



# IEEE BUENAVENTURA SECTION

## September 2012 Newsletter

Wed. 19 Sep.	AES EDCAS LMAG MTTS	<b>Weak Gravitational Lensing: the Ideal Probe for Dark Matter and Dark Energy</b> Dr. Jason Rhodes, JPL 6:30-8:30pm Vitesse Semiconductor, 741 Calle Plano, Camarillo
Fri.- Sat. 21-22 Sep	Region	<b>Region 6 Fall Meeting</b> Portland, OR
Mon. 24 Sep.	Section	<b>Section Operating Committee Meeting</b>
Wed. 26 Sep.	EMBS	<b>Smart, Implantable, Microtechnology-Enabled Drug Pumps</b> <i>Ellis Meng, Phd, USC</i> 7pm Richter Hall, Ahmanson Sci. Building, California Lutheran University
Thu. 4 Oct.	All	<b>2012 Energy Efficiency Symposium</b> <b>Keynote by Dr. Rajit Gadh, UCLA</b> <b>3pm-8pm</b> <b>Westlake Village Inn</b>

→TICKETS NOW ON SALE ←

<http://ees.ieee-bv.org/registration.htm>

Sep.	ComSoc Computer PES RAS	No local events planned this month.  Mid-month meeting announcements and additional upcoming events will appear on the website first.
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Be sure to see the advertised positions on the web too.

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

## SECTION SPONSORS



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The IEEE

## Membership News

### *New Members*

Please join me in welcoming our new Section members:

- Elizabeth H. Bleszynski
- Timothy Le
- Melissa Rhonemus
- Jie Song
- Andrew Tomat



Members can find and make contacts by [searching MemberNet](#) at the [IEEE Member Portal](#).

*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.

--- Karl Geiger, Section Chair

## Section News

### *Nominations for Section Officers*

Buenaventura Section holds an officer election **Nov 2012**. Elected positions are

- Chair
- Secretary
- Treasurer
- Vice Chair

Nominations for these positions are now open. **Nominees must be IEEE Buenaventura Section members in good standing and of Graduate Student Grade or higher.** See the [qualifications rules at the IEEE home site](#). To nominate someone or yourself, please send mail to [election@ieee-bv.org](mailto:election@ieee-bv.org).

-- Karl Geiger, Section Chair

## Job Opportunities



### **PRINCIPAL ELECTRICAL ENGINEER**

Second Sight ([www.2-sight.com](http://www.2-sight.com)) in Sylmar is searching for an EE with strong experience in RF and communication protocols to lead the design & implementation of external medical device hardware & mechanical systems.

Contact

**Pat Jacobs**

805-579-0630

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

### **Biochemist**

Alfred Mann Foundation ([www.aemf.org](http://www.aemf.org)) in Valencia is searching for a PhD level chemists for a six month contract. Proof-of-Concept for a very exciting project. This is a premier medical device research organization!

Contact

**Pat Jacobs**

805-579-0630

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

### **Sr. System Integration / 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)

## ***Product Safety/EM Compatibility Joint Chapter Forming***



Buenaventura Section is seeking to start a joint chapter of the Product Safety Engineering (PSE) and the Electromagnetic Compatibility (EMC) Societies. IEEE members interested in forming this chapter please contact Mike Nicholls, Advance Motion Controls, at [mnicholls@a-m-c.com](mailto:mnicholls@a-m-c.com) or me at [chair@ieee-bv.org](mailto:chair@ieee-bv.org).

*-- Karl Geiger, Section Chair*

## ***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 Zak Cohen, [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 Zak or a Chapter chair.

*--Zak Cohen, Section Secretary*

## **Mechanical and Electrical Engineer**

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)

## **SYSTEMS ENGINEERS – PRINCIPAL & SENIOR**

Premier Ventura County company – must have medical device experience. DOORS experience a plus.

