



January 2015 Newsletter

Welcome to the January 2015 edition of the IEEE Buenaventura Newsletter

In this issue

IEEE Announcements

- Call for Nominations – Engineer of the Year and Project of the Year

IEEE technical talks

- Jan 14 – Visual Search using Vector Quantization
- Jan 21 – Global Observer UAV System and Test Results
- Jan 28 – Technologies Enabling Mastery in Dentistry

Other events

- Jan 22 – The Society of American Military Engineers – Annual Business Opportunities Presentations
- Feb 19 – National Engineering Week – 2015 Awards Banquet

IEEE - Call for Nominations

Engineer of the Year and Project of the Year

Each year the IEEE Buenaventura Section selects one Engineer of the Year who is recognized for outstanding performance to the profession of engineering and one Project of the Year to honor a group of individuals who have completed a significant technical project such as a product design release, or installation, or service to the community. Here is the [form](#) for the EOY and POY Application to be mailed to moming7@yahoo.com by January 11, 2015.

Jan 14, 2015

IEEE Technical Talk - Visual Search using Vector Quantization

Pizza and networking: 6:30 PM

Presentation: 7:00 PM

No RSVP needed.

Abstract

The techniques of vector quantization have long been used for data compression, but they can also be used as an innovative way to accomplish pattern recognition. When a dataset is “kernelized” it is transformed into a smaller denser space that enables fast lossy searching. This can be particularly useful as a way to implement image matching for visual search. This talk will describe various ways of “kernelizing” images and methods for storing and retrieving the resulting vectors. It will also describe a visual search engine implementation based on these methods, and touch on related techniques including kernel synonymization and iterative turning. And yes, there will be a demo!

About the Speaker

Ole Eichhorn has more than 25 years of experience as an entrepreneur, software engineer, architect, and manager. In 2013 he founded [eyesFinder](#), a company developing leading-edge Visual Search solutions. In 2011 he co-founded [DoubleBeam](#), which develops mobile payments solutions. Ole was the founding CTO of [Aperio](#) in 2001, the leader in digital pathology solutions, and actively participated in developing applications of this technology for patient care. Previous to that Ole served as SVP/Engineering at [PayPal](#), GM of Online Billpay at [Intuit](#), VP/Engineering for [Digital Insight](#), and Director of Technology for [XP Systems](#).

Location

[California Lutheran University](#)
[Ahmanson Science Center](#), Room 100
Thousand Oaks, CA 91360

Free parking is available in the G1 [visitor lot](#) at the corner of Olsen Road and Mountclef Boulevard. Alternatively, CLU Public Safety has provided us with [parking passes](#) for on street parking. **Do not park in the faculty/staff/resident lots.**

Presented by: IEEE Buenaventura Computer Society Chapter

[Click here for more information](#)

Jan 21, 2015

IEEE Technical Talk - Global Observer UAV System and Test Results

Pizza and networking: 6:30 PM

Presentation: 7:00 PM

RSVP: Dougaskegard@ieee.org

Abstract

Global Observer (GO) is a high-altitude long-endurance unmanned aerial vehicle designed and built by AeroVironment to manoeuvre automatically even under adverse weather conditions for specific missions: maritime patrol, hurricane or storm tracking, detection and location of electromagnetic interference, and agriculture optimisation operations. The GO is the first UAV to be fitted with a liquid hydrogen fuelled propulsion system. It can be transported by a C-130 aircraft. Flying at a maximum altitude of 65,000ft (19,812m), the GO provides its operators with real-time intelligence data transmitted to the ground control station (GCS) through a satellite communication data link. The UAV can render communication relay when cell towers, microwave relays and satellite downlinks are damaged.

About the Speaker

Andy Thurling, Chief Pilot and Director of Product Safety & Mission Assurance at AeroVironment, Inc. will discuss the reasons that launched the GO project, the system architecture of this new UAV architecture and the test results.

Originally from Rochester, New York, Andy Thurling graduated from MIT and was commissioned as an Air Force officer in June 1987. Over the next decade, Thurling served in various positions as an F-15 fighter pilot, including Chief of Programming and Flight Commander, before being selected for Test Pilot School.

Thurling is a Distinguished Graduate of the Air Force Institute of Technology and the U.S. Air Force Test Pilot School. He has held several positions as a test pilot including Chief of Test and Evaluation in the F-22 Program Office and as an instructor at the Test Pilot School. His career in the Air Force culminated as Commander of the 452d Flight Test Squadron and Director of the Global Vigilance Combined Test Force, a unit responsible for the flight test of the nation’s newest unmanned aircraft including the Global Hawk, Predator, and X-47 Navy UAS aircraft. He has more than 2,300 hours of flight time in more than 35 types of aircraft.

At AeroVironment, Thurling has been responsible for all phases of testing on AeroVironment’s revolutionary hydrogen-powered unmanned aircraft, the Global Observer, from strategic test concept development to acting as initial cadre instructor pilot. He was awarded the 2011 AUVSI Foundation “Operations Award” for this work.

Thurling has served on RTCA SC-203 and is now a member of SC-228 working with the FAA UAS Integration Office, major UAS Stakeholders, and the wider the UAS community to develop the Minimum Operational Performance Standards for UAS integration into the National Airspace.

