biologist to quickly transition from a birds-eye view of entire genomes down to the level of individual genes and base pairs -- and then back again. While there are other tools that can visualize this data, none (to our knowledge) do it quickly and fluidly, and none are able to synthesize a wide variety of data. We will talk about several challenges, both technical and aesthetic, we had to overcome in order to make this possible. Online details at <http://www.ceres.net/persephone>.

### About the Speaker

Stanislav Freidin (or "Stas" for short) is a Senior Software Engineer working on Persephone. After graduating from UC Berkeley, he worked at several startups until he came to Ceres, where he became a member of the original Persephone team. After a brief stint at Google and CarsDirect, he came back to Ceres to continue Persephone development.

### About the Company

Founded as a genomics technology firm, and operational since 1997, Ceres has been applying the techniques used in the Human Genome Project to crops. Our high-throughput systems have proven to be extremely effective at identifying not just genes, but also their function and potential use.

Today, Ceres is a fully integrated seed company applying our knowledge to dedicated energy crops. This is resulting in higher yields of biomass and fermentable sugars, more fuel per acre, fewer agricultural inputs, and a cleaner environment for us all. Visit online at <http://www.ceres.net/>.

**This meeting is free and open to the public.**

#### Where/When/Details:

Richter Hall, California Lutheran U., 60 W. Olsen Road, Thousand Oaks

6:30pm pizza, networking; 7pm presentation and discussion

See <http://www.ieee-bv-cs.org/meetings/> for meeting location, time, and parking instructions.

#### Registration:

[https://meetings.vtools.ieee.org/meeting\\_view/list\\_meeting/17243](https://meetings.vtools.ieee.org/meeting_view/list_meeting/17243)





MICROWAVE THEORY AND TECHNIQUES SOCIETY,  
LIFE MEMBER AFFINITY GROUP, EDCAS, AND  
AEROSPACE ENGINEERING  
BUENA VENTURA SECTION



**You are invited**

**Date/ Time:** Wed March 20<sup>th</sup>, 2013  
6:30 PM Pizza & networking  
7:00 PM Presentation

**Location:** Ciao Wireless  
4000 via Pescador  
Camarillo, CA 93012

**Speaker:** Rick Sturdivant, Pres.  
Reliant Lab Systems, Inc.

**Title:** Transmit/Receive Module  
Design for Mil & Comm  
Applications

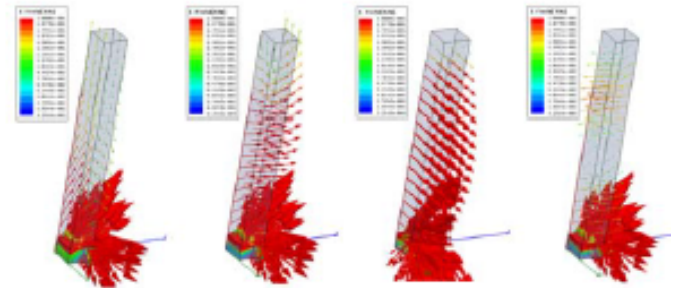
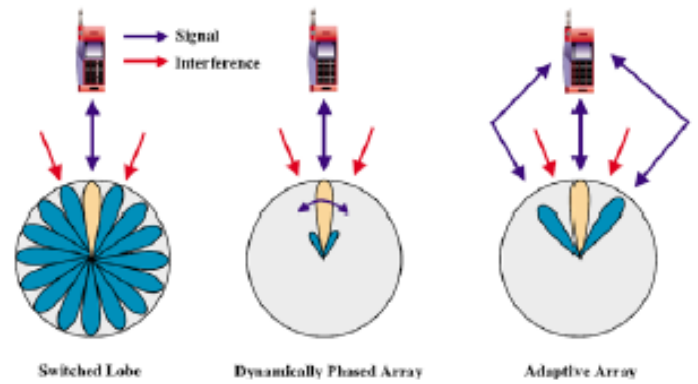


Figure 50: E-field distributions for the 4 first modes of the array under investigation

**Abstract:** “Applications, Key Components, Design Issues and Manufacturing”

Phased Arrays with T/R modules, ubiquitous in military radar systems, are now entering deployment for numerous commercial systems. The military often uses Active Electronically Scanned Array (AESA) radars for airborne, ground based, & ship borne systems. As the heart of most AESA radars the T/R module can potentially account for 40-70% of the system cost.

