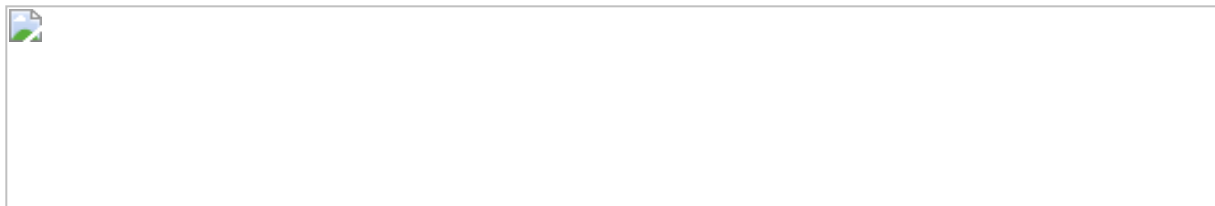


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AESS QEB, Issue 16

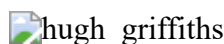
Quarter 4, 2013

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Society News

Welcome Message
by Hugh Griffiths
AESS President 2012-2013



Summertime (at least in the northern hemisphere) and the living is easy ... The chance to spend more time with family and loved ones, to write that paper or proposal that you'd be meaning to, and to take stock.

Did You Know?

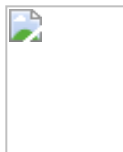
Did you know that AESS is on [LinkedIn](#) and [Facebook](#)? Please join us!

I am writing this at the Fall meeting of the IEEE Technical Activities Board (TAB), in New Brunswick, NJ. This meeting includes the Presidents of all of the IEEE Societies and Divisional and Regional Directors, so is a substantial and serious affair. One sees the IEEE at its best – a collection of volunteers from (literally) all over the world, passionate about the profession, working together.

2014 AESS Officers



President - Robert P. Lyons, Jr.

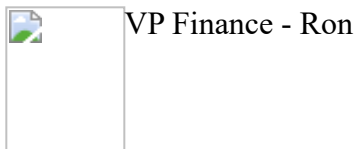


Executive VP - Teresa Pace

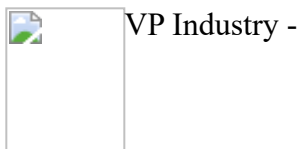
I'd like to highlight the changes that have been made recently to the Distinguished Lecturer (DL) program under the leadership of Dr Joe Fabrizio, VP for Education. A full list of the DLs and their lectures, as well as the details of the procedures to be followed, are available in the AES Magazine and on the AES website.

Rather wistfully I realize that my time as President is drawing to a close. At the Fall meeting of the AES Board of Governors at the end of September we elected Bob Lyons as AES President for 2014/15. Bob has a long and distinguished record of service on the Board. I wish him every success, and I trust that he enjoys his Presidency every bit as much as I have enjoyed mine. It has truly been a pleasure and a privilege !

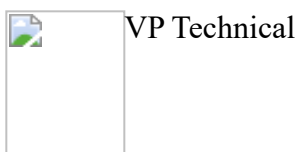
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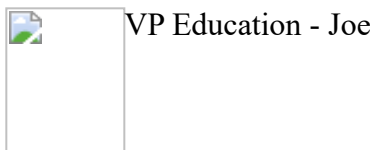
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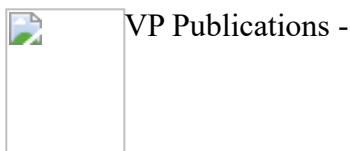
Alfonso Farina



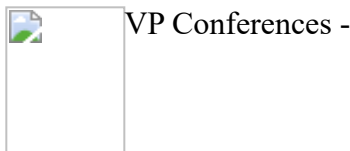
Operations - Roger Oliva



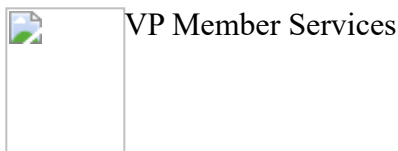
Fabrizio



Peter Willett



Iram Weinstein



- George Schmidt

As many of you will already know, the IEEE runs a substantial program of awards, medals and prizes. Some of these are at Society level, and some at IEEE level. They recognize outstanding contributions in our profession - over an entire career or at an early stage. The processes are rigorous, requiring detailed nominations and endorsements, and assessment by panels of experts. The AESS Awards Chair is Erv Gangl.