Contact  
**Pat Jacobs**  
805-579-0630

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

## **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.



# Energy Efficiency Symposium 2012

**THURSDAY 4 OCTOBER** – Mark your calendars for the 2<sup>nd</sup> Annual **Energy Efficiency Symposium**. For 2012 the keynote speaker is Dr. Rajit Gadh, Director of UCLA's Smartgrid Energy Research Center (SMERC).



Sponsors include Johanson Technology, SoCalEdison, GreenTech Motors, Sauer Energy, Maverick Angels Investment Group, SolarWorld, Quality Logic, Titan LED, and the Clean Business Forum.

Tickets are now on sale; IEEE members \$20, General Admission \$25, Students \$15. Please see the conference website at

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

If you, your company, or someone you know is interested in sponsoring, exhibiting, or speaking, please contact Bridge Carney, [bcarney@ieee-bv.org](mailto:bcarney@ieee-bv.org). Space is limited.

-- Bridge Carney, Vice Chair



## 2012 ENERGY EFFICIENCY SYMPOSIUM EXHIBITORS

A reminder, that we need YOUR help...If work for or know a company involved in any way energy efficiency and might want to be an exhibitor in our upcoming annual Energy Efficiency Symposium please let Bridge Carney know at [bcarney@ieee-bv.org](mailto:bcarney@ieee-bv.org)