Commercial uses for phased arrays include satellite systems, Smart Antennas, and telecom back haul. Driving Smart Antenna demand is mobile phone and data usage. Global mobile device data usage will increase 18 fold by 2016 reaching 10.8 exabytes per month. With a Smart Antenna approach, we hope to meet this exploding need for wireless data. Smart antennas are phased arrays incorporating T/R modules and may replace the existing cell tower infrastructure.

Rick will cover the design trades, packaging, thermal, and electrical interconnects used in phased arrays and T/R modules. Comparisons on brick modules, tile modules, panel arrays & the packaging of MMIC devices for radar systems will be presented. The heart of the talk will be the “10 key elements to a successful T/R module.” If you are a designer, manager or executive responsible for the development of phased arrays, these topics will be important to you.



MICROWAVE THEORY AND TECHNIQUES SOCIETY,  
LIFE MEMBER AFFINITY GROUP, EDCAS, AND  
AEROSPACE ENGINEERING  
**BUENA VENTURA SECTION**



### About The Speaker

Rick Sturdivant is President of Reliant Lab Systems, Inc. which develops T/R modules and phased arrays for commercial and military systems. His 22+ years of experience developing products for microwave and mm-wave applications include high volume telecom modules, point-to-point radio systems, modules for radar receiver excitors, and T/R modules for AESAs. He was instrumental in developing the world's first tile array T/R modules in the mid 1990's for which he received the Engineering Excellence Award from Hughes Aircraft Company. Balancing the costly side, Rich has also developed low cost panel phased arrays. He holds 5 U.S. Patents, published over 17 articles on microwave and millimeter-wave circuits, and authored Chapter 1 of the book "RF and Microwave Electronic Packaging", Springer Publishing, 2010. Having earned an MS EE from UCLA, a BS EE from CSULB, and a BA from Vanguard University, worked for Raytheon (Hughes Aircraft Company) and Multilink Technology Company prior to founding his company.

### Directions to Ciao Wireless:

4000 Via Pescador  
Camarillo Ca. Phone: 805-389-3224

#### From LA and South

Take the I-405N.

Take the US-101/VENTURA FWY North

Exit FLYNN RD and go straight.

Turn **RIGHT** onto **VIA PESCADOR**. (2nd  
Road on **RIGHT**)

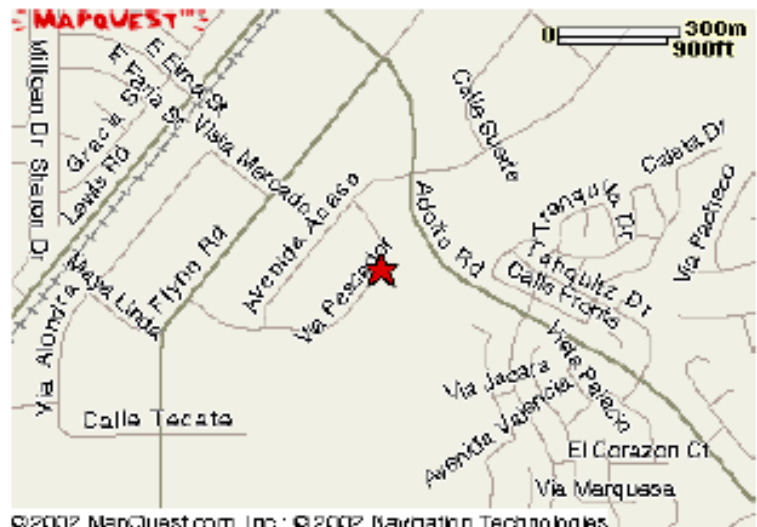
#### From Santa Barbara and North:

Take the US-101S/VENTURA FWY towards  
LOS ANGELES.