The process relies entirely on nominations. So if you can think of someone whose work has really made a difference and who deserves recognition, please take the trouble to identify the appropriate award and to prepare the nomination. A list of the AES awards, criteria and nomination processes and deadlines can be found at:

<http://www.ieee-aess.org/membership/awards>

Thanks and best wishes,

Hugh Griffiths
AESS President

Complimentary Radar Pocket Guide courtesy of Rohde & Schwarz

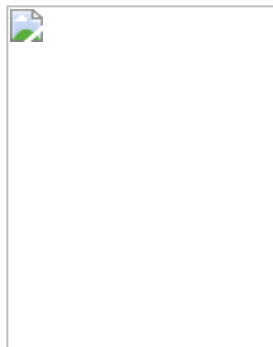
Rohde & Schwarz has teamed with SciTech Publishing to provide a concise and useful Pocket Guide for the radar professional, written by G. Richard Curry. Filled with definitions, propagation models, range equations, formulas, useful graphs and other handy rules of thumb, this pocket guide is a must have across all Radar Specialists. With over 20 pages of information, take this pocket guide with you in the field and use it as the first source of information to remind you of all the RF that you need to know for radars.

Limited offer! Register now for your complimentary Radar pocket guide, courtesy of Rohde & Schwarz.

Note that we are only able to ship to U.S. and Canada at this time.

Congratulations to the newly elected 2014-2016 Board of Governors!

Erik P. Blasch, Robert L. Ewing, Alfonso Farina, James Howard, Robert C. Rassa, Frank Reyes, William P. Walsch, Peter K, Willett



<http://www.rohde-schwarz-ad.com/AESS.php>

Awards

Congratulations to our recently elevated IEEE Fellows, Class of 2014!

Joachim Ender Fraunhofer Group

for contributions to multi-channel synthetic aperture radar and radar array signal processing

Robert Ewing Air Force Research Laboratory

for contributions to electronic system design in avionics

Yu Morton Miami University

for contributions to the understanding of ionospheric effects on global navigation satellite signals

Marina Ruggieri University of Roma 'Tor Vergata'

for contributions to millimeter-wave satellite communications

Paul Ryan

for contributions to aviation safety

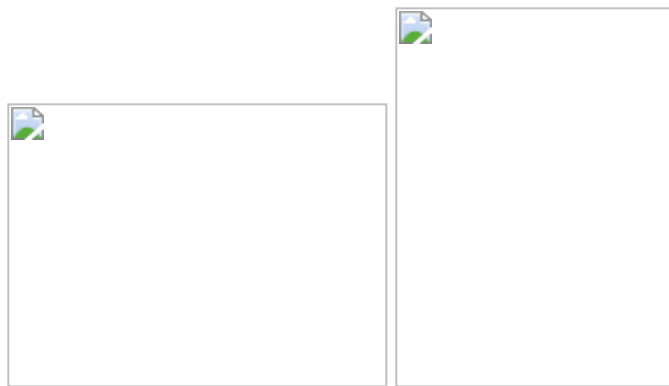
Iram Weinstein Science Applications International Corp.

for leadership in signal processing and test methods for radars detecting advanced aircraft and cruise missiles in severe terrain clutter

England & the Netherlands (Holland) - Ron Ogan

A late afternoon flight from Jackson, MS on Saturday 14 September provided an arrival in London about 1:00PM on Sunday afternoon. London hotels are expensive and the Mercure Bloomsbury hotel was no exception but it was only 6 blocks from University College London, so it was a convenient location.

