

**IEEE Orange County Consultants Network (OCCN) joins with the Los Angeles Area Consultants Network (LAACN) in presenting:**



**Kip Haggerty, Ph.D., P.E..**  
**310-607-9609**  
**kip@ieee.org**

## **Being an Engineering Consultant: What Does it Take?**

### Synopsis:

The transition from being an employee to running your own consulting practice is challenging. Business and personal life choices will impact your ability to succeed. This talk will present the basics of successfully entering engineering consulting highlighted with personal experiences and observations from eighteen years in private practice. Included will be a discussion of business and personal life choices that help prepare an engineer to make the transition to private practice.

### Bio:

Kip Haggerty, Ph.D., P.E. has over 32 years of experience in control, communication, and sensor systems engineering. He received the Ph.D. degree in electrical engineering from the University of California, Los Angeles in 1988.

Since 1994, he has been the principal systems engineer of H&A Systems Engineering, where he leads the control, communication, and sensor systems engineering consulting portion of the business. His consulting work has covered systems issues in advanced airborne radar, electronic warfare, power electronics, active RFID location, and breathalyzer sobriety monitoring.

From 1980 to 1994, he was an engineer at Hughes Aircraft Company, El Segundo, CA. His systems engineering experience at Hughes covered a broad range of sensor and communication technologies as well as control and signal processing algorithms. He developed, simulated, and analyzed avionic system concepts that included spread spectrum data communications, radar, and air traffic control communications. He also led a cooperative engagement system concept study. For radar systems, he participated in a demonstration of the first high resolution radar range profiles from a new waveform and he designed, simulated, analyzed, and verified radar signal processing, tracking, and calibration algorithms.

Dr. Haggerty is a senior member of IEEE and a member of Tau Beta Pi. He is a licensed electrical and control systems engineer in the state of California. He has five published papers, taught two short courses on Kalman Filtering, and has given numerous presentations.

**Date: Saturday, September 22nd, 2012**

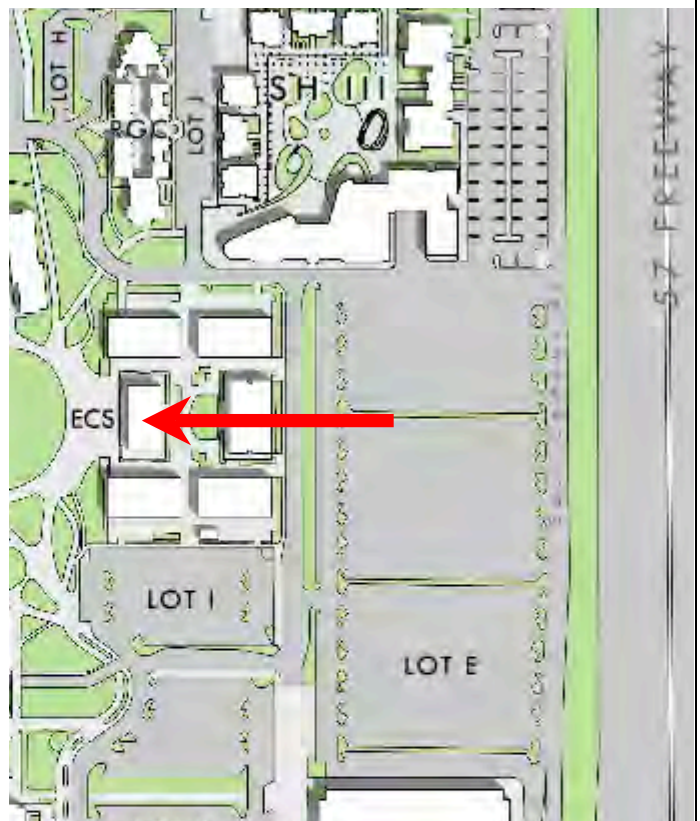
**Time: 10:00 AM Introductions & Presentation  
12:00 PM Lunch & Networking**

