

## June 2012 Newsletter

Mon. 4	Section	Section Operating Committee Meeting	SECTION SPONSORS
June			California Lutheran
Tue.	ComSoc	An Introduction to Compressive Sensing and its	
12		Applications	
June		Dr. Emilio Sovero, Waveconnex Inc.	
		6:30 pizza, networking, 7pm presentation	
		Skyworks, 2440 West Hillcrest Drive Newbury Park, CA	wireless
		91320	Ciao Wireless, Inc.
		More Info: <u>http://comsoc.ieee-</u>	
		bv.org/2012/05/june-talk-an-introduction-to-	
		<pre>compressive-sensing-and-its-applications/</pre>	VITESSE <sup>®</sup> Making Next-Generation Networks a Reality.
		Register:	
		https://meetings.vtools.ieee.org/meeting_view/list_m	
		<u>eeting/12757</u>	
			MAVERICK
			ANGELS

June	Computer ED/CAS EMBS	No events planned this month.
	MTTS	
	PES	
	RAS	

Mid-month meeting announcements and additional upcoming events will appear on the website first.

Be sure to see the advertised positions on the web too.

http://ieee-bv.org/



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The IEEE

# **Membership News**

## Please Welcome Our Newest Members to the IEEE

Please join me in welcoming our newest members:

- Calvin Chow
- Richard J. Joyce
- Stephen Jubb
- Larry C Lace
- Frank Keith McCallion
- Negin Parya
- Gopal Raghavan
- Yunshun Zhou



Members can find and make contacts by <u>searching MemberNet</u> at the <u>IEEE Member Portal</u>.

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. Please also introduce yourself at any meeting; networking starts here in the IEEE.

---- Karl Geiger, Section Chair

## 2012 Membership

There is no better time to discover the value of IEEE membership!

New members that join between 1 March and 15 August are billed at half-off the full-year membership dues, and receive membership benefits now through 31 December!

To apply to join, see

http://www.ieee.org/join or http://www.computer.org/join

- Christian Ziegler, Membership Development

# Job Opportunities



## Are you an EE?

Second Sight (<u>www.2-sight.com</u>) in Sylmar is searching for a QUALITY ENGINEER who is an EE. Great company, stock options, excellent opportunity.

**Contact Pat Jacobs** 

805-579-0630 pat.jacobs@advancedpersonnelprofiles.com

## Biochemist and Polymer Chemist

#### Alfred Mann Foundation

(www.aemf.org) in Valencia is searching 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

## **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.

**Contact Pat Jacobs** 

805-579-0630 pat.jacobs@advancedpersonnelprofiles.com

## **Section News**

### **Section Officer Nominations**

A Section Officer election will be held Oct-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 <u>qualifications rules at the</u> IEEE home site. To nominate someone or yourself, please send mail to <u>election@ieee-bv.org</u>.

-- Karl Geiger, Section Chair



BV PES is looking to rejuvenate its meeting schedule for 2012. If you are interested in energy (renewable, clean, dirty, nuclear, green, etc.), smart grid, distribution, smart meters, switching stations, home grid, electric cars and so forth, please contact Bridge Carney at <u>bcarney@ieee-bv.org</u>.

-- Bridge Carney, PES Chair, Section Vice 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, <u>newsletter@ieee-bv.org</u>, so it can appear in the newsletter and the website.

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

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

--Zak Cohen, Section Secretary

### Mechanical & Electrical Engineer

Pasadena medical device company has 3 month contracts for mechanical & electrical engineers. Mechanical engineer needs experience with lancet development & Electrical engineer must have expertise in analog, digital and embedded system design.

Contact Pat Jacobs

805-579-0630 pat.jacobs@advancedpersonnelprofiles.com

### **Quality Engineer**

Bioness (www.bioness.com) in Valencia is searching for a quality engineer with expertise in a regulated industry, medical device a plus.

**Contact Pat Jacobs** 

805-579-0630 pat.jacobs@advancedpersonnelprofiles.com

### In-house Clinical Research Associate, Financial Analyst, Marketing Communications Specialist & Global Supply Chain Planner

Bioness (www.bioness.com) in Valencia has a number of job opportunities. Medical device experience a plus, experience in manufacturing or regulated industry required.

**Contact Pat Jacobs** 

805-579-0630 pat.jacobs@advancedpersonnelprofiles.com

### DIRECTOR – QUALITY SYSTEMS

Los Angeles County medical device company is looking for an exceptional leader with top notch technical skills who will be responsible for their global quality assurance system. Must have experience with pharmaceuticals or medical devices. This is an exceptional opportunity.

