

## About the IEEE Aerospace & Electronic Systems Society Newsletter



Dear AESS Members,

I hope you have had a great start to 2020!

This year marks a changing of the guard for the AESS leadership as Walt D. Downing transitioned in as President, taking over from Joe A. Fabrizio, who served as our President over the last two years.

I take this opportunity to congratulate Joe for his inspired leadership that resulted in so many new initiatives and accomplishments for our Society.

Looking ahead, there is no doubt that Walt can effectively guide us to build upon these successes in the future to continue to provide value to AESS members at all stages of career development. However, leading the AESS into a new decade is a huge responsibility soâ€¦good luck Walt!

Warmest regards,  
Fabiola Colone  
Editor-in-Chief, AESS QEB  
[fabiola.colone@uniroma1.it](mailto:fabiola.colone@uniroma1.it)

## Message from the President

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Â¡Feliz aÃ±o nuevo!



The year 2020 signals a new decade of promise . . . and uncertainty. For the last two years the Aerospace and Electronic Systems Society (AESS) Board of Governors has used â€œVision 20/20â€ as our strategic theme and it has served us well. As I begin a two-year term as President of AESS, I look forward to the opportunity to continue the innovative initiatives started by Past President Joe Fabrizio as well as create compelling new programs that provide value to all members, both current and prospective.

As we consider our collective future, we must recognize the challenges that AESS and all professional societies face to stay relevant in the information age. How we choose to respond will be critical. Legacy products and services based on business as usual and resulting from yesterdayâ€™s activities are, frankly, losing value. What got us here will not get us where we need to be in the future. We must change and adapt to this new environment or we will not survive. After all, we are in the technology business which is constantly changing, and we must change with it. Just as our members need to develop new skills and grow professionally to avoid obsolescence and career stagnation, so too must the AESS offer new products and

services to meet their needs. Addressing these challenges will not be easy, because change takes us out of our comfort zone. As we all know, it's easier to stick with the known than to try the unknown. However, exploration that tests the limits of knowledge--a founding principle in our chosen career fields--is the key to innovation and future success.

Join us and come along on the adventure!

Walt Downing, IEEE Life Senior Member, AESS President (2020-21)



## The Story Behind a Success

*by Francesca Filippini and Fabiola Colone*

As the recipients of the Best Paper Award at the RADAR2019 conference, it is our pleasure to share a few words with you.

We are honored that our paper titled "Polarimetric detection scheme for passive radar based on a 2D auto-regressive disturbance model" has been selected as the best, given the high technical level of the conference.

We have been working together for four years in a supervisor-PhD student relationship, and the mutual trust and esteem between us has been growing over the years. We are glad for having achieved such a great result together.

This award is also an opportunity for us to point out that women can achieve great success, especially when openly supporting and lifting each other up. We hope that more and more women get interested in STEM reaching other, even more ambitious, results.



## The History Column

by Hugh Griffiths



The third anniversary in this series is Marconi's first transatlantic radio transmission, on 14 December 1901.

In the late 19th century several scientists, including Popov, Tesla, Lodge and Marconi, worked to investigate the properties of electromagnetic waves experimentally. In particular, Marconi demonstrated transmission of a radio signal over increasing distances, and by the end of 1901 he was able to attempt to send a signal from Poldhu in Cornwall, south-west England, to St John's in Newfoundland, Canada.

[Read Column](#)



## Society News

### Unveiling and Dedication of IEEE Historic Milestone

by Hugh Griffiths, Peter Knott, & Wolfgang Koch

On 19 October 2019, an IEEE Historic Milestone plaque was unveiled and dedicated in K ln (Cologne), Germany, marking the invention and first demonstration of radar on 17 May 1904, by the German inventor, Christian Daniel H ismeyer.