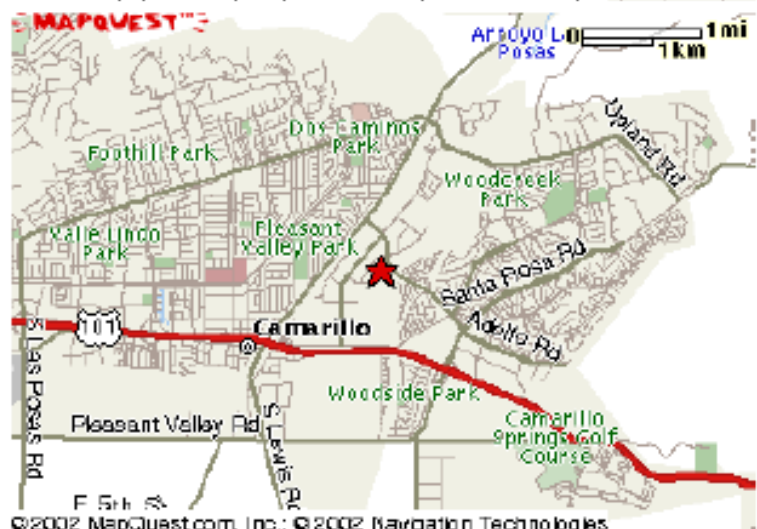
Take the **DAWSON DRIVE** exit and turn **RIGHT**  
from the ramp.

Turn **RIGHT** at the light onto **DAWSON DRIVE**.

Turn **LEFT** at the light onto **FLYNN ROAD**.  
Turn **RIGHT** onto **VIA PESCADOR**. (2nd Road on  
**RIGHT**)



©2002 MapQuest.com, Inc.; ©2002 Navigation Technologies



©2002 MapQuest.com, Inc.; ©2002 Navigation Technologies

## March 20: Quality Management and Compliance for Small Biotech and Device Companies

There are more than 5,000 medical device companies in the US with a total value of over \$100 billion. The majority of them have less than 20 employees. All of them want to be successful and get their products to market. Many do not have full-time staff dedicated to quality management or regulatory compliance. What's a small company to do to understand and comply with regulatory requirements in this environment?

During this presentation, we will explore the quality attributes FDA expects of your data and systems, investigate FDA's hot buttons, discuss how you can leverage what you're already doing to improve your position, and map out some ideas for local resources that may be helpful.



### About the Speaker

Jamie Colgin is the President of Colgin Consulting, Inc., a consulting firm that helps Pharmaceutical, Biopharmaceutical, and Contract Research Organizations assure the integrity of their preclinical and clinical data through Integrated Computer System Compliance Audits, Mock Inspections, Remediation Assistance, and On-the-Job Training.

Jamie has managed computer system audit teams at Amgen, Pfizer, and Parke-Davis. With over 20 years of hands-on experience in statistics, computer system validation, audits, and monitoring, she has developed validated SAS programs to support GLP studies, managed the retrospective evaluation of hundreds of GLP and GCP systems, written policies and procedures, and set new standards for communicating audit findings by using process flow diagrams.

Location:	California Lutheran University 60 West Olson Road, Thousand Oaks
Dinner:	In the Atrium of the Ahmanson Science Building, available at 6 p.m. for \$10 payable at the door, no RSVP needed.
Lecture:	Nearby, at 7 p.m. Come to Ahmanson beforehand for directions. Meetings are free, open to the public
Parking:	In general, visitor Parking is no longer permitted before 7 p.m. on Memorial Parkway and adjacent streets. However, CLU Public Safety has provided us with <a href="#">parking passes</a> to download and use.



## Aerospace / Electron Devices / Circuits and Systems



### Development of the Laser Centerline Localizer (Long-Range Line-Up System)

**Date:** March 21, 2013

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

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

Dr. David M. Shemwell and Dr. Alan A. Vetter invented and developed the Laser Centerline Localizer Long-Range Line-Up System visual landing aid for aircraft carrier flight operations that was called the most significant advance in naval aviation safety in 30 years. This device is currently installed on every aircraft carrier in the U.S. fleet.

Dr. Vetter will present the story of the unique development track of the LCL/LRLS. The Laser Centerline Localizer evolved through a series of designs during the course of its development. Early flight testing with naval aviators allowed corrections to the presentation style in a rapid and cost effective manner. The final result was a landing aid which is simple and exceeded all fleet expectations and requirements. Without the test program that relied heavily on the input of fleet aviators and LSOs, such an outcome would not have been very likely.

