

DECEMBER 2014 NEWSLETTER



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EV	EN	TS

Wednesday 3 rd December 6:30 PM	Robotics & Automation Industry Applications	Self-Reconfigurable Robots and Digital Hormones by Prof. Wei-Min Shen, USC at CLU Ahmanson Richter Hall
Wednesday 19 th November 7 PM	EMBS	Communication System Design for Launch Vehicles Speaker: Dr. Keyvan Bahadori, Responsible Engineer Location: Skyworks Conference Room, Newbury Park, CA 91320
Monday 5 th Jan,2015 November 6:30 PM	OpCom	Operating Committee Meeting 6:30 pm Pickles Deli, Newbury Park

MEMBERSHIP NEWS

Hi Everyone!

Please check some interesting events and spread the news about the job opportunities that we have in our area as we move into the holidays. Wish you all a very Merry Christmas and hope you all have a Great Holiday season!

As on membership, this year in August 2014 we have added 68 members which is 25% more than member who joined us in August 2013. For the Prospective members who will also like to join the IEEE local chapter and get involved, New members who join now not only get membership through the end of 2015, they also get \$25 off their first year dues. The discount only applies to first-year dues, and is not applicable toward student membership.

http://www.ieee.org/membership_services/membership/join/mga2013mv.html?utm_campaign=IEEE+Membership+2014+-+2015+-+Branded

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.

--- Albert Wolfkiel IEEE Buenaventura Section Chair 2014



Contact Pat Jacobs -- 805-579-0630 pat.jacobs@advancedpersonnelprofiles.com →

- ♣ Quality Director- Medallion Therapeutics (www.medalliontx.com), Valencia This position is responsible for managing the Quality System and associated compliance activities for the design, development and manufacturing of medical devices in compliance with applicable quality and regulatory requirements, including FDA's Quality System Regulation, European Union Medical Device Directive and ISO 13485, ISO 14971 and other applicable standards and regulations.
- ♣ Sr. Quality & Principal Quality Engineer Medallion Therapeutics (<u>www.medalliontx.com</u>), Valencia Two positions requiring medical device experience. Experienced with drug delivery devices a plus.
- ♣ Product Manager Implantables, Bioness (www.bioness.com), Valencia Experience with medical device marketing. Key strategic partner of the Marketing team responsible for leading the commercial aspects of implantable products. Manage critical processes related to business planning, marketing plans, product training, portfolio management and development, market research. Requires experience working in an operating room or surgical center.
- Product Manager Rehabilitation Technology Bioness (<u>www.bioness.com</u>), Valencia

Experience with medical device marketing. Key strategic partner of the Marketing team responsible for upstream and downstream marketing. Must be a self-starter, able to resolve complex issues in the field and lead cross-functional teams.

→ Sr. Test Engineer - Alfred Mann Foundation (www.aemf.org), Valencia
Conduct integration test for an electronic medical device system. This position will
also lead collaboration efforts for requirements analysis and test documentation,
including all related Requirements Specification, Design Description, Test Plan and
Test Procedures. Facilitate System Design, System Verification and Validation
Strategies in cooperation with other engineering functions. Identify, mitigate and
manage technical risk as part of the design oversight process. Provide technical
insight to Regulatory/Clinical to support regulatory/clinical strategies.

Contact Abby Hariabedian − 805-388-1711 ext 332 ahairabedian@dex.com →

LECTRICAL ENGINEER

Camarillo company looking for an Engineer to successfully complete tooling projects for electronic assemblies such as wind turbine control systems and computer networks used in the medical equipment industry. Minimum 5 years' experience in test engineering, including designing and setting up of ATEs. Please go to dex.com for more info.

Jobs Opportunities at Naval Surface Warfare Center, Port Hueneme, CA Additional questions can be addressed to Esperanza Arroyo, X6082 or esperanza.arroyo@navy.mil

In FY14 NSWC PHD filled 111 positions (mostly in the last 3 months). They are asking headquarters for permission to fill 301 in FY15 (1Oct2014-30Sep2015). All positions will be posted on USA Jobs.

On Thursday, October 2, 2014, vacancy announcement number NW408XX-05-1225157PP921239 will open for the position of Department Manager, Code L00. The announcement will close on October 16, 2014. The position will be filled as Manager, ND-801/830/854/855-05. The selecting official is Dr. William Luebke. The link to the announcement is below and will work starting tomorrow, October 2, 2014. The website for applications is www.usajobs.gov

Link to the job opportunity

announcement: https://www.usajobs.gov/GetJob/ViewDetails/382431700

Last Month at NSWC 30 positions filled (position titles only as below). 28 of new shipmates will work here at Port Hueneme and the remaining two will work at our Virginia Beach detachment. All have the backgrounds, knowledge, skills, and abilities we need to move our command forward. The titles include as below, many of these jobs will keep opening in the near future till all required positions are filled, so please keep a lookout on http://www.usajobs.gov

