

# IEEE BUENAVENTURA SECTION

## Welcome to the Buenaventura IEEE Section for June, 2009.

Our events are free and open to the public, and often have dinner available. All of these events are posted on the Section calendar, available on our site.

- June 9: *ComSoc* PCIe versus Serial RapidIO, at ITT-FPS, Westlake
- June 10: *Computer* RFID in Implantable Medical Devices: Security Implications, at CLU
- June 17: *MTTS* Combining FPGA with RF for SDR OFDMA Physical Layer Waveform Development, at Ciao Wireless, Camarillo
- June 25: *AESS* Utilizing Electronic Dispersion Compensation (EDC) and Embedded Waveform Viewing Technologies in Next Generation Backplanes, at Vitesse Semiconductor, Camarillo



If you didn't make last month's IEEE-USA speaker event on immigration and employment policy, you're in luck – it's on-line as a podcast here:



[http://www.ieee-buenaventura.org/portals/0/media/Harrison\\_May\\_2009.mp3](http://www.ieee-buenaventura.org/portals/0/media/Harrison_May_2009.mp3)

On a related note, our Section will continue it's new October tradition of Dinner with the Experts in our presentation of **Frontiers in Digital Entertainment**. Watch for announcements!

Our Section's annual **Senior Member Advancement** event will take place on September 12 at California Lutheran University. Interviewers will be on hand to review your credentials, write recommendations, and file your application.

*Potential Senior Member candidates* – watch your e-mail over the summer for an invitation to participate, or drop me a line. *Recent Senior Members* – watch your e-mail for your opportunity to “pay it forward” by conducting the interviews for potential senior member candidates in September.

*Steve Johnson, 2009 Section Chair*

40 year member of IEEE and  
recently elected a Sr. Member!

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Renew your  
IEEE Membership  
for 2009

**Date and Time:** Tuesday, June 9, 2009

**Location :** ITT – FPS, 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=&qty=](http://maps.yahoo.com/maps_result?addr=3500+Willow+Lane&csz=Thousand+Oaks%2C+CA&country=us&new=1&name=&qty=)

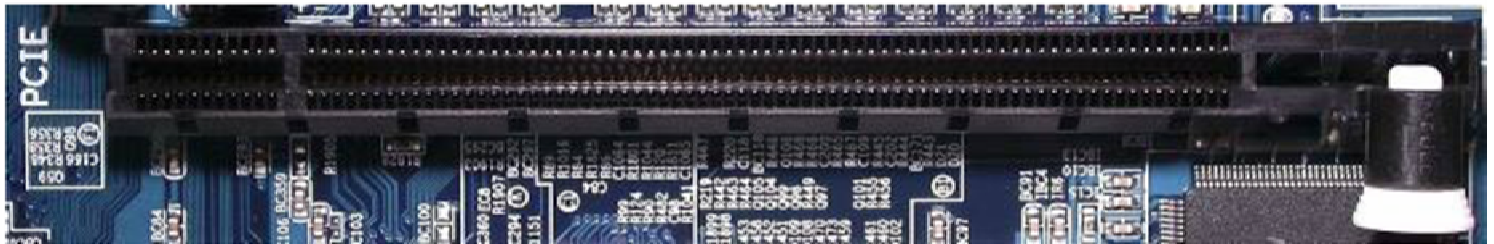
**Agenda:** 6:30 p.m. Reception, Pizza, & Networking  
7:00 p.m. Meeting & Presentation

**RSVP Requested only if you plan to attend:** Victor S. Lin, [victor.s.lin@aero.org](mailto:victor.s.lin@aero.org)

***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 Right-To-Work documentation.

## **PCIe versus Serial RapidIO**

**Speaker:** Richard M. Mathews



PCI Express and Serial RapidIO have many features in common, yet there are important differences that affect which would be better for particular applications. PCIe is becoming ubiquitous in PCs, from desktops to large servers. RapidIO sees much more use in embedded applications. Often they are seen side-by-side performing different functions in the same system.

