



IEEE BUENAVENTURA SECTION

May 2013 Newsletter

Tue. 14 May	ComSoc	Adoption of the DDL Waveform for the Most Widely Deployed UAV in the World <i>Eric Cox, AeroVironment Inc.</i> 6:30-8:30pm Skyworks, 2440 W. Hillcrest Dr., Thousand Oaks Register to attend: http://bit.ly/Zg4VdG
Wed. 15 May NOTE TIME, DATE CHANGE	Computer EMBS MTTS RAS	FIRST Robotics – High School Robotics Competition <i>Charles Seabury and the Conejo Robotics Team</i> 6pm networking, dinner (\$10 cash at the door) 7pm presentation Richter Lecture Hall, Ahmanson Science Center California Lutheran University Register: http://bit.ly/Zg5IAL
Wed. 22 May	EMC PSES	EMC for Functional Safety <i>Ed Nakauchi</i> 6pm, Wed 22 May TO Library, Newbury Park Branch, 2231 Borchard Rd Register/Info: m nicholls@a-m-c.com
Thu. 23 May	AESS LMAG ED/CAS MTTS	The Voyager Mission to the Outer Planets and Interstellar Space <i>Alan Cummings, CalTech</i> 6:30pm networking, refreshments 7pm presentation Vitesse Semiconductor, 741 Calle Plano, Camarillo Register/Info: paisunils@ieee.org
Mon. 3 Jun.	OpCom	Operating Committee Meeting 6:30 pm China Buffet, Thousand Oaks
May	PES	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/

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The IEEE

Membership News

New Members

Please join us in welcoming our new Section members:

- Bryce Anthony Chanes
- Kung-Hua Chang
- Jose Martinez
- Gregory Simon



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

Senior Member Elevation Clinic



The 2013 Senior Elevation Event for the section has been scheduled for Saturday, July 13 at the Goebel Adult Community Center in Thousand Oaks – on Janss road adjacent to the library.

Last year's event resulted in 21 members rising to IEEE Senior Member Grade

We have nearly 300 members in the section who may qualify.

You will be receiving an email announcement if you are a qualifying member of the section. You need to be an active member to receive this announcement. If you are a little behind in renewing (HQ calls in arrears) and want to be included in the announcement please renew ASAP to be included in the distribution dataset.

For more information or to help prepare for the event, contact me.

Christian Ziegler
Membership Development Chair
Christian.Ziegler@ieee-BV.org

Job Opportunities



DIRECTOR – DESIGN ASSURANCE

Premier Ventura County company – must have medical device experience.

Contact
Pat Jacobs
805-579-0630

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 and devices. Experience with inductive coupling desired.

Contact
Pat Jacobs
805-579-0630

pat.jacobs@advancedpersonnelprofiles.com

SR. ELECTRICAL ENGINEER

Congratulation to Second Sight (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

Section News



Power & Energy Society Survey

An on-line survey is being conducted by the PES chapter of the IEEE Buena Ventura Section. The results of the survey will be used to prepare a program schedule for Power and Energy subjects.

The survey can be completed in less than 60 seconds. If you have an interest in these subjects and would like to contribute you can access the survey at [PES Survey Link](#).

Christian Ziegler
Survey Coordinator

Christian.Ziegler@ieee-BV.org

EMBS Administrative Committee Candidate

Annual Administrative Committee elections in the EMBS will open 6 May 2013. EMBS members: please vote for your representatives.

IEEE BV member Abigail Corrin Parks is a candidate for EMBS Administrative Committee - GOLD (Graduates of the Last Decade) office, for which electronic voting opens on May 6th to members of the EMB Society.

- Steve Johnson, EMBS 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

ELECTRICAL ENGINEER

5-10 years low power, mixed-signal including MCU based signal acquisition systems, ASIC and battery life experience. PCB layout a plus. BSEE, MSEE preferred for Pasadena location.