## EES EXHIBITOR REGISTRATION

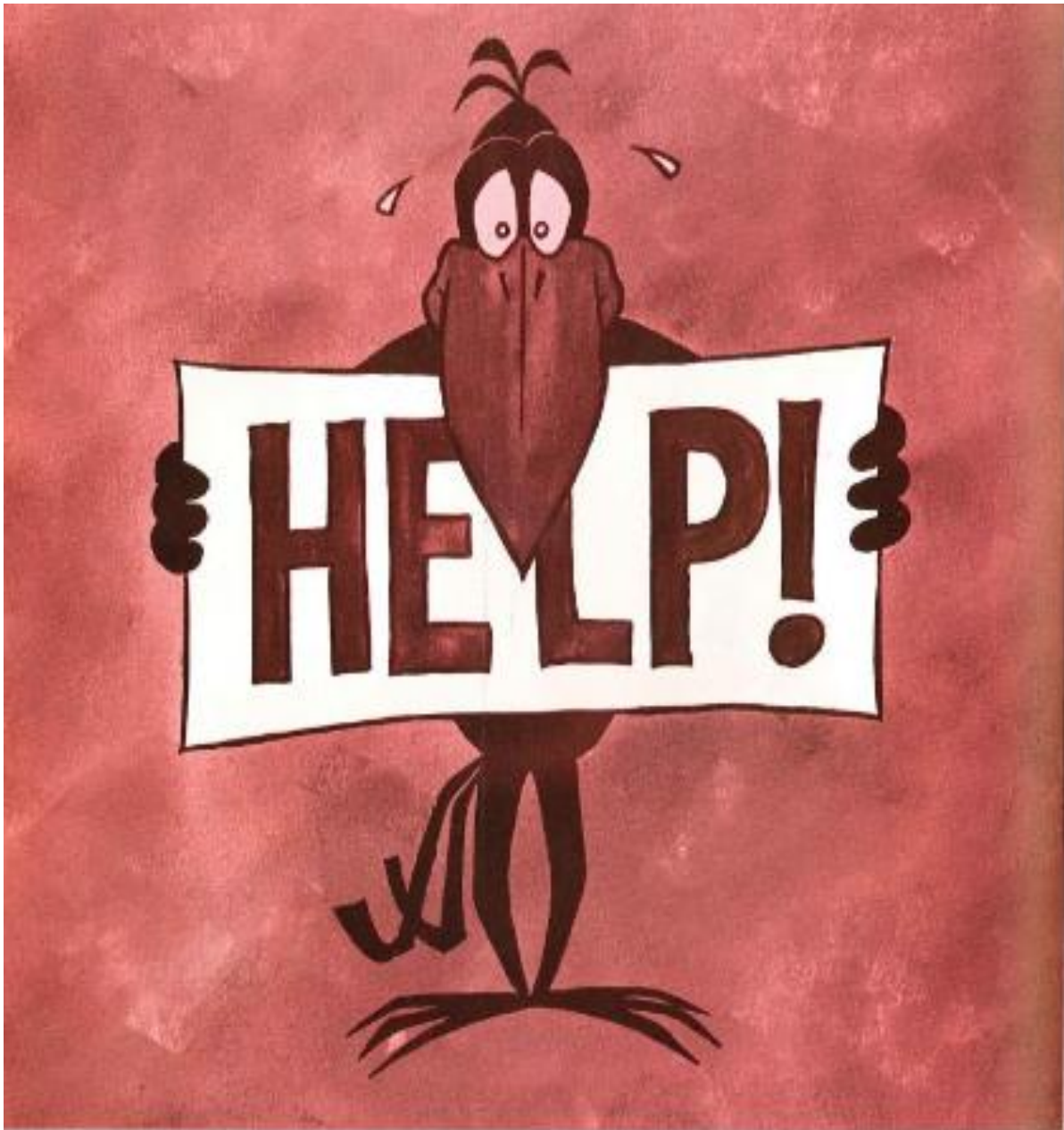
...is now online at

<http://ees.ieee-bv.org/registration.htm>

or

<http://2012-ieee-bv-ees-exhibitors.eventbrite.com/>





**...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.

# Section Events

*MTTS/AES/LMAG/EDCAS*

## **Weak Gravitational Lensing : The Ideal Probe of Dark Matter and Dark Energy**

**Dr. Jason Rhodes, Jet Propulsion Laboratory**

The past decade has seen the emergence of the so-called “concordance model” of cosmology. In this model, the Universe started about 13.7 billion years ago in a Big Bang and is now dominated by dark matter and dark energy. Together this poorly understood “dark sector” makes up about 95% of the Universe, but the nature of these phenomena remains elusive. Weak gravitational lensing, whereby the observed shapes of background galaxies are slightly distorted by foreground dark matter has proven to be one of the most useful ways to measure dark matter and dark energy. I’ll explain the basics of weak lensing and outline some key weak lensing results. Finally, I’ll discuss future plans for space telescopes dedicated to using weak lensing to unlock the mysteries of the Universe.

### **About the Speaker**

Jason Rhodes was born in Des Moines, Iowa and lived there until he moved to Claremont, CA to get his BS in physics at Harvey Mudd College. He then moved to Princeton, where he got a PhD in physics. He then did stints as a postdoctoral scholar at NASA’s Goddard Space Flight Center in Greenbelt, MD and at Caltech. In 2004 he moved to JPL, where he works as a scientist using weak lensing to understand the Universe’s dark sector.

### **When:**

- 6:30 pm Wed, 19 September 2012

### **Where:**

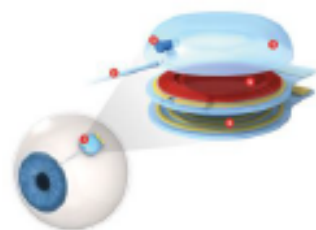
- Vitesse Semiconductor, 741 Calle Plano, Camarillo, CA 93012

### **Agenda:**

- 6:30 Reception and Networking
- 7:00 Presentation and Discussion



## Sep 26 at 7 pm: Smart, Implantable, Microtechnology-Enabled Drug Pumps – Ellis Meng, PhD, University of Southern California