This presentation will compare and contrast these technologies, analyze their strengths and weaknesses, and consider which is better suited for various types of applications.

**Bio:** Richard M. Mathews is a developer of embedded, real time and distributed operating systems. At Curtiss Wright, he is a System Architect and the Product Development Manager for the  $\mu$ mem line of fast PCIe solid-state disks based on battery-backed RAM. In this position since 2002, he also was a designer of the acclaimed CoSine system-on-chip that combines user-programmable FPGA logic, PCI-X and Serial RapidIO interfaces, and a multiported DDR memory controller. Prior to that, he spent nine years at Sun Microsystems, where he led groups in kernel and device driver development for Solaris x86 and ChorusOS. Mr. Mathews was at Locus Computing Corporation for eight years, where he worked on the development of IBM's AIX operating system, specializing in clustering mechanisms, process control, and memory management. He came into software from physics and astronomy, which he studied at Caltech.

# IEEE Buenaventura Section Computer Society Chapter

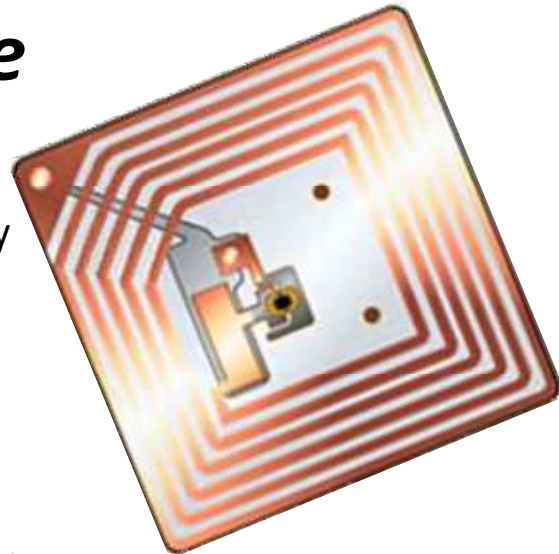


Computer Society

## ***RFID in Implantable Medical Devices***

Protecting Against Exploitable Security  
Vulnerabilities

Nalanjan Dey Roy,  
California Lutheran University  
Wednesday May 10 at 7 p.m.  
*CLU Ahmanson Science Building*



Radio Frequency Identification (RFID) is the next generation identification technique with a cheap and simple design. As RFID finds its way into the medical environment, it is important to put necessary safeguards against security vulnerabilities in place before we unleash the technology upon the world. Results of research will help us to understand the possibilities and level of risk involved in a RFID in implantable devices. This presentation provides an overview of RFID technology and the system components involved. Aspects of security and privacy will be discussed. An overall system with data management will be presented.

Site	California Lutheran University, 100 Ahmanson Science Bldg, 60 West Olson Road, Thousand Oaks Meetings are free, open to the public
Dinner	Pizza and soft drinks available at 6:30 p.m., \$5 Talk at 7 p.m.
Parking	Visitor Parking is no longer permitted before 7 p.m. on Memorial Pkwy and adjacent street. Please Park in "G" lots or stop at the CLU Welcome Center for an on-street parking permit. Map at <a href="http://www.callutheran.edu/about/campuses.php">http://www.callutheran.edu/about/campuses.php</a>
Contact	Craig Reinhart, <a href="mailto:reinhart@clunet.edu">reinhart@clunet.edu</a> or Karl Geiger, <a href="mailto:kgeiger@computer.org">kgeiger@computer.org</a>





## **Combining FPGA with RF for SDR OFDMA Physical Layer Waveform Development**

Mani Peroomal - Agilent

**Wednesday, June 17th, 2009 (6:30PM)**

**Location:** Ciao Wireless  
4000 Via Pescador,  
Camarillo, CA 93012

**Agenda:** 6:30 pm Reception & Networking;  
7:00 pm Presentation



### **BIOGRAPHY**

**Mani Peroomal** works in Agilent EEsof and specializes in baseband, RF, Wireless, EM and Signal Integrity design and simulation technologies. In this capacity he works with various companies in enabling efficient and productive design flows with the aid of simulation tools. Before that he worked in Agilent EEsof R&D for over 15 years in different capacities – Technical Lead/Scientist, and Software Architect in designing next generation simulation tools for the MMIC, RFIC, MW/RF and Wireless industries. Before the acquisition of EEsof by HP, he worked on various phases of the MIMIC programs funded by DARPA.