Tuesday 17SEP, a brief meeting was held with Dr. Hugh Griffiths, AESS President, at his office on the University College London UCL campus, see Figure 1. Next was a lunch meeting at the St. Pancras Hotel (Figure 2) with John Roper, Trig Avionics, Edinburgh, Scotland who provided demonstration hardware and information on FAA NextGen compliant avionics products that support Automatic Dependent Surveillance-Broadcast technology. The St. Pancras (Figure 3) was built around the rail station, the hotel looks like a fairy-tale castle straight out of Disney World. It opened in 1873 and was built in the Venetian Gothic style.



An evening AESS presentation “FAA NextGen Air Traffic Control System” was given at UCL (Figure 4) noting that all flights bound for the United States after 1 January 2020 must comply with FAA regulations. Afterwards, Hugh, my wife, Sharon and I walked to the Jeremy Bentham Pub. Bentham (1748-1832) was a leading theorist in philosophy of law and a political radical. He requested that when he died his body be preserved and kept on display. His body was preserved and is kept at the University College of London (UCL) in a wooden cabinet, modestly and precisely labeled "Jeremy Bentham." The body as such is not visible, since it is clothed and the head has been removed and replaced with a wax one. Pretty creepy if you ask me.

On Wednesday 18SEP, a one hour train ride was taken from the London Waterloo Station to Southampton to meet with NATS, a private company contracted to support the British Civil Aviation Authority. Unfortunately, Richard Deakin, CEO, NATS was not available and Kevin Briscoe, Communications Office provided NATS operation details.

AESS members elevated by other Societies or Councils:

**Hao Huang (IA)
GE Aviation**

for contributions to electric power generation, conversion, and control in aircraft

**Hassan Kojori (IA)
Honeywell**

for contributions to the design and application of predictive and diagnostic algorithms in power electronics converters

**Kim Fowler (IM)
Kansas State University**

for contributions to mission-critical and safety-critical systems engineering

**Hector Fenech (SysC)
Eutelsat SA**

for leadership in the definition of telecommunications satellite architectures and systems through innovation and technological exploitation

**Zachary Lemnios (SysC)
IBM Corporation**

for leadership in advanced technologies of defense security systems

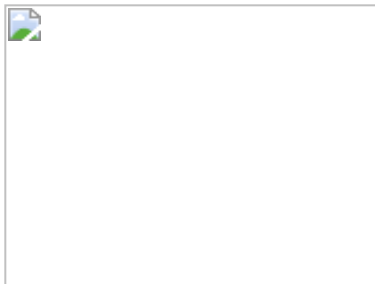
Nominate an IEEE Fellow today!

IEEE Fellow is the highest grade of membership of the IEEE. It honors members with an outstanding record of technical achievements, contributing importantly to the advancement or application of engineering, science and technology, and bringing significant value to society. Anyone can be a

UK airspace contains a network of corridors, or airways. These are usually ten miles wide and reach up to a height of 24,000 feet from a base of between 5,000 and 7,000 feet. They mainly link busy areas of airspace known as terminal control areas, which are normally above major airports. At a lower level, control zones are established around each airport. The area above 24,500 feet is known as upper airspace.

All of these airways are designated “controlled airspace” similar to the FAA procedures in the United States except with UK having only 5 major airports, they do not have a Class B airspace.. Aircraft fly in them under the supervision of air traffic controllers and pilots are required to file a flight plan for each journey, containing details such as destination, route, timing and height.