Location

[California Lutheran University](#)

[Ahmanson Science Center](#), Room 100
Thousand Oaks, CA 91360

Free parking is available in the G1 [visitor lot](#) at the corner of Olsen Road and Mountclef Boulevard. Alternatively, CLU Public Safety has provided us with [parking passes](#) for on street parking. **Do not park in the faculty/staff/resident lots.**

Presented by: IEEE Buenaventura Robotics and Automation/Industrial Applications Joint Chapter

[Click here for more information](#)

Jan 28, 2015

IEEE Technical Talk - Technologies Enabling Mastery in Dentistry

Dinner (optional): Available at 6:00 PM for \$10 payable at the door. No RSVP needed.

Presentation: 7:00 PM

Abstract

Advances in biomaterials and dental technology have revolutionized the art of oral care. Newer techniques are less invasive, more comfortable and procedures that formerly took multiple trips to the dentist can often be performed over one office visit. An array of imaging tools have become available to dental offices and enable accurate diagnosing of not only tissues and teeth problems but also helps diagnosed medical conditions related to the maxillary and head as well as respiratory problems. Equipped with a large array of tools to collect patient specific information, dentists can now customize the treatments to the patient. New dental materials make dentistry more durable, efficient and natural-looking. The introduction of new surface treatments has taken the art of the restoration of a smile to new levels. Stem cell therapy is in research for dental care and brings hope for tissue regeneration to solve gum disease problems and tooth decay issues.

About the Speaker

Sorin Muntean, DDS, earned two degrees in Dentistry: one from the Bucharest School of Dentistry in Romania and the other from the University of Southern California in 1986. Dr. Muntean focuses his interest in restorative and cosmetic dentistry. In his Thousand Oaks practice, he develops treatments for his patients that maintain comfortable chewing, healthy gums, and an appealing smile. Achieving lifetime durability with proper home care requires strategic thinking and wise selection of materials and solutions. Dr. Muntean is a member of the Academy of Cosmetic Dentistry, Academy of General Dentistry, the American Dental Association, the American Equilibration Society, the California Dental Association, the Dawson Academy, the Santa Barbara Ventura county Dental Association, the Spear Education Institute, the Thousand Oaks Dentistry, and the USC Alumni club.

Location

[California Lutheran University](#)
[Ahmanson Science Center](#), Room 100
Thousand Oaks, CA 91360

Free parking is available in the G1 [visitor lot](#) at the corner of Olsen Road and Mountclef Boulevard. Alternatively, CLU Public Safety has provided us with [parking passes](#) for on street parking. **Do not park in the faculty/staff/resident lots.**

Presented by: IEEE Buenaventura Engineering in Medicine and Biology Chapter

[Click here for more information](#)

Jan 22, 2015

The Society of American Military Engineers Annual Business Opportunities Presentations

Area municipalities, counties, and Federal Government entities to include Naval Base Ventura County, USACE LA District and the Naval Facilities Engineering and Expeditionary Warfare Center will present their annual capital construction programs and other contracting and business opportunities.

[Click here for more information](#)

Feb 19, 2015

National Engineering Week - 2015 Awards Banquet at the Presidential Reagan in Simi Valley.

An evening honoring Engineers, Educators, Projects, Companies, and Students.

4:00 PM to 9:00 PM

Scholarship awards to engineering students are presented in the stunning setting of the Presidential Reagan Library. 13 Engineering Societies from the Ventura and Santa Barbara counties gather to honor their Engineer of the Year and Project of the Year recipients.

Those who have registered and attending the banquet will have the chance to tour the library before the dinner and also enjoy the exhibition *Amazing Automobiles: The Ultimate Car Exhibit*.

Please join us at the IEEE table. For tickets contact Dougaskegard@ieee.org. Tickets are \$75 prior to Feb 2nd, and \$80 after that. Or for general seating, you can purchase tickets by mail using the form [at this link](#).

Guest Speaker will be [Dr. Claudia Alexander](#), U.S. Project Scientist for the multinational Rosetta Project which recently placed the Philae Lander on the comet 67P/C-G. In the world of space science, Claudia Alexander is a household name. In addition to her position with the U.S. Rosetta Project, she was the last project manager of NASA's Galileo mission to Jupiter and, early on, was a member of the technical staff at the Jet Propulsion Laboratory in Pasadena, California.

- Registration Opens, 4:00 pm
- Tours of Air Force One, 4:00 - 5:00 pm
- Tours of Presidential Library, 5:00 pm - 6:30 pm
- Social Hour, 5:30 pm - 6:30 pm
- Dinner, Awards and Guest Speaker, 6:45 pm - 9:00 pm

Find us online

Main Site: www.ieee-bv.org
Communications: comsoc.ieee-bv.org
Computer: computer.ieee-bv.org
EMBS: embs.ieee-bv.org

Facebook: <http://www.facebook.com/IEEEofVenturaCounty>

Join the IEEE

[IEEE Membership Services](#)
[IEEE Member Discounts](#)
[IEEE Home Page](#)