Mr. Peroomal holds a MSEE and a MS in Software Engineering.

IEEE BUENAVENTURA SECTION  
Aerospace & Electronics Systems Chapter  
&  
Life Members Affinity Group

**Utilizing Electronic Dispersion  
Compensation (EDC) and  
Embedded Waveform Viewing  
Technologies in Next Generation  
Backplanes**

**Date:** June 25, 2009

**Time:** 6:30 pm Refreshments and Networking,  
7:00 pm Talk

**Venue:** Vitesse Semiconductor Corp.  
741 Calle Plano,  
Camarillo, CA 93012

The application of IC-based electronic dispersion compensation (EDC) and embedded waveform viewing technologies in next generation backplanes will be discussed. The two distinct technologies have implicit use in the bring-up, performance enhancement and optimization of next generation backplanes running at 10Gbps+ speeds. The embedded waveform viewing is incorporated into the first decision circuit in a high-speed serial data receiver, enabling the received data eye to be scanned in a manner very similar to oscilloscopes. The same core circuit is used to implement the EDC algorithm. By locating both functions at the point of decision, the performance of a preceding integrated equalizer can be directly viewed (and tuned) prior to clocking. Furthermore, system designers now have an “inside the chip” view as adjustments to the EDC algorithm are being made. The benefits of this technology can be far-reaching in backplane design, with immediate benefits to the signal integrity and system engineers, along with improved manufacturability and reduced operational expenses for the end customer.

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

**Speaker: George Noh, Vitesse Semiconductor Corp.**

George Noh, Senior Systems Engineer at Vitesse Semiconductor Corporation.  
George is responsible for product definitions and future application engineering through simulations, lab measurements, and involvement in standards such as SFF8431 SFP+, SFF8461 Cu Direct Attach Cables, Fibre Channel, and IEEE802.3ba 40/100G. George holds a B.S.,M.S.E degree from the University of California, Los Angeles.



The IEEE Region 10 Student Activities Committee is pleased to introduce **IEEE 125th Anniversary Region10 Student Congress, 2009**. Jointly organized by National University of Singapore and College of Engineering Chengannur, India this event is scheduled from 16th to 19th July, 2009 in Singapore.

IEEE is a non-profit organization and the world's leading professional association for the advancement of technology. There are nearly 80,000 student members in over 160 countries around the world. The Congress will be attended by around 150 students from across the world, screened from among the registrants based on their achievements, volunteerism and contribution towards the advancement of IEEE and will be aimed at sculpturing global student leaders to pioneer sustainable development.

The Main Highlights of the events are:

- World @2020** - This will be a discussion forum, where the world's most esteemed Leaders from various fields of life will be invited for an open discussion with the student community.

- Exhibition on "Technologies for Sustainable Development"**

- Dignitaries Bench** - The IEEE dignitaries will address the delegates and share their experience in IEEE.

The congress will also be a platform for IEEE student leaders across the world to share their experiences of successful initiatives in IEEE along with leadership training sessions and group discussions to analyze and solve multicultural issues within the IEEE student community.

See the Region 10 Student Congress 2009 Web Site at:

<http://www.ieee125sc.org>



# 2009 Buena Ventura Section IEEE Officers

*We welcome your involvement – We have several positions open!*

## **Section Office**

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**If you need to reach individuals or companies with a technical background in Ventura County and beyond, this newsletter is an ideal vehicle.**

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**Please contact Steve Johnson, [sfjohnso@ieee.org](mailto:sfjohnso@ieee.org)**

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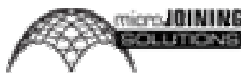
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