Contact
Pat Jacobs

805-579-0630

pat.jacobs@advancedpersonnelprofiles.com

RELIABILITY ENGINEER

Pasadena medical device company needs Reliability Engineer with 3+ years reliability or failure analysis experience. BSME.

Contact
Pat Jacobs

805-579-0630

pat.jacobs@advancedpersonnelprofiles.com

ASSOCIATE ELECTRICAL ENGINEER

Pasadena Medical Device Company needs 3-5 years experience in low power, mixed-signal design. Prefer MCU based signal acquisition and battery life optimization experience. BSEE.

Contact
Pat Jacobs

805-579-0630

pat.jacobs@advancedpersonnelprofiles.com



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 or call me at 805-558-5097.

Think about it and let me know!

-- Bridge
Chair, IEEE-Buenaventura 2013

JOB SEEKERS CORNER

The IEEE Buenaventura Section (<http://www.ieee-bv.org/>) is proud to announce a new benefit to members. If you are a job-seeker, in-transition or just searching for a new opportunity, we are happy to help you advertise your skills.



Simply send two lines, including your contact information, to Pat Jacobs at pat.jacobs@advancedpersonnelprofiles.com. Pat will publish your information in our monthly newsletter at no cost to the job seeker.

If you prefer, you can advertise anonymously and simply provide your email address and the main points that detail your experience. Employers will contact you directly at the email address provided.

The newsletter is published monthly so please contact Pat by the 20th of the month.

The following IEEE members are searching for new opportunities. Please contact them directly:

MSEE with successful industrial experience in analog mixed-signal designs and electrical/electronics development. Working location is flexible. Contact: sz98001@hotmail.com

Bioengineer with experience in research, development, & management. Contact: beejal@blackboxlabs.us

Looking for Academic, Scientific, or Engineering Talent?

Advertise with the IEEE Buenaventura
Section

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James.L.Keeler@gmail.com

B.S. in physics, strong math skills looking for a role in any scientific or technological field that utilizes mathematical and problem solving skills. Working location is flexible. Contact: (206)375-2503 gqiesber@clunet.edu

Electronics Systems/Software Test Engineer with 10 years experience. Skills include automated and manual software testing, environmental testing, Java and C++. Contact

aaronpoley9@gmail.com.

Systems Administrator with 8 years experience. Windows, Linux, VMWare, Hyper-V, AWS, Powershell, Python. Seeking professional growth Ventura County. Rick@Runeq.net

IEEE BV Section Gives Special Awards at Ventura County Science Fair



VCSF Awards Ceremony-April 11, 2013- From right Doug Askegard(IEEE), Niel Ghandi (1st Place), Quentin Wetherholt (1st), Allan Tran (1st), Ethan Zheng (1st), Mathew Yerich (2nd) & Momin Quddus (IEEE).

Ventura, April 10, 2013 - Ventura County Science Fair was held in the Ventura County Fair Grounds with the organization of VC Office of Education. VCOE celebrated the 59th anniversary of this premier annual event.

Students from numerous Middle and High Schools of Ventura County displayed their Science Projects in fourteen different categories. Top three projects from each category were selected by volunteer judges from the local industries and academia. Top projects on each category have the option of entering the State Science Fair held on April 15th. Participation in VCSF has been growing steadily since its inception in 1957 when eight budding scientists entered their projects. This year 900 students participated in this event.

In addition to awards given by VCOE, special Awards are given by professional organization and industries to exceptional projects. IEEE Buena Ventura Section participated in this special awards category. All projects that generate or use electricity for the implementation of the project were eligible for IEEE special awards. This included projects that use computers.

IEEE Judges selected four exceptional projects for these special Awards. Two exceptional projects were tied for first place and two for the second place. Niel Ghandi and Quentin Wetherholt were selected for 1st place for their project “Next Generation Multi Touch Technology” along with Allan Tran and Ethan Zheng for their project “hazardBot”. Each 1st place winners received \$100 prize from IEEE Buenaventura Section. Mathew Yerich was selected for 2nd place for his project “Magnetic Air Conditioning” along with Erik Loza for his project “Let There be Light”. Each 2nd place winners received \$50 prize from IEEE.