**Location: Cal State Fullerton on Nutwood and 57 in Fullerton.**

**Meeting is in the Engineering and Computer Science (ECS) Building. Room 221.**

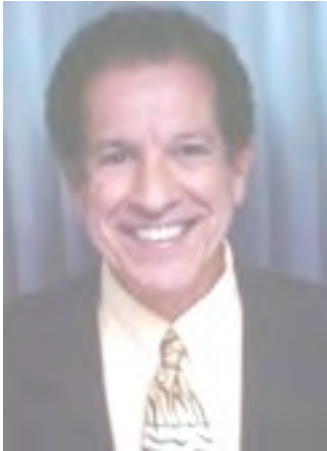
**Parking: Saturday parking is free. Enter from Nutwood and take Folino Drive north to Parking Lot E. See maps at [parking.fullerton.edu/maps](http://parking.fullerton.edu/maps) for more detail.**

**October Meeting: A presentation on "LinkedIn Is Compulsory, Even for Engineers" by Sven Johnson. Saturday October 27<sup>th</sup> at 10:00 AM.**



Lunch is free with reservation. Send reservations or questions to [r.gauger@ieee.org](mailto:r.gauger@ieee.org). Check out the IEEE-USA consultants website, database, and resources at [www.ieeeusa.org/business](http://www.ieeeusa.org/business).

**IEEE Orange County Consultants Network (OCCN) joins with the Los Angeles Area Consultants Network (LAACN) and the IEEE Foothill Section PACE in hosting:**



**Dr. Gary L. Blank**  
**IEEE-USA Vice-President**  
**Career and Member Services**  
**and Candidate for IEEE-USA**  
**President-Elect 2013**

## **New IEEE Tools, Services, Programs, and Networks for Consultants, Entrepreneurs, the Employed and the Unemployed**

**Abstract:** What can the IEEE-USA do for you? Dr. Gary L. Blank, IEEE-USA Vice-President, Career and Member Services, will describe new tools, new services, and new programs, and updates on older ones, at this special meeting. These are all designed to advance the careers, practices, and networking of consultants, entrepreneurs, those who are employed, and those who are unemployed.

During his talk, Dr. Blank will explain how the Consultants Networks function, and how they interface and work with other IEEE organizations including the Sections, PACE, Chapters and Societies, WIE Women in Engineering (WIE), Graduates Of the Last Decade (GOLD), and Life Members. He will describe the powerful IEEE-USA Consultants Database website and how it helps consultants find clients. He will also talk about the newly-formed IEEE-USA Entrepreneurs Networks and how effective they are in helping members to start new businesses, the new IEEE-USA Employment Networks that are rapidly growing and how they are helping our unemployed members to find jobs, and some of the new career advancement tools and services.

**Biographical:** Dr. Blank earned his Ph.D. in Electrical Engineering at the University of Wisconsin in Madison. He has been a full-time technical consultant for many years having provided consulting services for more than 40 major corporations and government agencies. He is the founder of the IEEE Chicago/Rockford Consultants Network which has over 200 members, and is the past chair of the AICN (Alliance of IEEE Consultants

Networks).

He has been a full-time professor of Electrical and Computer Engineering at Illinois Institute of Technology, Northern Illinois University, and Marquette University. He also taught at UCLA, and the University of Florida. He has worked with and consulted with many companies in Southern California. He is currently consulting with the U.S. Department of Energy in the areas of Smart Grid, Electric Vehicles, and Renewable Energy, and with the United Technologies Corporation (Hamilton Sundstrand) in the areas of Control Systems and Power Electronics.

His current IEEE-USA VP responsibilities include over 40 IEEE Consultants Networks in the USA, many of which he has founded for their sponsoring Sections. He also provides a 6-hour workshop/training for the members of the Networks on how to start and how to rapidly expand a successful consulting practice. In addition to the AICN (Alliance of IEEE Consultants Networks)

Dr. Blank, as IEEE-USA Vice President, is also responsible for the start-up and management of the IEEE-USA Employment Networks, the IEEE-USA Entrepreneur Networks, the IEEE-USA K-12 STEM Literacy Activities, and the IEEE-USA Professional Engineering Licensure and Registration programs. He is a candidate for IEEE-USA President-Elect 2013, nominated and endorsed by the IEEE-USA Board of Directors.

