

## **December 2011 Newsletter**

7 Dec	EMBS	Photonics based Telemedicine Technologies toward Smart Global Health Systems Dr. Aydogan Ozcan, UCLA 6:00 dinner and networking in California Lutheran University 's Ahmanson Hall (ASC 100) (\$10 at door, no reservation) 7:00 presentation (no charge) Web: <u>http://www.ieee-bv-embs.org/?p= 343</u> More info/RSVP: Pat Jacobs pat.jacobs@advancedpersonnelprofiles.com
13	ComSoc	APPLICATION OF ADVANCED MIMO TECHNIQUES TO
Dec		MILITARY COMMUNICATIONS
		Dr. Babak Daneshrad
		6:30 p.m., Exelis Inc., Thousand Oaks. Identification
		required; non-U.S. citizens must show INS
		documentation, i.e., H1B, 151, or passport
		Web: <u>http://comsoc.ieee-bv.org/</u> More info/RSVP:
		http://meetings.vtools.ieee.org/meeting_view/list_meeting/8023
14	Computer	No meeting this month.
Dec	•	Web: http://www.ieee-bv-cs.org/
Dec	AES LMAG MTTS	No meeting this month.
	PES RAS	Power and Energy to vote for 2012 Officers

9SectionSection Operating Committee MeetingJanSection and Chapter Officers6:30pm TBD, Thousand Oaks



HAPPY HOLIDAYS FROM BV SECTION

# **SECTION SPONSORS**



Interoperability Test Solutions for Smart Grid Technologies





Ciao Wireless, Inc.





# Membership Development

## **Please Welcome Our New Members**

Please join me in welcoming our newest Section members:

- John Clark
- Stephanie Knotts
- Justin Pender

Members can find and make contacts by <u>searching MemberNet</u> at the <u>IEEE Member</u> Portal. For new members, please

- update and share your information at the portal to help connect you to everyone, and
- remember to set up your new IEEE email forwarding address.
- Karl Geiger, Section Chair

# 2012 Membership

Qualified engineers and students are invited to join the IEEE and its Societies. Applications for enrollment start 16 August. New members may enroll now to have their memberships immediately active, good through December 2012. This means up to 16 months of membership and member benefits for the price of 12 months.

To apply to join, see

- <u>http://www.ieee.org/join</u> or
- <u>http://www.computer.org/join</u>

- Bridge Carney, Section Vice Chair/Membership Development

### Newsletters

If you have an event or news, IEEE or otherwise, that is of interest to IEEE members please send it to Zak Cohen, <u>zcohen@ieee.org</u>, so it can appear in the newsletter and the website. If you wish to write for the newsletter or website, please contact Zak or a Chapter chair.

### --Zak Cohen, Section Secretary

Bioness (<u>www.bioness.com</u>) in
Valencia is searching for Manager,
Global Regulations with experience in
IDE/PMA/510Ks.
Must have min 5 yrs exp in medical

Must have min 5 yrs exp in medical device industry. Must have current FDA experience and excellent communication skills.

Contact Pat Jacobs -- 805-579-0630 pat.jacobs@advancedpersonnelprofil es.com



# Job Opportunities

Job Opening in CA

Manager, Global Regulations

# **Section and Chapter News**

## **Power and Energy Society**

## **Elections for 2012 Officers**

For PES members: We will not be having a meeting however we will have virtual balloting for election of PES 2012 Officers. This will be coming to you in December!

Interested in being a 2012 Officer with IEEE-BV PES? We will be electing:

- PES Chair
- PES Vice-Chair
- PES Treasurer
- PES Secretary

If you are interested please send a brief bio (that we can use for the ballot) and which position you are interested in and we'll put you on the ballot. Send them to <u>bcarney@ieee-bv.org</u> soon or lose your spot on the ballot!



### **Section Volunteer Positions**

#### BV Section is seeking volunteers for the following Section Positions

#### **Awards Chair**

The Awards Chair works to ensure deserving IEEE members receive recognition for their career and technical achievements. The Awards chair coordinates with other officers to nominate members for local, regional, global awards.