Diseases are associated with localized manifestations in specific cell types or populations, typically resulting in dysfunction, degeneration and/or tissue reorganization. Investigation and intervention must address the spatial extent of these effects to maximize efficacy with minimal systemic risk. Thus, a new paradigm for studying and treating diseases using microfluidic delivery pumps was investigated. Biomedical micro-electromechanical systems (bioMEMS) enables microfabricated devices for next generation drug delivery applications. Prototype bioMEMS pumps were developed for use in mice, rats, and rabbits for the purpose of investigating new administration modalities for the treatment of disease or scientific discovery. To achieve chronic administration of drug with only a single surgical procedure, wirelessly-operated bioMEMS pumps were developed. These pumps feature on-demand dosing with operation over a wide dynamic range of flow rates, remote and wireless operation, accurate electrolysis-based pumping, a refillable drug reservoir, miniature form factor, and broad drug compatibility. In addition, these pumps have been integrated with sensors for electrochemical dose measurement that enables closed-loop drug delivery. Several experimental applications of our advanced bioMEMS pumps will be discussed in which chronic temporal and spatial control of delivered compounds are required.

### Ellis Meng, PhD



Ellis Meng is an Associate Professor of biomedical and electrical engineering at the Viterbi School of Engineering of the University of Southern California. She completed her graduate work in electrical engineering at the California Institute of Technology in 2003. Dr. Meng directs the Biomedical Microsystems Laboratory which specializes in advancing biocompatible polymer technology and micromachining, sensors and actuators, microfluidics, implantable MEMS and bioMEMS. She is a recipient of the National Science Foundation CAREER and Wallace H. Coulter Foundation Early Career Awards. Ellis was recognized as a 2009 TR35 Young Innovator Under 35 for her work in next generation drug delivery pumps, and as medical industry "40 Under 40" Innovator by Medical Device and Diagnostics Industry magazine this summer. She also an active educator and authored a textbook on bioMEMS. Her professional memberships include Tau Beta Pi, IEEE, ASME, ASEE, and BMES.

Meeting Site:	100 Ahmanson Science Building California Lutheran University 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.
Parking:	In general, visitor Parking is no longer permitted before 7 p.m. on Memorial Pkwy and adjacent street. However, CLU Public Safety has provided us with parking passes to download and use. See <a href="http://www.ieee-bv-embs.org">www.ieee-bv-embs.org</a> for a copy.





# Neighboring Section and Technical Society Events



## The 2012 IEEE-CPMT / IMAPS Advanced Technology Workshop on Optoelectronic Packaging and Assembly



### Advance Announcement

The Institute of Electrical and Electronics Engineers - Components, Packaging and Manufacturing Technology Society (IEEE-CPMT) and the International Microelectronics and Packaging Society (IMAPS) jointly announce the 2012 Advanced Technology Workshop on Opto-electronic Packaging and Assembly. This workshop will feature an ITRS Assembly and Packaging Roadmap working session as well.

Dates: September 6 & 7, 2012

Location: [Embassy Suites, 3100 East Frontera Street, Anaheim, CA 92806](#)

**Thursday, September 6, 2012**

**8:00 am – 5:00 pm**

### Optoelectronic Packaging & Assembly

Invited technical experts will be presenting on the advances and trends in Optoelectronic Packaging and Assembly Technology areas for applications such as Optical Interconnects & Semiconductor Photonics, Optical Transceivers & Networks, High Brightness LED and CMOS Image Sensors.

#### Featured Speakers:

Keynote Address: **Prof. Ricky Lee, President, IEEE CPMT Society**

**Dr. Mehdi Asghari, Kotura**

**Dr. Daniel Van Blerkom, Forza Silicon**  
**Ron Bonne, Philips Lumileds**

**Dr. Jack Cunningham, Oracle Labs**

**Dr. Peter De Dobbelaere, Luxtera**

**Dr. Ali Ghiasi, Broadcom**

**Dr. Radha Nagarajan, Infinera**

**Dr. Adit Narasimha, Molex**

**Prof. George Papen, UCSD**

**Jeff Perkins, Yole Developpment**

**Dr. Mark Verdiell, Samtec**

**Friday, September 7, 2012**

**8:00 am – 12:00 pm**



### ITRS Assembly & Packaging Roadmap Working Session

The International Technology Roadmap for Semiconductors (ITRS) Organization will hold an assembly and packaging roadmap working session for the workshop participants, with a presentation on the ITRS working process and an interactive discussion about their optoelectronic packaging activities.