IEEE BV section thanks Doug Askegard (IEEE), Paul Witman (IEEE, CLU), Karl Geiger (IEEE), Chuck Seabury (IEEE), Christian Ziegler (IEEE), and Momin Quddus (IEEE) for judging in the special awards category. The Section also thanks John Tarkany, Vicki Brown, and the staff of VCOE's Office for Special Programs, and VCOE Superintendent Stanley Mantooth as well as recognizes the hard work and fun the students and teachers had working on projects.

Upcoming IEEE Buenaventura Events

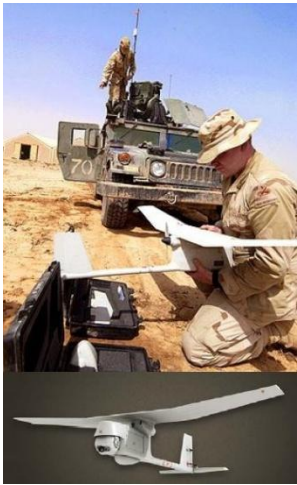


Adoption of the DDL Waveform for the Most Widely Deployed UAV in the World

Speaker : Earl Cox, Program Manager & Systems Engineer, AeroVironment, Inc.

Date/Time: **May 14, 2013** **6:30pm – 8:00pm**

Location: Skyworks, 2440 Hillcrest Drive, Newbury Park



Small Unmanned Aircraft Systems (SUAS) such as the Army's RQ-11B Raven have become a vital part of a soldier's equipment since the early 2000's. They help to cut through the Fog of War by providing the soldier with a vantage point to observe his or her surroundings while remaining far away from the danger. In order to accomplish this, however, the soldier needs to be able to communicate with the aircraft, both to control it and to get the information that it has.

Among the improvements that have gone into SUAS is an interoperable data link called the SUAS Digital Data Link (SUAS DDL or just "DDL"). The Army has adopted this data link as its standard waveform for all of its Unmanned Aircraft weighing less than 30 lbs, about 19,000 airframes.

This presentation will describe the waveform and how it can be used to work with Small Unmanned Aircraft to keep American and allied soldiers safer.

About the Speaker :

Earl Cox is a Program Manager and Systems Engineer at AeroVironment in Simi Valley, CA. He earned his Bachelors and Masters degrees from Cornell University in Electrical Engineering and has been a Communications System Engineer for over 25 years bouncing back and forth between the commercial and government sectors. In between his undergraduate and graduate school, he took a 4-year hiatus to serve as an Officer in the U. S. Navy. In commercial communications, he worked with digital microwave radio and digital cellular phone technology at AT&T Bell Labs, BellCore, Rockwell Semiconductor (now SkyWorks), Televersal Systems, and Broadcom. On the government side, he has worked in the SIGINT and UAS areas at Applied Signal Technology and AeroVironment, respectively. At AeroVironment, he was a member of the Helios team that flew a solar-powered UAV to over 96,000 feet, setting the world record for highest level aircraft flight. He has also worked with small and micro-UAS.

In his personal life, Earl spends all too much time speeding around the southwest in his electric powered sports car showing people that a sustainable world without petroleum can be a lot of fun.

Date and Time: 6:30-8:30pm Tuesday, May 14th, 2013

Location: Skyworks, 2440 West Hillcrest 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

Registration: https://meetings.vtools.ieee.org/meeting_view/list_meeting/18453

Computer Society/Robotics/EMBS/MTTS

FIRST Robotics - High School Robotics Competition

On Wednesday, 15 May 2013, the Newbury Park Robotics Club returns to discuss their recent participation in the Los Angeles Regional FIRST Robotics Competition.

FIRST is the largest national robotics competitions of it's kind at the high school level. Students are given a short 6 weeks to design, build, program, and test a 140lb robot to play a game in cooperation with 3 other robots on a team against another team of 3 robots. The game, the rules and the robot specifications are different every year. This year, the game was Ultimate Ascent, which is played by on a flat, 27 x 54 foot field. Each team competes to score as many discs into their goals as they can during a match.