#### **PACE Chair**

The PACE (Professional Activities Committees for Engineers) Chair oversees and coordinates events that aid IEEE members to develop and further their careers. The PACE Chair works with local and regional resources

These positions require approximately 4 to 8 hours per month plus attendance at a monthly 90 minute Operating Committee meeting (dinner included). The current officers and outgoing chairs will bring new volunteers up to speed.

Interested members: please contact Karl Geiger (karl@ieee-bv.org).



# Dec 7: Photonics based Telemedicine Technologies toward Smart Global Health Systems – Dr. Aydogan Ozcan, UCLA

Dr. Aydogan Ozcan received his Ph.D. degree at Stanford University Electrical Engineering Department in 2005. After a short post-doctoral fellowship at Stanford University, he was appointed as a Research Faculty Member at Harvard Medical School, Wellman Center for Photomedicine in 2006. Dr. Ozcan joined UCLA in the summer of 2007 as an Assistant Professor, where he is currently leading the Bio- and Nano-Photonics Laboratory at the Electrical Engineering Department. In 2011, Dr. Ozcan was honored with a 2011 Presidential Early Career Award for Scientists and Engineers by President Barack Obama. Ozcan was among 94 individuals to receive this year's awards, the highest honor bestowed by the United States government on science and engineering professionals in the early stages of their research careers.



Dr. Ozcan's group's vision is to introduce fundamentally new imaging and sensing architectures that can compensate in the digital domain for the lack of complexity of optical components by use of novel theories and numerical algorithms to address the immediate needs and requirements of Telemedicine for Global Health Problems. In a nutshell, his research is aimed at creating smart global health systems. He has developed new and powerful optical imaging and sensing architectures that can be incorporated into mobile phones, which can then be used to test bodily fluid samples for HIV, malaria and other infectious diseases

and to analyze water quality following disasters. These devices, which are relatively inexpensive to produce, have broad applications for improving health care in resource-poor regions of the globe.

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	Ahmanson Science Building	
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 <u>parking passes</u> to download and use.	California Lutheran University CARS MALL	
Contact:	Abigail Corrin, acorrin@clunet.edu	← To Ventura VENTURA FREEWAY 101 To Los Angeles →	





Date and Time: Tuesday, December 13th, 2011

**Location** : Exelis Inc. (formerly 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=&gty=

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

RSVP Requested: https://meetings.vtools.ieee.org/meeting\_view/list\_meeting/9577

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 INS documentation, i.e. H1B, 151, or passport.

### APPLICATION OF ADVANCED MIMO TECHNIQUES TO MILITARY COMMUNICATIONS

#### Speaker: Dr. Babak Daneshrad

Abstract: The invention, over a decade ago, of multiple-input multiple-output (MIMO) techniques by Bell Labs Stanford, and other researchers spawned a tidal wave of research that continues to this date. Prior to this invention, wireless signals were, for the most part, treated the same as their wireline counterparts. The unique spatial characteristics of the wireless signal and effective means of exploiting the spatial dimension along with the traditional temporal and spectral dimensions spawned numerous new research topics and communities each of which looks to exploit this new paradigm achieve a unique objective. To date, however, the research community has by and large focused on the application of MIMO to civilian wireless systems. It is not surprising then, that commercial MIMO systems are starting to roll out. In the military arena, however, the adoption of multi-antenna MIMO techniques has been slower in part due to the diversity and harshness of the EM environments, and channel conditions under which military missions must operate. The work carried out under the DARPA MNM, the Army MURI, and ONR and AFRL funded programs have successfully bridged this chasm and have shown the utility of MIMO techniques to deliver unprecedented gains both on a per link and as well as a networked environment. This talk will highlight some of the recent advances made in the application of multi-antenna MIMO techniques to meet the challenging and widely diverse demands of military communications.