**Contact Pat Jacobs** 

805-579-0630 pat.jacobs@advancedpersonnelprofiles.com History

History

**Does Buenaventura Section have history?** 

Does it ever! Nearly 50 years of it!!

In 2013 we will be celebrating BV Section's 50<sup>th</sup> anniversary.

We need your stories, pictures, officer names, activities, memorable outings, Engineers Week participation, and anything else that will tell BV Section's story. If you have any of these, or any memorabilia you can loan or donate, please contact:

Doug Askegard, Section Historian <u>dougaskegard@ieee.org</u> Phone: 408-425-3060

Thank you!

### Are you looking for a Paid Internship?

Second Sight (www.2-sight.com) in Sylmar has openings for a CLINICAL DATE INTERN and a COMPUTER SCIENCE / ENGINEER INTERN. Great company, great people and a premier project!

Contact Pat Jacobs

805-579-0630 pat.jacobs@advancedpersonnelprofiles.com



### Senior Hybrid Component Design Engineer

GTRAN seeks engineer to research and recommend designs, develop products, simulate and measure high speed broadband components, troubleshoot and take the project to product. Must know how to design and develop RF optical/electrical components and have experience with frequencies between 1 GHz to 40+ GHz. (5/12)

#### Contact

Karole Albers 805-482-1088 ext.263 <u>karole.albers@egtran.com</u>

# Job Opportunities



Military and Industrial Display Solutions

#### **Electrical Engineer**

Camarillo manufacturer of ruggedized military and industrial LCD display units seeks EE with 3-5 yrs experience. Need analog and digital circuit design experience, including ASIC, FPGA. Experience with ground up product design a plus. (5/12-6/12)

#### Contact

Judy Sitko Judy.Sitko@NLSdisplays.com Tel 805-389-5435 x212 Fax 805-389-5436 www.NLSdisplays.com



#### **Field Service & Applications Engineer**

Tamar Technology builds optical metrology equipment, and is searching for a field service engineer who can travel frequently to locations worldwide. The job includes training customers and evaluating samples.

The applicant must be able to work independently and be a positive face for the company. (5/12-8/12)
Contact:
David Marx
<u>dmarx@tamartechnology.com</u>
1-805-480-3358



#### **Computer Science Lecturer Positions**

A Masters degree in Computer Science or related field is required for teaching undergraduate courses. A PhD is required for teaching graduate courses. (5/12-8/12) Application web-site <u>http://csucifacultyjobs.com</u>

> For more information contact Peter Smith peter.smith@csuci.edu

# Looking for Academic, Scientific, or Engineering Talent?

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

Sponsorships available for website and Section.

Contact <u>newsletter@ieee-bv.org</u> or see our <u>Ad Placement</u> <u>information</u> to advertise or sponsor the Section.



bking to hire full time tion Specialist in our ulation Department.

# Section and Chapter News and Events



# An Introduction to Compressive Sensing and its Applications

## Dr. Emilio Sovero

**Abstract:** One of the central tenets of signal processing and data acquisition is the Shannon/Nyquist sampling theory: the number of samples needed to capture a signal is dictated by its bandwidth. Recently, we have developed an alternative sampling or sensing theory which goes against this conventional wisdom. This theory now known as "Compressed Sensing" or "Compressive Sampling"—or CS for short—allows the faithful recovery of signals and images from what appear to be highly incomplete sets of data, i.e. from far fewer data bits than traditional methods use. We will describe the use of CS in wideband Analog to Digital converters: 2.5 GHz bandwidth 10 bits resolution while sampling at 400 Msps (average). This is performance beyond the current state of the art for ADC.

The web site http://dsp.rice.edu/cs gives an excellent resource on the theory and the various fields in which CS technique has been applied.

**Biography**: Emilio A. Sovero is currently VP of Technology at Waveconnex Inc (Oct 2011). He received his B.S. in Engineering, M.S. in Mechanical Engineering, and Ph.D. in Applied Physics and Information Science, all from the California Institute of Technology. Dr. Sovero joined Rockwell-Science Center in 1977. There Dr. Sovero was involved in the development of III–V devices (GaAs and InP). His particular expertise is in the design, analysis and testing of active devices. Past accomplishments include the experimental demonstration of charge-coupled devices (CCD) used as building blocks in complex analog and optical signal processing functions. Dr. Sovero was later involved in the development of PHEMT and HBT millimeter-wavelength integrated circuits and devices, including monolithic Quasi-Optic power devices, Low Noise and Power amplifiers for frequencies above 30 GHz. In 2000 he joined Vitesse Corp. where his work centered on InP HBT integrated circuits for 40 Gbps



communications. In 2006 he joined Northrop Grumman Space Technology Center as a Chief Scientist in applications of III-V technology. He has over 63 publications, a book chapter and 6 US patents.