- Program Manager
- Systems Analyst
- Supply Technician
- Field Service Supervisor
- Administrator
- Financial Management Analyst
- Budget Analyst
- Mechanical Engineer
- Mechanical Engineer
- Mechanical Engineer

- Aegis Ballistic Missile/Fire Control Technician
- Operations Research Analyst
- Systems Engineer
- Engineer (Electrical)
- Mechanical Engineer
- Senior Training Specialist
- Engineer (Tech Manuals)
- Electronics Technician
- Computer Engineer
- Software Engineer
- Mechanical Engineer
- Resource Advisor
- Aerospace Engineer
- Senior Field Engineer
- Electronic Radar System Specialist
- Electronics Technician
- Technical Engineering Support Analyst
- Financial Technician
- Navy Test Officer
- Contract Administrator



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IEEE BUENAVENTURA

ROBOTICS AUTOMATION & INDUSTRIAL APPLICATIONS CHAPTER

Self-Reconfigurable Robots and Digital Hormones Dec 3, 2014 6:30 pm at CLU Ahmanson Richter Hall

Self-reconfigurable modular robots are metamorphic systems that can autonomously change their logical or physical configurations (such as shapes, sizes, or formations), as well as their locomotion and manipulation, based on the mission and the environment in hand. Because of their modularity, versatility, self-healing ability and low cost reproducibility, such robots provide a flexible approach for achieving













complex tasks in unstructured and dynamic environments. The construction and control of these robots, however, are very challenging due to the dynamic topology of the module network, the limited resource of individual modules, the difficulties in global synchronization, the preclusion of centralized decision makers, and the unreliability of communication among modules. This talk presents the SuperBot reconfigurable robotic system and a distributed and reliable control architecture and algorithms for such robots. The approach is inspired by the biological concept of hormones (thus the name "digital hormones") and it provides a unified solution for metamorphic systems' self-reconfiguration/assembly, locomotion, and manipulation. Modules are modeled as autonomous agents free from globally unique identifiers and they can physically connect and disconnect with each other and can communicate via content-based messages. In particular, the talk will present (1) SuperBot's capability for multifunctional locomotion, (2) a general representation for self-reconfigurable systems; (3) distributed solutions for "task negotiation," "topology-dependent behavior selection" and "synchronization"; (4) distributed detection and reaction mechanisms for topology changes and message loss; and (5) demonstrations of unique, online, self-reconfiguration capabilities of SuperBot for assembly, bifurcation, unification, behavior shifting, and shape-alternations. An application for self-assembly in space may also be presented when time permits.

Professor Wei-Min Shen is the Director of Polymorphic Robotics Laboratory, the Associate Director of the Center for Robotics and Embedded Systems, and a Research Associate Professor in Computer Science at University of Southern California. He received his Ph.D. under Nobel Laureate Professor Herbert A. Simon from Carnegie Mellon University in 1989. Dr. Shen has more than 20 years of research experience. His current research interests include self-reconfigurable and metamorphic systems, autonomous robots, Machine Learning, Artificial Intelligence, and Life Science. He has over 100 publications in these areas.



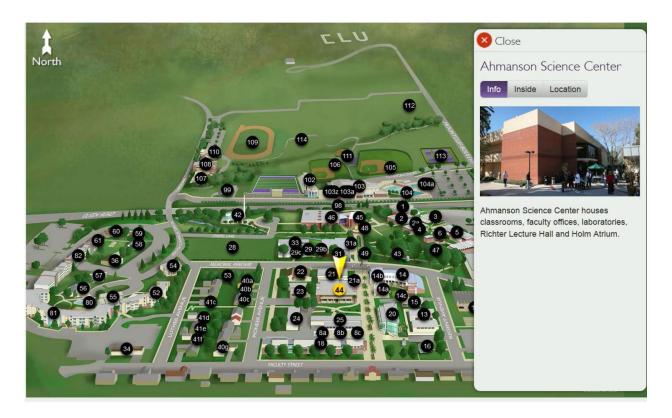
He is the recipient of a Silver-Medal Award in 1996 AAAI Robotics Competition, a World Championship Award in 1997 Middle-sized RoboCup Competition, a Meritorious Service Award at ISI in 1997, a Phi Kappa Phi Faculty Recognition Award at USC in 2003, a Championship Award at the first ICRA planetary contingency robotic competition in 2008, and a Best Paper Award at the 26th Arm Science Conference in 2008. He is the author of "Autonomous Learning from Environment" (W.H.Freeman), a 360-page book on how machines learn from their environment based on "surprises". He is the PI for the SuperBot project for developing a modular, multifunctional and self-reconfigurable robotic system for space application, a co-inventor of CONRO, and the inventor of hormone-inspired distributed and decentralized control for self-reconfigurable systems. He has served as chairs and committee members for international conferences and workshops in Robotics, Machine Learning, and Data Mining, and as editorial board members for scientific books and research journals. His research activities have been reported by leading scientific journals such as SCIENCE (9/26/1997 and 8/8/2003) and NATURE (5/28/2004), and media press such as CNN, PBS, BBC, Fox, Discovery, NHK (Japan), Newsweek, New Scientists, and other newspapers and magazines in the world. His research has been supported by NSF, AFOSR, DARPA, ARO, NASA, and CiSoft. He is the conference program chair for the 7th International Conference on Autonomous Intelligent Systems, and has served on the program committee for AAAI, AAMAS, KDD, ICRA, IROS, and other international technical conferences