Bio: **Dr. Babak Daneshrad** is a Professor with the UCLA Electrical Engineering Dept., and a Co-founder of Silvus Technologies, Inc. Over the past decade he has focused on solving the practical implementation challenges of MIMO systems as they apply to military communications. He has been involved in numerous field experiments and validation of MIMO capabilities for urban operations, robotic tele-operations (as applied to EOD missions), ship-to-shore communications, UAV based MIMO systems, and below-deck communications. He serves as the Chief Technical Person on the DARPA Mobile Networked MIMO project. He is the recipient of the 2005 Okawa Foundation award, a co-author of the best paper award at PADS 2004, and was awarded first prize in the DAC 2003 design contest. He is the beneficiary of the endowment for "UCLA-Industry Partnership for Wireless Communications and Integrated Systems". In Jan. 2001 he co-founded Innovics Wireless a company focused on developing 3G-cellular mobile terminal antenna diversity solutions and in 2004 he co-founded Silvus Communications. From 1993 to 1996 he was a member of technical staff with the Wireless Communications Systems Research Dept. of AT&T Bell Laboratories where he was involved in the design and implementation of systems for high-speed wireless packet communications.

# **Neighboring Section News and Special Announcements**





Colleagues,

Please plan to attend the annual IEEE Central Coast Section Fall Dinner Meeting, **Wednesday, December 7**, **2011**, at the Upham Hotel in Santa Barbara as a guest of the IEEE CCS EMBS.

The topic is "The New Revolution in BioEngineering: Biology from the Perspective of Engineering," presented by Professor Frank Doyle, Department of Chemical Engineering at the University of California, Santa Barbara.

Dr. Doyle will give a technical overview of research and practical applications from various UCSB engineering departments and institutes involved in the "BioEngineering Revolution." Included is an update on current research projects and medical applications at UCSB, such as the work The Doyle Group is leading in systems biology and process control for glucose monitoring and insulin delivery in Type I diabetes, including development of an "intelligent artificial pancreas."

Important links:

Flyer (pdf) on the Central Coast Section website:

http://ewh.ieee.org/r6/central\_coast/events/IEEEFallDinnerMeeting-2011-12-07.pdf

Event details at the event site:

https://www.123signup.com/event?id=cddfc

Registration site for immediate sign-up:

https://www.123signup.com/register?id=cddfc

The event is free to IEEE Members -- please bring a guest to generate interest in IEEE activities on the Central Coast.



George

Chair, IEEE Central Coast Section george.konstantinow@ieee.org

# **ATTENTION IEEE members -- VEX Robotics Judges Needed at CSUN**



#### On Saturday, December 10, 2011

On Saturday, December 10, 2011 more than 70 VEX robotics teams will descend upon CSUN's University Student Union. We are looking for adult judges to help interview teams and select deserving teams for a variety of technical and community awards. We also need inspectors who can help out on Friday evening and Saturday morning to make sure that all of the robots meet the competition requirements. We can offer lunch from Wood Ranch and a day you where you will meet some amazing students. We start at 8:00am and will do our best to get you out by 4:00. You are welcome stay longer if you like. If you have colleagues who may also be interested let us know and we will be glad to invite them as well.

VEX Awards Overview: <u>http://content.vexrobotics.com/docs/vex-gateway/VEX-</u>Gateway-AppendixE-Awards-071911.pdf

Inspection Guidelines: <u>http://content.vexrobotics.com/docs/vex-</u>gateway/VEX-Gateway-AppendixD-Inspectio-Guidelines-v.060811.pdf

Inspection Checklist: <u>http://content.vexrobotics.com/docs/vex-</u>gateway/VEX-Gateway-Inspection-Checklist-v.060611.pdf

Please contact me if you can volunteer or if you have questions. Thank you!

-Nancy McIntyre

Program Director Eagle Engineering Team #1138 Chaminade College Preparatory 7500 Chaminade Ave West Hills, CA 91304 818-347-8300 ext 424 nmcintyre@chaminade.org





## The job market is tough these days.

It pays to be prepared to present what you have to offer a new or present employer with clarity and impact. But where can you learn the skills required to master an interview?