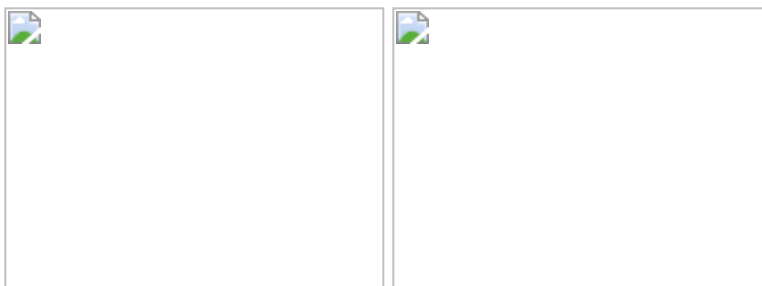
There are over 200 AESS members in the United Kingdom with 14 members living within 50 miles of London and there are 14 AESS members who live within 50 miles of Southampton . John Guy, former NATS engineer and University College London instructor now lives near Southampton and he provided details about the area including the nearby Stonehenge (figure 5) which is located near Salisbury. Stonehenge was completed about 3500 years ago but it was preceded by the first Stonehenge which was a large earthwork or Henge, comprised of a ditch, bank, and the Aubrey holes, all probably built around 3100 BC. The Aubrey holes are round pits in the soil about 3 feet wide and deep, with steep sides and flat bottoms. They form a circle about 284 feet in diameter.



Travel on Friday 20SEP, included a return from Southampton to the London Waterloo station, underground (subway) to Heathrow Airport, a flight to Amsterdam, Netherlands and a shuttle to the Wyndham Hotel (Figure 6) which has been selected for the Fourth AESS Chapter Summit to be held on 21 August 2014 immediately before the IEEE Sections Congress meeting at the RAI Convention Center. Amsterdam has a great Metro rail system that operates above ground due to the high water table in the Netherlands. Several hotels were surveyed and proposals were received prior to the Amsterdam visit. The Wyndham Apollo Hotel was selected based upon the meeting facilities

nominator (no need to be an IEEE Fellow, or even an IEEE member). The nomination deadline is 1 March, and all required information is obtained from www.ieee.org/fellows.

and location of 1.8 kilometers (about a mile) from the RAI Convention Center.



Membership

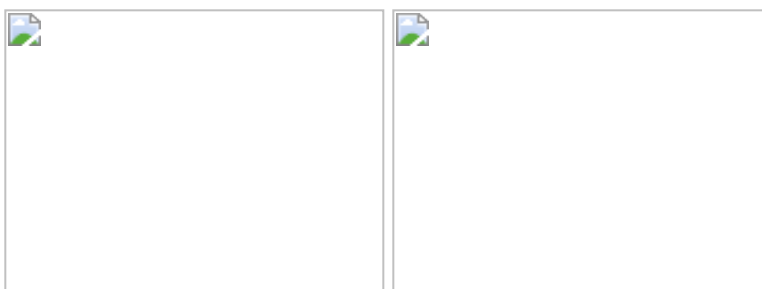
Congratulations to the newly elevated Senior Members for 2013 thus far:

Robert Bishop, Ryan Hersey, Vincent Kirk, Alejandro Monsivais Huertero, Frank Robey, John Gorman, Tapas Pal, Luis Rodrigues, Hongbo Sun, Richard, Joyce, Victor Larios Rosillo, Tyler Marshall, Anthony Martone, Lee Patton, Diana Yolanda Valadez-Rovelo, G. Viswanathan, Paulo Costa, Henry Leung, Francisco Perez Guevara, Eduardo Miramontes Garcia, Majunatha HV Reddy, Anand Gharpure, Antonio Timoszczuk, Piero Angeletti, Keshav Bapat, Raja Boddu, Gopi Bulusu, Gamantyo Hendratoro, Steven Lein, Nagaraj Shivaramaiah, KoteswaraRao Tatipamula, Yaseen Zaidi, Ayman Asadi, Timothy Gray, Richard Horn, Charles Johnson-Bey, Farinaz Koushanfar, Saurabh Rahul, Gloria Tuquerres, Ronald Twist

The biggest danger in Amsterdam is getting run over by a car, or more likely, by a bicycle. Amsterdam was founded as a fishing village in the late 12th century. The historic canal district is on the UNESCO world heritage list.