Platinum Sponsor



Silver Sponsor



For Sponsorship & Vendor Exhibition inquiries, please contact:

Lawrence Williams – [larry.williams@ansys.com](mailto:larry.williams@ansys.com), 714-417-9311 x449

Jaydutt Joshi – [jaydutt@gmail.com](mailto:jaydutt@gmail.com), 949-697-9814

### Registrations:

Early-Bird Registration Fees: IEEE / IMAPS Members - \$200; Non-Members - \$250; Students - \$75  
Registration options are also available for attending only one of the days. Prices will increase for each category, after July 31, 2012.

Registration Instructions at [https://meetings.vtools.ieee.org/meeting\\_view/list\\_meeting/12685](https://meetings.vtools.ieee.org/meeting_view/list_meeting/12685)

### Workshop Organizing Committee

#### General Chairs

Robert Warren, Conexant Systems, Inc., [robert.warren@conexant.com](mailto:robert.warren@conexant.com)

John Mazurowski, Penn State Electro-Optics Center, [jmazurowski@eoc.psu.edu](mailto:jmazurowski@eoc.psu.edu)

#### Technical Program

Wei Koh, Pacrim Technologies, [wkoh2003@hotmail.com](mailto:wkoh2003@hotmail.com)

Dick Otte, Promex Industries, Inc., [otte@promex-ind.com](mailto:otte@promex-ind.com)

Bill Bottoms, Third Millennium Test Solutions, [bill\\_bottoms@3mts.com](mailto:bill_bottoms@3mts.com)

Kannan Raj, Oracle, [kannan.raj@oracle.com](mailto:kannan.raj@oracle.com)

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Mark Bachman, Univ. of California – Irvine, [mbachman@uci.edu](mailto:mbachman@uci.edu)

Sam Karikalan, Broadcom Corporation, [samkarikalan@ieee.org](mailto:samkarikalan@ieee.org)

Ivan Shubin, Oracle, [ivan.shubin@oracle.com](mailto:ivan.shubin@oracle.com)

#### Registration & Finances:

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#### Publicity:

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Paul Wesling, Communications Director - IEEE, [p.wesling@ieee.org](mailto:p.wesling@ieee.org)

#### Vendor Exhibits & Sponsorships:

Lawrence Williams, Ansys Corporation, [larry.williams@ansys.com](mailto:larry.williams@ansys.com)

Jaydutt Joshi, Skyworks Solutions, Inc., [jaydutt@gmail.com](mailto:jaydutt@gmail.com)

#### Local Arrangements:

Hossein Ahmad, Boeing, [hossein.ahmad@boeing.com](mailto:hossein.ahmad@boeing.com)

#### University Relations:

Mark Bachman, Univ. of California – Irvine, [mbachman@uci.edu](mailto:mbachman@uci.edu)

Workshop Website: <http://www.cpmt.org/opto2012>



## IEEE PES LA CHAPTER September 15, 2012

### Technical Seminar

## **Engineering Power Systems for Safety**

### **What:**

An IEEE technical seminar on safety related topics, with a focus on medium voltage substation and distribution systems. The seminar starts with the fundamental topics of SCD calculation and grounding. Several specific engineering solutions that draw on these fundamentals are covered from an applications level perspective: arc flash and fault location. While the seminar's focus is primarily from the perspective of engineering for medium voltage (4,160-34.5kV) electrical infrastructure, all seminar topics have relevance across the power delivery path: generation through end-use utilization.