Date: **Wednesday, August 8<sup>th</sup>, 2012**

(Note that this is a change from the time and date announced earlier)

Sponsorship: **This meeting is being hosted by the PACE Activities of the IEEE Foothill Section, in cooperation with the Orange County Consultants Network and the Los Angeles Area Consultants Network. All IEEE members are invited. No charge for food or parking.**

Time: **6:30 PM Networking and food.**

**7:00 – 9:30 PM Presentation and Q&A.**

Location: **Diamond Bar community Center, 1600 Grand Avenue, Diamond Bar, CA**  
The Community Center is located near the intersection of the Freeways 57 and 60, with the Freeways 10 and 210 fairly nearby. This was selected in order to allow many IEEE members from the LA Metropolitan Area, as well as the Inland Empire and Orange County to attend. Free parking on site, but car pooling is recommended. Use your travel time to network.

Past Meeting: Slides from Dr. Gayn Winter's presentation on Big Data are available from Gayn at [gaynwinters@alum.mit.edu](mailto:gaynwinters@alum.mit.edu).

Future Meeting: **A meeting is being planned for the fourth Saturday in September, with the meeting again in the Engineering Building at Cal State Fullerton at 10:00 AM. Mark your calendar and watch for the announcement.**

[r.gauger@ieee.org](mailto:r.gauger@ieee.org)

**DON'T RETIRE - CONSULT**

MEETING NOTICE for Saturday, June 23<sup>th</sup>, 2012 Please Post!

**IEEE Orange County Consultants Network (OCCN) joins with the Los Angeles Area Consultants Network (LAACN) in presenting:**



**Gayn B. Winters, Ph.D.  
1962 Lerner Lane  
Santa Ana, CA 92705  
714/366-4296 cell  
gaynwinters@alum.mit.edu**

## **Consulting Opportunities with Big Data and Hadoop**

Abstract:

Becoming common are Petabyte ( $10^{15}$  bytes) and larger datasets and techniques to process them on clusters of thousands of ordinary PCs. This talk discusses the techniques provided by The Apache Software Foundation's Hadoop, which enable high availability processing on such clusters where frequent machine and disk failures are common and expected. The techniques and several simple examples plus at least one substantial example will be presented. Once basic principles are understood, consulting opportunities abound as more and more companies realize they have huge amounts of complex data. For example, in the financial markets there are huge datasets that are related to risks on various investments being made. Many companies offer their products on line, and as a prospect logs into their site, the company wants to make meaningful suggestions for products (Think Amazon for books, NetFlix for movies, Fry's for electronics, Dell and HP for PCs, etc.) GM just cancelled their Facebook advertising for lack of productivity; GM has tons of consumer data, what did they do wrong on Facebook and how should GM proceed? Grocery stores give discounts for using "membership cards." They collect petabytes of information yearly that correlate the shopper's age, address, and purchases. How should they use this data? Power transmission companies have amassed huge quantities of usage and load data across the current grid. How should they use this to design the next generation "smart grid"? Electronic medical records can now be mined to discover correlations with various sources of pollution and certain diseases. Google builds all of its applications using this technology; what would you suggest for Yahoo and other specialized search engines? There will be time for Q&A on these and related consulting opportunities

Bio:

Ph.D. from MIT, with considerable post doctoral and academic work. Did foundational work using distributed workstations in the Financial Analysis industry. At Digital Equipment built the industry's first PC with integral Ethernet, won a Computerworld award for best micro/mainframe integration software (that became Digital's highest volume software product), promoted to Digital's corporate strategy board and Corporate Consultant, corporate internationalization architect, oversaw multiple worldwide programs with many F1000 clients. Board of Directors for Unicode, Inc. At Phoenix Technology, as CTO, VP and GM, ran worldwide engineering and program management for systems; clients were manufacturers of PCs, boards, chips, peripherals, PDAs, and laptops. Started Bristol Systems to do engineering and application development outsourcing. Expert in high availability networking and security. Consulting, software development, and project/program management for manufacturing, commercial real estate, legal, and laboratory clients. At L-3/IEC, worked on current and modernized military GPS based products. Currently working on Big Data problems in the insurance industry.