Student-Contestants get to

- Work alongside mentors who volunteer their time and talents to guide each team
- Build and compete with a robot of their own design
- Learn and use sophisticated software and hardware
- Compete and cooperate in alliances and tournaments
- Earn a chance to compete in the World Championship
- Qualify for over \$16 million in college scholarships

The team will give us a short presentation in the lecture hall, followed (weather permitting) by an extended demonstration and Q&A outside. This is an excellent opportunity to get kids interested in science and engineering.

The presentation is free and open to the public.

Where/When/Details:

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

Wed, 15 May 2013

- 6pm dinner (\$5 students, \$10 non-students), 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/18455

EMC for Functional Safety

Please join us to hear Ed Nakauchi discuss EMI and product safety the evening of Wednesday, 22 May.



Electronic and programmable electronic devices are increasingly being used in applications where reliable functionality is necessary. This increasing use of electronic technologies is causing higher levels of electromagnetic interference (EMI) to the environment. All electronic technologies are vulnerable to errors or malfunctions caused by electromagnetic interference (EMI). The result of all of this worsening EMI is the decrease of functional reliability with potentially serious safety consequences.

EMI is controlled by standards and directives, but specifically do not address safety matters. Likewise, the same for safety standards and directives generally do not deal with EMI issues. As a result, the effect of EMI on safety has been largely unconsidered until now.

About the Speaker



Mr. Ed Nakauchi has a BSEE and MSEE from Northrop University and Columbia Pacific University. He has over forty years experience beginning with analog, power, and digital design. For the last thirty years, he has spent a majority of his time in the EMI/EMC/EMP and ESD areas for both military/aerospace companies and commercial audio, computer, and medical companies. He has written numerous technical papers and magazine articles as well as presented seminars on EMI/EMC/EMP/ESD topics for many companies. He has taught EMI and electrical engineering courses through the University of California Irvine Extension program.

Mr. Nakauchi was the primary author of a shielding design guideline for the Army and was an EMI consultant to the Air Force's Space and Missile Command on their COTS program. He has also worked on several RF projects including the CASSPER system that is an innovative correlation analyzer. Ed has also worked the Space Shuttle, Global Positioning Satellite, Splash Mountain & Rocket Rod rides for Disneyland, submarine systems, and the B-2 Bomber.

He is currently a consultant with G&M Compliance, a regulatory compliance company and EMC senior adviser for CQC-Testing Services in Beijing, P.R. of China. Mr. Nakauchi has published a book titled "Testing for EMC Compliance: Approaches and Techniques" and is an NARTE Certified EMC/ESD Engineer Senior member of the IEEE EMC Society.

Where/When/Details:

Thousand Oaks Library, Newbury Park Branch, 2231 Borchard Rd, Newbury Park, CA 91320

Wed, 22 May 2013

- 6pm refreshments, networking
- 7pm presentation and discussion

Contact/Info/RSVP:

Mike Nicholls mnicholls@a-m-c.com



The Voyager Mission to the Outer Planets and Interstellar Space

Date: Thursday, May 23, 2013
Time: 6:30 pm Refreshments and Networking,
7:00 pm Talk
Venue: Vitesse Semiconductor Corp.
741 Calle Plano, Camarillo, CA 93012

AESS, ED/CAS, LMAG

Launched in 1977, the twin Voyager spacecraft were assigned an ambitious mission: to explore the giant outer planets. Both spacecraft flew by Jupiter in 1979 and Saturn in 1981. Voyager 1's flight path at Saturn bent away from the ecliptic plane, while Voyager 2 continued on to encounter Uranus (1986) and Neptune (1989). Both Voyagers are now heading out of the solar system, with enough onboard resources to continue sending data until at least 2020. In 1998, Voyager 1 became the most distant human-made object in space. In December 2004, Voyager 1 crossed into a region at the outer edge of our solar system and Voyager 2 followed suit in 2007. In 2012 dramatic changes in the intensities of energetic particles at Voyager 1 occurred, which may signal an impending crossing into interstellar space.