The impressive 17th century Royal Palace is in Dam Square. The Dam was created in the 13th century when a dam was built around the Amstel River to keep the sea from inundating the city. The Skinny Bridge crosses the Amstel River, see Figure 7. It is an Old Dutch design wooden bridge known as a double-swipe (balanced) bridge. The current bridge was built in 1934. The original one was built in 1691 and was so narrow that 2 people had trouble passing each other.

The houses (Figure 8) in Old Amsterdam are so narrow because lots sold by the city during the early days of Amsterdam were only 5.5 meters (about 18 feet) wide. The houses built then are supported by 36 foot tall wooden pilings sunk into the soil. As long as these piling stay submerged in water they will not rot because they have no contact with the air. Some of the houses are leaning because not enough pilings were used for support. Modern houses are supported by concrete piling.



Chapter Information

AESS is expanding in the number of active chapters with multiple starts in Regions 8, 9, and 10. While there are multiple [AESS chapters](#), for AESS members without Chapter, we are here to help in

IEEE AESS Society Expense Reporting Process

[Click here for more information](#)

[IEEE Expense Reporting Form](#)

forming a chapter. Two actions to maintain existing chapter developments include (1) event planning and (2) mentorship.

Maintaining a chapter can be facilitated by planning an event, hosting a distinguished lecturer, or coordinating a conference. The benefit is networking, content, and engaging discussions. AESS has coordinated on multiple events, conferences, and speakers; so future opportunities and events are driven by the members.

To foster and maintain AESS intra-chapter relationships with that of AESS inter-chapter relationships, we are planning on developing a mentorship program. Students and GOLD members will be matched against experienced people in industry, academics, and government. These discussions are meant to enable new members learn about each other, career paths, and networking as an IEEE AESS member.

Aerospace and Electronics Systems Society for Quality of Life

A presentation was prepared by Alfonso Farina and Maria Sabrina Greco and presented by Prof. Greco at the meeting of Division IX of IEEE for Quality of Life. The presentation was on behalf of AESS President Prof. Hugh Griffiths.

It covered the following topics:

- Fields of interest of AESS (complex systems for space, air, ocean and ground),

Conference Information

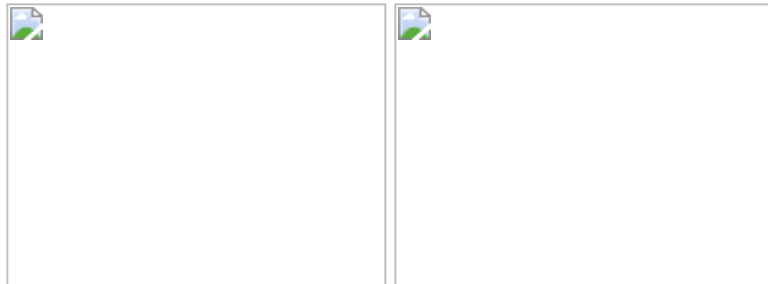
Please go to the [AESS Website](#) to see a full list of upcoming conferences.

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32nd DASC - Syracuse, NY, USA

In October, the IEEE AESS Co-sponsored (with the AIAA DATC) the Digital Avionics System Conference. It was a success even with the variations in availability from NASA and FAA employees. Discussions on avionics, systems engineering, and aircraft safety issues were discussed based on recent results – such as the NextGen system. Paul Kostek (previous IEEE President) and Erik Blasch (AESS BoG) were both on hand to introduce attendees to IEEE AESS.

Below are pictures of Jeff Beyer, Paul Kostek, and Erik Blasch at the conference.



The 33rd DASC will be held next year in Colorado Springs.



IEEE AUTOTEST will be held 15-18 September 2014 in St. Louis, MO, USA.