Date: **Saturday, June 23rd, 2012**

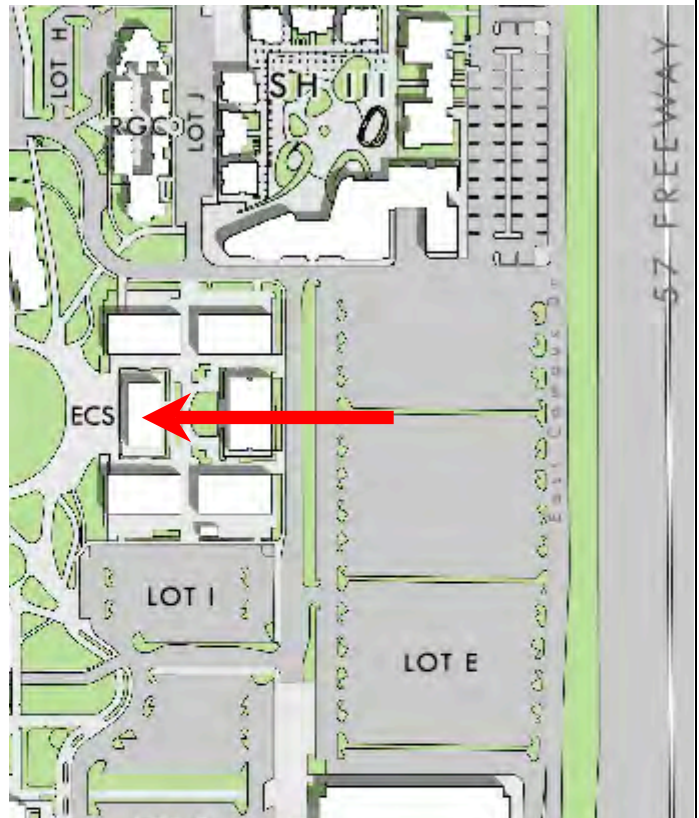
Time: **10:00 AM Introductions & Presentation**  
**12:00 PM Lunch & Networking**

Location: **Cal State Fullerton on Nutwood and 57 in Fullerton.**

**Meeting is in the Engineering and Computer Science (ECS) Building. Room 202.**

Parking: **Saturday parking is free. Enter from Nutwood and take Folino Drive north to Parking Lot E. See maps at [parking.fullerton.edu/maps](http://parking.fullerton.edu/maps) for more detail.**

Future Meeting: **A presentation by Dr. Gary L. Blank, consultant, workshop leader, and 2012 candidate for IEEE-USA President-Elect is being rescheduled for an August date. Watch for the announcement.**



Lunch is free with reservation. RSVP before the 23<sup>rd</sup> with an email to [r.gauger@ieee.org](mailto:r.gauger@ieee.org). Check out the IEEE-USA consultants website, database, and resources at [www.ieeeusa.org/business](http://www.ieeeusa.org/business).

I am contacting you as you are an IEEE consultant listed in the Consultant's Database and you live in the LA/OC area.

I am working with Ralph Hileman to set up a consultant's meeting on Saturday the 28th. We hope to reactivate the once very popular local consultant's networks and we need your advice and help.

We now have a time: 11:00 AM on Saturday the 28th.

We now have a Room #: E-221 in the Engineering Computer Science Building. Thanks to David Cheng.

We now have a map. I found the best one at [parking.fullerton.edu/maps](http://parking.fullerton.edu/maps).

It looks as though Parking lot E is the best choice, but use your own judgement.

Parking is free on Saturdays.

I usually take 57 to Nutwood, take the first entrance and go north on Polino Drive.

This is a joint LA/OC meeting and a chance to pick up where we left off, including:

Are joint meetings still the best way to go?

When and where should we meet? What is best for you?

San Diego has a very successful evening meetings with a low cost dinner. Is that any better?

The Bay Area has an even more successful program with dinner meetings and a rather pricy webinar.

What fits your needs?

Do we need fewer meetings, filled in with on-line meetings?

Workshops and Seminars used to be very popular. Do you see an interest in this area?

What other things like this could we do to help local consultants?

Pizza is also on Saturday's agenda.

We will also take a look at what the IEEE national has to offer for consultants and see what we can take advantage of.

Who else should we be inviting?

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We hope you can meet with us, but if you already have a Saturday commitment we understand. But, if you can't come, please send me an email with your opinions regarding the questions above.

Or send me an email anyway and we will make plans for you.

Thanks for your help.

Bob Gauger