Date and Time: Tuesday, June 12th, 2012

Location: Skyworks, 2440 West Hillcrest Drive Newbury Park, CA 91320

Agenda: 6:30 p.m. Dinner, & Networking

RSVP Requested: https://meetings.vtools.ieee.org/meeting\_view/list\_meeting/12757

# **Neighboring Section and Technical Society Events**

34<sup>th</sup> Annual International Conference of the IEEE Engineering in Medicine & Biology Society *"Engineering Innovation in Global Health"* Hilton San Diego Bayfront, San Diego. Aug 28 – Sep 1

The 34<sup>th</sup> Annual International Conference of the Engineering in Medicine and Biology Society will take place at the Hilton Bayfront Hotel in San Diego. The general theme of EMBC'12, "Engineering Innovation in Global Health", covers a broad spectrum of topics in biomedical engineering and healthcare technologies, including medical and clinical applications.

#### Themes

Biomedical Signal Processing Biomedical Imaging and Image Processing Bioinstrumentation, Biosensors and Bio-Micro/Nano Technologies

Bioinformatics and Computational Biology, Systems Biology, & Modeling Methodologies

Cardiovascular and Respiratory Systems Engineering

Therapeutic and Diagnostic Systems, Devices and Technologies, & Clinical Engineering

Neural and Rehabilitation Engineering

Cellular and Tissue Engineering and Biomaterials Biomechanics and Robotics

Healthcare Information Systems, & Telemedicine Biomedical Engineering Education and Society

### Key Dates:

- June 1 Late-Breaking & Undergrad Papers Deadline
- June 1 Advanced Exhibit Booth/Table Reservation
- June 4 Author Final Submission (1st Submission Cycle)
- July 25 Early Registration Deadline
- July 25 Hotel Reservation Deadline

### Plenary Keynote Speakers

William R. Brody, Ph.D., M.D., President of the Salk Institute: Medical Devices and Healthcare Technology: Changing the Paradigm for the 21st Century

Eric J. Topol, M.D., Director of the Scripps Translational Science Institute, and Vice-Chairman of the West Wireless Health Institute: Digitizing Man

Rebecca Bergman, Vice President of New Therapies and Diagnostics in the Cardiac Rhythm Disease Management Business Unit of Medtronic, Inc.: Emerging Medical Device Technologies: Creating Better Healthcare Solutions for Chronic Disease Management

# embc2012.embs.org





# **Buenaventura Section and Chapter Info**

Section Office 2012	<u>Name</u>		<u>E-Mail</u>		
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 Cohe	Zak Cohen		zcohen@ieee.org	
Programs and Events	Ross Kocen		events@ieee-bv.org		
Awards Chair PACE Events Chair	Christian Ziegler		awards@ieee-bv.org		
Historian	Doug Askegard		dougaskegard@ieee.org		
Past Chair Ste		nnson	<u>sfjohnso@ieee.org</u>		
Sr. Representative, LA Council	Bridgeman Carney		<u>bcarney@ieee-bv.org</u>		
Jr. Representative, LA Council Mo		Quddus	mominq7@ya	ioming7@yahoo.com	
Section Webmaster Yesenia Karl Geig			webmaster@ieee-bv.org		
Newsletter Zak Cohe Karl Geig					
<u>Chapter</u>		<u>2012 Chair</u>		<u>E-Mail</u>	
Aerospace		Momin Quddus		moming7@yahoo.com	
Communications	Victor Lin		Victor.S.Lin@aero.org		
Computer	Craig Reinhart		reinhart@callutheran.edu		
Electron Dev./Circuits and Systems Suni				chair@edcas.ieee-bv.org	
Engineering in Medicine and Biology Abigai			orrin	abigailacorrin@hotmail.com	
Life Members Affinity Group Jerry K			otts	chair@Imag.ieee-bv.org	
Microwave Technology and Techniques Tom Ca			npbell	TCampbell@sstrf.com	
Power and Energy	Bridge Ca	arney	bcarney@ieee-bv.org		
Robotics	Bob Rum	er	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/Aerospace, ED/CAS, Life Members, Microwave, Power and Energy, Robotics, Sectionhttp://comsoc.ieee-bv.org/Communicationshttp://www.ieee-bv-cs.org/Computerhttp://www.ieee-bv-embs.org/Engineering in Medicine and Biology