### Speaker: Dr. Alan A. Vetter, Ph.D., P.E.

Dr. Vetter graduated with a B. Eng. (Engineering Science) from the State University of New York at Stony Brook. He then obtained M.S. (Mech. Eng.) and Ph.D. (Mech. Eng.) degrees from the California Institute of Technology (Caltech). His thesis topic was the kinetics and structure of the CS<sub>2</sub>/O<sub>2</sub> flame laser. Dr. Vetter is a Professional Engineer (Mechanical) registered in the State of California.

In 1980, Dr. Vetter founded Humbug Mountain Research Laboratories (HMRL) in Duarte, California. At one time, Dr. Vetter was the one of the world leaders in three different technologies. He developed laser-based visual landing aids for aircraft carrier flight operations that have been called the most significant advance in naval aviation safety in 30 years. He invented the Swath Centerline Indicator to provide line-up information for both air and ground based agricultural applications. Dr. Vetter was the world leader in application of sophisticated two-phase computer simulations, which he wrote, to pulverized coal-fired power electrical generation plants.

# Neighboring Section, Professional Society, and Regional Events

## Coastal Los Angeles Section



search...

[Home](#) | [Contact Us](#) | [Site Map](#)

### The Applied Power Electronics Conference and Exposition

- About APEC ▶
- Participating in APEC ▶
- Conference at a Glance ▶
- Exposition ▶
- Registration ▶
- For Exhibitors ▶
- Committee ▶
- Hotel and Travel ▶
- Press and Analysts ▶
- Free Downloads ▶
- Contact Us ▶



# APEC 2013

## March 17-21, 2013

# Long Beach, CA

[Home](#)

### WELCOME TO APEC 2013!

APEC 2013 continues the long-standing tradition of addressing issues of immediate and long-term interest to the practicing power electronics engineer. Outstanding technical content is provided at one of the lowest registration costs of any IEEE conference. The conference will be held at the Long Beach Convention Center March 17 - 21, 2013. APEC 2013 will provide:

- I. The best power electronics exposition.
- II. Professional development courses taught by world-class experts.
- III. Presentations of peer-reviewed technical papers covering a wide range of topics.
- IV. Time to network and enjoy the company of fellow power electronics professionals in a beautiful setting.

## The APEC Experience

[Current Technologies](#)

[Education](#)

[Quality](#)

[Relationships](#)

[Substance](#)

[IEEE TV Videos](#)

Countdown to  
APEC 2013  
16 days  
to Go

[NEWSFLASHES](#)

**NEW!**  
[APEC Mobile App](#)

[2012 Plenary  
and  
Industry Session](#)  
Downloads  
Available

[IEEE TV Videos](#)

[Purchase  
Previous Years  
APEC  
Conference  
Publications](#)

#### APEC Sponsors



#### Website Comments

Correction or comment  
on [apec-conf.org](#)?  
Please [let us know](#).

## APEC Partnerships

Click [here](#) for details about becoming a Partner

DIAMOND Partners



# Society of Women Engineers

ASPIRE • ADVANCE • ACHIEVE

## Upcoming Event for SWE March-May

March 14, Thursday - 6PM onwards at Marie Callendar's in Camarillo - Pi Day - come eat some pie and have some fun

March 23, Saturday - 8AM to 3PM - attend FIRST robotics Regional competition in Long Beach. Meet in Thousand Oaks and carpool to Long Beach to watch the action. Have lunch in Long Beach.

April 19, Friday - noon - Skyworks - Invisibility Only Works for Superheroes - how to successfully promote your good work - lunch provided \$10 for engineering society members, \$15 for guests.

May 8, Wednesday - 6PM onwards - student engineering awareness event - come help us show county science fair winners and high school achievement winners what engineers do - Camarillo.