**When: September 15, 2012 (Saturday)**

8:00 a.m. Registration & Coffee

**Where: LA Department of Water & Power**

111 N. Hope Street, Los Angeles, California

- 8:30 Distribution Standards, Matthew Collins, P.E., SCE Protection Engineering
- 9:15 SCD Calculation, "How To" example, Matthew Collins, P.E., SCE Protection Engineering
- 10:00 *Networking Break*, vendor displays and interaction
- 10:30 Utility Grounding, Donald Laird, P.E., SCE Apparatus Engineering
- 11:30 *Lunch (provided)*
- 12:45 Arc Flash, Medium Voltage Solutions and Applications, John Jansen P.E, Sohrab Jalili, P.E., Keith Johnson, P.E., Eaton
- 2:45 *Break*
- 3:00 Fault Location, High Impedance Fault Solutions & Applications, Ali Kazemi P.E., SEL
- 4:30 Adjourn

### **COST**

	<u><b>Payment by 9/7/12</b></u>	<u><b>Payment after 9/7/12, and walk in</b></u>
Member	\$75	\$100
Non-Member	\$100	\$125
Student Member	\$30	\$40

**Payment by check only (IEEE P.E.S.).**

**Please use the attached Registration Form, and mail the completed form with your check.**

Sponsored display tables are being offered to interested companies, for more information, please contact Jason at 213-367-3601, [Jason.Rondou@ladwp.com](mailto:Jason.Rondou@ladwp.com)

Further questions? Please e-mail or call Charlie Vartanian, 626-818-5230, [cvaranian@a123systems.com](mailto:cvaranian@a123systems.com)

# CLASTECH 2012

## Antenna and Microwave Talks

Mark your calendar for Friday, October 12, 2012, from 8:30 AM to 3:30 PM, for the 6th annual CLASTECH Meeting. The format will be the same as the previous ones, with engaging talks, table top exhibits, and good food, for \$30 onsite, or \$15 preregistration.

Early registration closes on Oct. 8. To insure that you get lunch, register today at:

<http://clastech2012.eventbrite.com>

For meeting flyer go to

[home.earthlink.net/~clastech/clastech.pdf](http://home.earthlink.net/~clastech/clastech.pdf)

### Microwave Talks

- “High Linearity, High Efficiency Ka-Band GaN Power Amplifier”, by Paul Blount, Custom MMIC
- “Active Integrated Circuits for Terahertz Communication” by Ingmar Kallfass, Karlsruher Institut für Technologie (KIT)
- “RFIC for Microwave Applications (TBD)”, by Prof. Gabriel Rebeiz, UCSD
- “Implantable Wireless Medical Devices and Systems” by J.C. Chiao, Univ. of Texas at Arlington
- “Commercial Applications for RF MEMS” by Stepan Lucyszyn, Imperial College London

### Antenna talks

- “Detectors, and Sources for Terahertz Science and Technology”, by Dr. Goutam Chattopadhyay, JPL
- “Development of Compact High Performance Antenna Feeds for Space Application”, by Dr. Clency Lee-Yow, CMI
- “Recent Advances in Leaky-Wave Antennas”, by Dr. David Jackson, Univ. of Houston
- “Low-Profile High-Efficiency Planar Antennas for Aeronautical, Mobile, and Fixed SATCOM Applications” by William Milroy, Chairman and CTO, ThinKom Solutions, Inc.
- “Modeling the F-16 Phased Array” by Dane Thompson, Ansys

Contact Charlie Jackson, Chair, IEEE Coastal LA Section, [c.jackson@ieee.org](mailto:c.jackson@ieee.org) for more information.



## Buenaventura Section and Chapter Info

<u>Section Office 2012</u>	<u>Name</u>	<u>E-Mail</u>
Chair	Karl Geiger	<a href="mailto:karl@ieee-bv-cs.org">karl@ieee-bv-cs.org</a>
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Past Chair	Steve Johnson	<a href="mailto:sfjohnso@ieee.org">sfjohnso@ieee.org</a>
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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>
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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  
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