Abstract Submission Deadline:
15 January 2014 ([Call for Papers](#))

IEEE AUTOTEST is the United States' largest conference focused on automatic test systems for US military systems, and has been held annually since 1965. The Conference, whose general theme is The Support Systems Technology

- Conferences,
- Publications,
- Educational activities, distinguishing lecturer programs, awards, Technical Operations Panels,
- Details on programs for space (Galileo satellite system, CosmoSkimed I and II),
- Air traffic management,
- Maritime traffic monitoring,
- Details on ground systems (Smart Energy, Smart Mobility, Smart & Safe City, Law Enforcement, Indoor and Outdoor Localization),
- Radar for health monitoring,
- Automotive radar,
- Folder of AESS

International Director Region 9 Report

[Luis Riesco](#)

Education

If you haven't explored our [Educational Video Tutorial System](#) on the AESS website, this would be a good time to do so because we've added several new entries. In addition to the six tutorials listed on that page for AESS members, we have added links to several other sites offering coursework and lectures that may be of interest to our members. Look under [Other Tutorials](#) tab to access them. The Radar Systems Engineering Course is constantly being expanded, and now contains seventeen segments, each with a video lecture and downloadable pdf copies of the slides. Also, we've just added a link to several interesting lectures

Conference, is held in varying cities around the US each fall. Administered by a standing Board of Directors, the Conference typically presents over 120- quality application-focused papers with over 250 Exhibits, all focused precisely on the current issues facing military automated test. Attendance ranges between 650 and 750 (paid) attendees, with an additional 1,000 to 1,200 exhibitor and spouse attendees.

The Conference Registration includes admission to Technical Sessions, a copy of the Proceedings (CD ROM), lunch on Tuesday & Wednesday, Exhibit Hall access, Tuesday Exhibitor Reception, and Wednesday Evening Gala ticket.



33rd DASC will be held 5-9 October 2014 in Colorado Springs, CO, USA.

Final Manuscript Submission Deadline:
1 March 2014

For more information, visit the website at:

<http://www.dasconline.org/>



2014 IEEE Aerospace Conference will be held 1-7 March 2014 in Big Sky, MT, USA.

For more information, visit the website at:

<http://www.aeroconf.org/>



PLANS 2014 will be held 5-8 May 2014 in Monterey, CA, USA.

For more information, visit the website at:

that were presented at meetings of the Seattle Section.

These links are provided as a service of our members. If you know of others that would interest our members, please let us know by email to [Dr. Joe Fabrizio](#), our VP for Education.

Publications

Upcoming Transactions Posted on the AESS Website

Upcoming Magazine articles:

[January, 2014](#)
[February, 2014](#)
[March, 2014](#)

For a listing of Upcoming Transactions, please visit the [AESS website, Upcoming Transactions.](#)

Open Access Policy

In accordance with IEEE policies regarding open access (OA) content, the AES Transactions has become a “hybrid” journal for submissions dated November 1st 2012 or later. This means that authors have the choice between the traditional publication model and an OA model. The former is the familiar procedure in which an accepted article is available on IEEEExplore to subscribers of that service. Under the OA model the author of an accepted manuscript chooses to pay a fee, such that the manuscript is posted on IEEEExplore and available,

<http://www.ion.org/plans/index.cfm>



2014 IEEE RadarCon will be held 19-23 May 2014 in Cincinnati, OH, USA.

For more information, visit the website at:

<http://www.radarcon2014.org/>



2014 IEEE NAECON will be held 25-27 June 2014 in Dayton, OH, USA.

For more information, visit the website at:

<http://naecon.org/>

free, to all. The current OA fee is \$1750 per article, and this figure is independent of manuscript type (regular, correspondence or letter).

Technical Operations

Technical Panels

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[Aerospace Systems Integration Engineering](#)

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[Radar Systems](#)

[Space Systems](#)

[Target Tracking](#)

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To submit new articles, please send an email with your article to AESS QEB Editor, [Cosimo Stallo](#), subject line: "Quarterly Email Blast Article Submission". The next publication will be in Quarter 1, 2014, deadline for submission is December 20, 2013.