### Contact:

Sherisse Hughes  
President, Society of Women Engineers  
Ventura and Santa Barbara counties  
805-844-2027 - cell  
sherisse.hughes@gmail.com



**IEEE FOOTHILL SECTION  
POWER AND ENERGY SOCIETY  
TECHNICAL PRESENTATION**

**The PES Foothill and Cal Poly Pomona Student Chapter are pleased to**

Sponsor an evening of discussion, networking, and refreshments

**TOPIC:** Computer Aided Protection Schemes for Transmission Lines

**SPEAKER:** *TRIBHUWAN CHOUBEY, Technical Specialist*  
Smart Grid Cyber Security Architecture Team (SCE)

**Tuesday March 21, 2013**

7:00 – 9:00 pm

Bronco Student Center

ANDROMEDA AB 2<sup>nd</sup> floor

<http://asi.csupomona.edu/bsc/media/bscmap.pdf>

Cal Poly Pomona

3801 W. Temple Ave, Bldg. 35

RSVP requested by Friday March 15 2013

Parking \$5

**Program: 7:00-7:30-Refreshments, Networking**

7:30 -7:45- Introductions and Announcements

7:45-8:30- Presentation

8:30-9:00- Questions and Discussion

**Abstract** -- Electrical Transmission Lines are critical to providing reliable and continuous energy to the consumer industry. Electrical faults occurring on the lines need to be cleared promptly to maintain reliability and control damage. For short lines Differential current protection provides instantaneous protection against faults. The protection philosophy works on the principle of comparing currents at different terminals. A fault within the protected zone of line would create a differential current which would be used to clear the fault promptly. Various protection philosophies like Phase Comparison of current phasors, Direction comparison of current and line impedance measurements are used to determine in zone faults for instantaneous clearing. However for long lines, communication system would be required between terminals to exchange information about current between local and remote terminals. Different modes of remote tripping mechanism are used to protect long transmission lines. This presentation will discuss protection philosophies deployed on 500 and 220kV Transmission systems applying a combination of protection systems and protective relaying devices.



**About our Speaker**-Tribhuwan Choubey is a member of the Smart Grid Cyber Security Architecture Team in the Compliance and Quality Group at Southern California Edison. He joined SCE in 2003 primarily working on Power Distribution applications. Currently he is assigned to the Smart grid Cyber Security Architecture team supporting development of internal procedures and protocols for distribution related cyber security issues. He worked for 17 years with the Industrial Systems Group division of BHEL in India, on Industrial automation and control projects in steel and aluminum rolling mills and worked for 8 years with Finance, Retail and Insurance industries on their business applications as a Business Analyst. Tribhuwan has presented various papers at IEEE and Engineering school forums on the subject of Disturbance Analysis, Cyber Security and protective systems applied in Electrical Transmission and Distribution systems.. He is an active member of IEEE since 1998.





**ALL IEEE FOOTHILL SECTION STUDENTS FORUM  
A DAY OF EXPLORATION THE JAMES WEBB SPACE TELESCOPE (JWST)  
PROGRAM  
SATURDAY, APRIL 20, 2013**

AT CALIFORNIA POLYTECHNIC UNIVERSITY POMONA , Bronco Student Center

SPONSORS: IEEE FOOTHILL SECTION

AND ALL OUR IEEE FOOTHILL SECTION STUDENT CHAPTERS

CALIFORNIA STATE UNIVERSITY SAN BERNARDINO

CALIFORNIA BAPTIST UNIVERSITY RIVERSIDE

DEVRY UNIVERSITY POMONA

HARVEY MUDD COLLEGE

UNIVERSITY OF CALIFORNIA RIVERSIDE

CALIFORNIA POLYTECHNIC UNIVERSITY POMONA

**FEATURING PRESENTATIONS BY: Dr Rolf Danner and Dr Jon Arenberg, both with the Northrup Grumman Prime Contractor team for the JWST**

Dr. Rolf Danner and Dr. John Arenberg, astronomers and senior scientists at Northrop Grumman Aerospace Systems, will layout how NASA's James Webb Space Telescope will reach beyond the accomplishments of the Hubble Space Telescope. Come and hear how the science goals of JWST have led to an observatory design never before launched into space. Understand how all elements of the revolutionary architecture will allow astronomers to peer back further into the beginning of the universe than ever. See an in depth overview of the latest technical progress and a preview of what is left to be done before launch in 2018.

Identified as a top priority for astronomy and astrophysics by the National Research Council, the Webb Telescope is a key program for NASA and the scientific community and is central to the nation's ground- and space-based astrophysics program.