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

Speaker: ALAN C. CUMMINGS, Caltech
(Senior Scientist, Member of the Professional Staff)

RESEARCH AREA: COSMIC RAYS, **RELEVANT EXPERIENCE:** 1973 TO PRESENT

EDUCATION: B.A., RICE UNIVERSITY, 1966; CHURCHILL SCHOLAR, CAMBRIDGE UNIVERSITY, 1967; PH.D. CALIFORNIA INSTITUTE OF TECHNOLOGY, 1973

Alan Cummings graduated from Rice University with a B.A. in Physics in 1966. He attended Churchill College, Cambridge, England during 1966-67 as a United States Winston Churchill Foundation Fellow and received a Ph.D. in Physics from the California Institute of Technology (Caltech) in 1973. Since that time he has been employed in the Space Radiation Laboratory of Caltech, where he is presently a Senior Scientist and Member of the Professional Staff. His research interests have recently centered on studies of the anomalous cosmic ray (ACR) component. He has used data from a variety of spacecraft to study ACR composition and radial and latitudinal gradients. Currently, he is analyzing data returned from the Voyager 1 and 2 spacecraft, which are beyond the solar wind termination shock. He is the author or co-author of more than 100 publications in refereed journals.

He is a Co-Investigator on the Voyager Cosmic Ray Subsystem experiment, the Advanced Composition Explorer (ACE) mission, and the Solar Probe Plus (SPP) mission. He has been the Instrument Manager for six instruments: two on the SAMPEX (Solar, Anomalous, and Magnetospheric Particle Explorer) mission launched in 1992, two on ACE, which was launched in 1997, one on STEREO (Solar Terrestrial Relations Observatory), and one on SPP, which will be launched in 2018.



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- Working toward a bachelors degree in electrical engineering
- Willing to take courses in power and energy engineering

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30 June 2013**

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Neighboring Section, Professional Society, and Regional Events



The Society of Women Engineers is holding a Student Recognition Event for Ventura County students, parents, and teacher on Wednesday evening, May 8th at the Orchid Room Banquet facility at 816 Camarillo Springs Rd # H, in Camarillo.

We are presenting Certificate of Merit awards to girls from each high school in Ventura County. The award is presented to 11th grade ladies who have been nominated by their teachers and guidance counselors for excellence in math and science during their high school years.

We are also giving awards to the fifteen Ventura County Science Fair SWE award winners.

The Student Recognition Event is a way to positively encourage young women to pursue higher education and future careers in Math, Science and Engineering. For more information, please contact Sherisse Hughes, SWE president, at sherisse.hughes@gmail.com.

Buenaventura Section and Chapter Info

<u>Section Office 2012</u>	<u>Name</u>	<u>E-Mail</u>
Chair	Bridgeman Carney	bcarney@ieee-bv.org
Vice-Chair	Albert Wolfkiel	awolfkiel@ieee-bv.org
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Programs and Events	Ross Kocen	events@ieee-bv.org
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Historian	Doug Askegard	dougaskegard@ieee.org
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Sr. Representative, LA Council	Bridgeman Carney	bcarney@ieee-bv.org
Jr. Representative, LA Council	Momin Quddus	moming7@yahoo.com
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<u>Chapter</u>	<u>2013 Chair</u>	<u>E-Mail</u>
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Computer	Craig Reinhart	reinhart@callutheran.edu
Electron Dev./Circuits and Systems	Sunil Pai	chair@edcas.ieee-bv.org
Engineering in Medicine and Biology	Bob Rumer	chair@embs.ieee-bv.org
Life Members Affinity Group	Jerry Knotts	chair@lmag.ieee-bv.org
Microwave Technology and Techniques	Tom Campbell	chair@mtts.ieee-bv.org
Power and Energy	Bridge Carney	bcarney@ieee-bv.org
Robotics	Bob 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/>

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

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