[Read More Here](#)

### **The IEEE AESS is awarded the 2019 IEEE Educational Activities Board Society Professional Development Award**

The 2019 IEEE Educational Activities Board Society Professional Development Award was awarded to the IEEE AESS on Friday, November 22 at the IEEE EAB Awards Ceremony in Boston, MA at the IEEE TAB Meeting Series. The citation for the award is *“For offering inspiring and comprehensive educational programs and innovative professional development opportunities to the IEEE community.”*



[Read More Here](#)



## AESS at the White House:

Dr. Shannon Blunt to join the President's Council of Advisors on Science and Technology.

[Read More Here](#)



## IEEE TAES Editor in Chief announced the M. Barry Carlton Award

Michael Rice, EiC of the *IEEE Transactions on Aerospace and Electronic Systems* has announced the recipient of the 2015 M. Barry Carlton Award. **Jason Williams** was awarded the M. Barry Carlton Award for his paper entitled "Marginal Multi-Bernoulli Filters: RFS Derivation of MHT, JIPDA, and Association-Based MeMber."

[Read More Here](#)

## Membership Opportunities



## AESS Professional Networking and Mentoring Program

2020 marks the fourth year of this innovative AESS program that helps connect students and young professionals with more experienced AESS members for two-way exchange. This program has been a great success.

Our vision is a flexible international program that is carefully implemented, attentively supported, and singularly focused on providing benefits to AESS members.

We have an excellent core of distinguished international members distributed across industry, academia, and government, who are experts in their field and who are willing to share their time and experience to develop future leaders within the AESS.

More information is available on the [AESS website](#). Mentors and mentees, it is easy to sign up for the program. Join us today!

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## IEEE AESS Professional Networking & Mentorship Program Report November 2019

As a part of IEEE AESS Professional Networking and Mentorship program, Dr. Ganesh Subramanian of Team Dronix--Panimalar Institute of Technology, Chennai, India has presented a talk on "Drone license' around the globe during a one day workshop on 'Application and Technology development of Drones," held at Institution of Engineers building, Bengaluru on 10 November 2019. [Read more here.](#)

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## AESS Membership Certificates are now available!

Follow these steps to download and print your certificate:

- Log into [Collabratec](#)
  - Click on your name in the top right of the screen and select "Member Certificates" from the drop-down menu
  - From the "Member Certificates" page, click on the "Download PDF" link to the right of "IEEE Aerospace and Electronic Membership"
  - Open the PDF and print it
- 



AESS Members have free access to the [AESS Resource Center!](#) The Resource Center is a robust, web-based, technical learning and research center that is tailored to support the educational, career, and research needs of AESS members. It is a one-stop shop for AESS Video Tutorials, Publications, educational material, interviews, and more!

## AESS Resource Center Submissions Invitation

The IEEE Aerospace and Electronic Systems Society (AESS) is pleased to invite submissions of tutorials and short courses for inclusion on the [AESS Resource Center](#). This provides an opportunity for authors to support the professional development members of the field and extend the reach of their training material to a global audience. Tutorials may be submitted under a non-exclusive agreement, which does not transfer ownership to IEEE. Further submissions process instructions may be found on the [AESS website](#).

## Chapter News

### Unveiling of the first IEEE Milestone in Ukraine, Zenit Parabolic Reflector L-band Pulsed Radar 1938

On 21 November 2019, an IEEE Historic Milestone plaque was unveiled and dedicated at the V. N. Karazin Kharkiv National University in Ukraine, marking the first successful field test of Zenit, two-antenna L-band pulsed radar, demonstrating the ability to accurately determine all three coordinates of a flying airplane. [Read more here.](#)

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## Chapter Meeting: Joint SMC/AES Chapter of the Lone Star Section

The newly-formed Lone Star Section Joint SMC-AES Chapter met on Friday, 13 December, 2019 to hear Edwin of Southwest Research Institute talk about 1553 Avionics Cyber Vulnerability Assessment and Cyberattack Detection. [Read more here.](#)

The Joint SMC/AES Chapter of the Lone Star Section (formerly part of the Central Texas Section) met at on Tuesday, 17 December, 2019 for a presentation by Patrick Ellis of Southwest Research Institute on RF Geolocation Using a Single LEO Satellite. [Read more here.](#)