Four Los Angeles organizations, have joined together to again bring you the **Interview Skills Workshop** on **Saturday December 10, 2011**. This is a rare opportunity to learn how to increase the value you bring an employer and hone your ability to articulate that value during an interview.

Scott Olsen of The Olsen Group, an accomplished career counselor and trainer, will lead a half-day program where you will learn interview techniques to help you land your next dream job, including how to handle difficult interview questions and how to make your strengths shine.

Whether you are seeking to reenter the workforce or are currently employed and considering a career change, this event will make sure you're perfectly poised when opportunities come your way.

"I attended the Interviewing Skills Workshop in 2010 and found it to be excellent. Scott's experience and advice was very helpful and the interactive nature of the workshop allowed me to gain real-world experience in interviewing skills. The group activities were beneficial because they helped me to greatly reduce my anxiety about job hunting and improve my confidence going in to interviews.

Thanks again and please invite me to the next workshop."

Greg Griffes

2010 IEEE Coastal LA Section chair

## **Registration:**

http://alumweb.mit.edu/clubs/mitcsc/BrowseWeb.do;jsessionid=68666136E465BA6F2 ED853963CF6EADC?webSiteId=SI000397&webPageId=P008&eventId=43284 Register soon! Capacity is limited to 100 people.

## **Sponsored by:**

- The American Institute of Aeronautics & Astronautics (AIAA)
- The IEEE Coastal Los Angeles Section
- The Los Angeles Chapter of the International Council on Systems Engineering (INCOSE-LA)
- The MIT (Massachusetts Institute of Technology) Club of Southern California



# Interview Skills Workshop on December 10, 2011

### Agenda:

8:30AM – 9:00AM Continental Breakfast & Registration
9:00AM – 9:15AM Introduction
9:15AM – 10:00AM Increasing Your Value to an Employer – Anthony Nicoli, MIT Club of
Southern California
10:00AM – 10:15AM Break
10:15AM – 12:15PM Power Interviewing Skills Workshop – Scott Olsen, The Olsen Group
12:15PM – 1:30PM Lunch & Networking

### Fee:

- \$20 for AIAA, IEEE, INCOSE-LA and MIT Club members
- \$40 for non-members

### Venue:

Northrop Grumman Café One Space Park Drive 'S' Cafe Redondo Beach, CA 90278 (On Marine Ave, 1/4 mi E of Aviation) Note: An open area, no badge required.

## Parking: Free

### Map:

http://maps.google.com/maps?f=q&source=s\_q&hl=en&geocode=&q=marine+ave+man hattan+beach&sll=37.0625,-95.677068&sspn=55.543096,71.806641&ie=UTF8&ll=33.893923,-118.374496&spn=0.001799,0.002191&t=h&z=19&iwloc=A

### **Directions:**

- From the 405, exit onto Rosecrans-West.
- Turn LEFT onto Aviation (3rd stoplight).
- Turn LEFT on Marine (2nd stoplight).
- Turn RIGHT at the next stoplight.
- Parking lot and Building S are on the RIGHT at end of driveway.
- The meeting is in the lower level cafeteria.

For persons with disabilities that need to make additional arrangements, please notify Dr. Shantaram Vasikarla (shantaramv@hotmail.com) in advance.

# **Buenaventura Section and Chapter Info**

Section Office 2011	Name		E-Mail	
Chair	Karl Geiger		karl@ieee-bv-cs.org	
Vice-Chair	Bridgeman Carney		bcarney@ieee-bv.org	
Treasurer	Albert Wolfkiel		awolfkiel@ieee-bv.org	
Secretary	Zak Cohen		zcohen@ieee.org	
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Past Chair	Steve Johnson		sfjohnso@ieee.org	
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Power ar	nd Energy	Bridg	ge Carney	<u>bcarney@ieee-bv.org</u>
	Robotics	Bok	o Rumer	rrumer@callutheran.edu

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/

Aerospace, Life Members, Microwave, Power and Energy, Robotics, Section Communications Computer http://www.ieee-bv-embs.org/ Engineering in Medicine and Biology