Meetings are free, open to the public, Pizza/networking starts at 6:30 pm, Talk starts at 7:00 pm

Contact: Doug Askegard, dougaskegard@ieee.org Our Sponsors: California Lutheran University, IEEE Buenaventura Section

Address

California Lutheran University 100 Ahmanson Science Building, 60 West Olson Road, Thousand Oaks



Directions from Ventura:

Take the Ventura Freeway 101 South.
Take Lynn Road Exit, turn left, drive 2.9 miles.
Lynn Road turns into Olsen Road, drive .9 miles.
Turn right onto Mountclef Boulevard - the University is on the right Turn Right onto Memorial Parkway
Park on Memorial Parkway or adjacent streets.

Directions from Los Angeles:

Take the Ventura Freeway 101 North.

Take Lynn Road Exit, turn right, drive 2.9 miles.

Lynn Road turns into Olsen Road, drive .9 miles.

Turn right onto Mountclef Boulevard - the University is on the right.

Turn Right onto Memorial Parkway

Park on Memorial Parkway or adjacent streets.

VERY IMPORTANT: PRINT YOUR PARKING PASS - In general, visitor Parking is no longer permitted before 7 p.m. on Memorial Parkway and adjacent street. If you arrive before 7 p.m., please park in the large lot next to the corner of Olsen Road & Mountclef Blvd.

CLU STREET PARKING PERMIT IEEE-RAS-IA MONTHLY MEETING

THIS VEHICLE IS AUTHORIZED TO PARK ON ANY CLU STREET BEFORE 7 PM ON THE 2ND OR 3RD WEDNESDAY OF EACH MONTH IN CONNECTION WITH THE IEEE-ROBOTICS AUTOMATION/INDUSTRIAL APPLICATIONS MEETING ON THE CLU CAMPUS.

NAME:	
LICENSE PLATE:	
CONTACT PHONE NUMBER:	
CURRENT DATE:	

Fred Miller Director of Campus Public Safety (805) 493-3960











Date/ Time: Thursday December 11th, 2014

6:30 PM Pizza & networking

7:00 PM Presentation

Location: Skyworks Conference Room

Newbury Park, CA 91320 (See RSVP/Directions Below)

Speaker: Dr. Keyvan Bahadori,

Responsible Engineer

Title: Communication System Design for Launch Vehicles

Abstract:

Communication systems play a very critical role in the success of any launch vehicle operation. These systems have to operate in one of the harshest environment possible for any fast moving vehicle. Among several comprising components of

a communication system, antennas designs are the most environmentally challenging as they are usually being exposed to the worst condition as the most forefront component of the chain.

This presentation gives an overview of launch vehicles and the role of communication systems in their operations. Some fundamentals in modeling and design of the communication links are presented and special space-related terms are discussed. Antenna requirements and challenges to realize the designed system are then reviewed and finally some design guidelines to meet those requirements are suggested.

Bio:

Keyvan Bahadori received his MSEE and Ph.D from UCLA in 2004 and 2008 respectively. His research areas have included novel designs of reflector antennas for spacecraft applications, high frequency hybrid methods, and ultra wideband (UWB)antennas for wireless communications.

He Joined with Aeroantenna Technology, Inc. in Chatsworth, CA in July 2007 as a senior antenna design engineer and later as the RF director to lead leading several projects in developing advance aircraft antennas for avionics, GPS and GNSS applications and ultra wideband (UWB) systems.

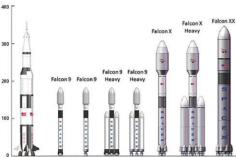
He has been with Space Exploration Technologies (Spacex) in Hawthorne CA, since June 2012, where he is the responsible engineer to deliver the next generation of communication systems and antennas for rockets and spaceships.

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,-

 $\underline{118.930994\&num=1\&t=h\&vpsrc=0\&ie=UTF8\&z=18\&iwloc=A}$

RSVP Requested: https://meetings.vtools.ieee.org/m/27803

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