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## Region 8 Chapter Summit

*by Heinz Wipf*

Region 8 held their Chapter Summit on 17 October in Cologne, Germany. [Read the full report here.](#)



## AESS Technical Panels

Currently the AESS has 7 Technical Panels:

- [Gyro and Accelerometer](#)
- [Radar Systems](#)
- [Aerospace Control & Guidance Systems](#)
- [Cyber Security Panel](#)
- [Avionics Systems Panel \(ASP\)](#)
- [Navigation Systems Panel](#)
- [Glue Technologies for Space Systems Technical Panel](#)

The panels hold multiple meetings per year throughout the world, typically where conferences relevant to their technical interests are taking place. Creation of IEEE standards and support of IEEE Conferences are major thrust of technical panels. Each panel operates under its own charter and bylaws. Be sure to click the appropriate Technical Panel button above for more information on that panel.

Please contact George Schmidt ([gtschmidt@alum.mit.edu](mailto:gtschmidt@alum.mit.edu)), VP Technical Operations, the Technical Panel Chairs or any member of the Board of Governors if you're interested in participating in the work of a technical panel.

Distinguished Lecturers are wanted to support the Panel's technical areas, as well as, in all the AESS areas of interest; for more information contact VP Education, Lorenzo Lo Monte ([lorenzo.lomonte.us@ieee.org](mailto:lorenzo.lomonte.us@ieee.org)).

[Click Here to Read Panel Posts on Recent Activities](#)

## Education News

### AESS Chapter Lone Star Section attends the University of Texas at San Antonio Tech Symposium

The Lone Star Section AESS Chapter attended the University of Texas at San Antonio Tech Symposium, which showcased engineering senior design projects and other innovative multidisciplinary research projects. [Read more here.](#)

### Unmanned Aircraft Systems Standardization Collaborative (UASSC) Plenary Meeting: Summary

The Unmanned Aircraft Systems Standardization Collaborative (UASSC) Plenary Meeting was held Thursday, 12 September 2019 in Washington, DC. The meeting was for the purpose of launching the version 2 update to the ANSI UASSC standardization roadmap for UAS. [Read more here.](#)

### AESS Distinguished Lecturer Program

All AESS Chapters and IEEE Sections are encouraged to take advantage of the AESS Distinguished Lecturer and Tutorial Program for their regular or special meetings, that allows them to select from an outstanding list of truly distinguished speakers who are experts in the technical fields of the Society. For more information, please see the [AESS website](#).

**Distinguished Lecturer Report:** Walter Downing on “20 Years from IMAGE to New Horizons and Beyond” Conquering Space with CCSDS... [Read Here.](#)

### Distinguished Lecturer Report

AESS Distinguished Lecturer, Walt Downing, presented “20 Years from IMAGE to New Horizons and Beyond” Conquering Space with CCSDS” to CCSDS on 21 October 2019 in Darmstadt, Germany. [Read full report here..](#)

## Conferences



### Radar Challenge “Radar-A-Thon”

Hosted by 2020 IEEE International RADAR Conference,  
Washington DC, USA

<http://ieee-aess.org/radar-challenge>



Deadline for Sensing Results: 29 April 2020



## IEEE Aerospace Conference

7-14 March 2020 in Big Sky, Montana, USA



[Visit Website](#)

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## IEEE Systems Security Symposium (SSS)

6-9 April 2020 in Crystal City, Virginia, USA



[Visit Website](#)

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## IEEE/ION PLANS 2020

20-23 April 2020 in Portland, Oregon, USA



[Visit Website](#)

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## 20th Integrated Communications, Navigation and Surveillance Conference (ICNS)

21-23 April 2020 in Herndon, Virginia, USA



Integrated Communications Navigation and Surveillance

[Visit Website](#)

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## 2020 IEEE International Radar Conference

27 April - 1 May 2020 in Washington, D.C., USA



[Visit Website](#)

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## 2020 IEEE International Workshop on Metrology for AeroSpace (MetroAeroSpace)