The Webb Telescope will use its superb angular resolution and near-infrared instruments to discover and study planetary systems similar to our own, analyze the molecular composition of extrasolar planets' atmospheres, and directly image Jupiter-size planets orbiting nearby stars. It will peer into the past to a time when new stars and developing galaxies were first beginning to form, measuring and capturing images and spectra of galaxies that formed billions of years ago. By extending our knowledge of the cosmos, the Webb Telescope will play an important role in our quest to answer the compelling questions "How did we get here?" and "Are we alone?"

**WHEN:** 9am-3pm, Saturday 20 April 2013

**WHERE:** Bronco Student Center, California Polytechnic University, Pomona

**Registration:** TBD

## Buenaventura Section and Chapter Info

<u>Section Office 2012</u>	<u>Name</u>	<u>E-Mail</u>
Chair	Bridgeman Carney	<a href="mailto:bcarney@ieee-bv.org">bcarney@ieee-bv.org</a>
Vice-Chair	Albert Wolfkiel	<a href="mailto:awolfkiel@ieee-bv.org">awolfkiel@ieee-bv.org</a>
Treasurer	Zak Cohen	<a href="mailto:zcohen@ieee.org">zcohen@ieee.org</a>
Secretary	Karl Geiger	<a href="mailto:karl@ieee-bv.org">karl@ieee-bv.org</a>
Programs and Events	Ross Kocen	<a href="mailto:events@ieee-bv.org">events@ieee-bv.org</a>
Awards Chair	Christian Ziegler	<a href="mailto:awards@ieee-bv.org">awards@ieee-bv.org</a>
Member Development		
PACE Events Chair		
Historian	Doug Askegard	<a href="mailto:dougaskegard@ieee.org">dougaskegard@ieee.org</a>
Past Chair	Karl Geiger	<a href="mailto:karl@ieee-bv.org">karl@ieee-bv.org</a>
Sr. Representative, LA Council	Bridgeman Carney	<a href="mailto:bcarney@ieee-bv.org">bcarney@ieee-bv.org</a>
Jr. Representative, LA Council	Momin Quddus	<a href="mailto:moming7@yahoo.com">moming7@yahoo.com</a>
Section Webmaster	Karl Geiger	<a href="mailto:webmaster@ieee-bv.org">webmaster@ieee-bv.org</a>
Newsletter	Zak Cohen Karl Geiger	<a href="mailto:newsletter@ieee-bv.org">newsletter@ieee-bv.org</a>

<u>Chapter</u>	<u>2013 Chair</u>	<u>E-Mail</u>
Aerospace	Momin Quddus	<a href="mailto:moming7@yahoo.com">moming7@yahoo.com</a>
Communications	David Pehlke	<a href="mailto:chair@comsoc.ieee-bv.org">chair@comsoc.ieee-bv.org</a>
Computer	Craig Reinhart	<a href="mailto:reinhart@callutheran.edu">reinhart@callutheran.edu</a>
Electron Dev./Circuits and Systems	Sunil Pai	<a href="mailto:chair@edcas.ieee-bv.org">chair@edcas.ieee-bv.org</a>
Engineering in Medicine and Biology	Bob Rumer	<a href="mailto:chair@embs.ieee-bv.org">chair@embs.ieee-bv.org</a>
Life Members Affinity Group	Jerry Knotts	<a href="mailto:chair@lmag.ieee-bv.org">chair@lmag.ieee-bv.org</a>
Microwave Technology and Techniques	Tom Campbell	<a href="mailto:chair@mtts.ieee-bv.org">chair@mtts.ieee-bv.org</a>
Power and Energy	Bridge Carney	<a href="mailto:bcarney@ieee-bv.org">bcarney@ieee-bv.org</a>
Robotics	Bob Rumer	<a href="mailto:rrumer@callutheran.edu">rrumer@callutheran.edu</a>

Be sure to check the Section's websites for the latest updates, meeting flyers, and newsletters. Some event details may change. Sites:

<http://www.ieee-bv.org/>

<http://comsoc.ieee-bv.org/>

<http://www.ieee-bv-cs.org/>

<http://www.ieee-bv-embs.org/>

Aerospace, ED/CAS, Life Members, Microwave, Power and Energy, Robotics, Section  
Communications  
Computer  
Engineering in Medicine and Biology