22-24 June 2020 in Pisa, Italy

2020 IEEE INTERNATIONAL WORKSHOP ON

# Metrology for AeroSpace

[Visit Website](#)

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## Radar Summer School 2020

3-10 July 2020 in Haus Humboldtstein, Germany



[Visit Website](#)

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## 23rd International Conference on Information Fusion

6-9 July 2020 in Sun City, South Africa



[Visit Website](#)

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## 2020 IEEE AUTOTESTCON Conference

24-27 August 2020 in National Harbor, Maryland, USA



[Visit Website](#)

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## 2020 IEEE/AIAA 39th Digital Avionics Systems Conference (DASC)

11-15 October 2020 in San Antonio, Texas, USA



[Visit Website](#)

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# 2020 IEEE Radar Conference

21-25 September 2020 in Florence, Italy



Prospective authors are invited to submit full-length papers of up to six (6) pages. Submission will open at the end of February 2020.

[Visit Website](#)



## 27th Saint Petersburg International Conference on Integrated Navigation Systems

25-27 May 2020

Saint Petersburg, Russia



[Visit Website](#)

**Save the date for 2021**

**ANNOUNCING THE**  
**2021 IEEE RADAR CONFERENCE** *Radar on the Move*  
**ATLANTA, GEORGIA, USA**

**8-9 MAY 2021**  
 (RADAR SUMMER SCHOOL)

**10-14 MAY 2021**  
 (CONFERENCE & WORKSHOPS)

**IEEE Atlanta Section** 

**IEEE**  
**AESS**

**CONFERENCE & WORKSHOPS**

Plenary & Special Sessions   □   Tutorials by the Experts  
 Peer-Reviewed Technical Presentations   □   Vendor Exhibits

**SPECIAL PROGRAMS**

- Radar Summer School
- Student Engineering Challenge
- Student Paper Contest – *Judged by Pioneers in Radar*
- IEEE Young Professionals
- IEEE Women in Engineering (WIE)

Historical & Regional Excursions

**CONTACTS:**

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**Dale Blair & Fabiola Colone**  
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**RADARCONFERENCE21.ORG**

Have a conference you'd like advertised in the AESS Quarterly Email Blast? Contact Judy Scharmann ( [j.scharmann@conferencecatalysts.com](mailto:j.scharmann@conferencecatalysts.com)) for details on how to have it included.

[View Full List of AESS Conferences](#)

## Publications

### IEEE Aerospace and Electronic Systems Magazine

The *IEEE Aerospace and Electronic Systems Magazine* is a monthly magazine that publishes articles concerned with the various aspects of systems for space, air, ocean, or ground environments as well as news and information of interest to IEEE Aerospace and Electronic Systems Society members. Our goal is to inform the readers of technologies, state of the art, design trades, etc. so that they will gain insights into a field heretofore unknown to them. We want to introduce technical specialties to readers in the hope that something in the articles will give them some insight for their own fields of endeavor.

### Latest Issues

- [November 2019](#)
- [Oct. 2019 Part I](#)
- [Oct. 2019 Part II](#)
- [September 2019](#)
- [August 2019](#)
- [July 2019](#)
- [June 2019](#)

## IEEE Transactions on Aerospace and Electronic Systems

*IEEE Transactions on Aerospace and Electronic Systems* (T-AES) focuses on the organization, design, development, integration, and operation of complex systems for space, air, ocean, or ground environment. These systems include, but are not limited to, navigation, avionics, spacecraft, aerospace power, radar, sonar, telemetry, defense, transportation, automated testing, and command and control.

### Latest Issues

[December 2019](#)

[October 2019](#)

[August 2019](#)

[June 2019](#)

[April 2019](#)

[February 2019](#)

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[AESS Board of Governors](#)

[AESS YP & Student Representatives](#)

### AESS Suggestions Welcome

We welcome suggestions from members on how the AESS can improve.

[Fabiola Colone](#), VP Member Services

[Judy Scharmann](#), AESS Executive Assistant



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