

## Editors

Editor-in-Chief—*Peter K. Willett*  
Associate Editor-in-Chief—*David F. Crouse*  
VP Publications—*Maria S. Greco*  
AESS President—*Joe Fabrizio*  
Executive Assistant, AESS  
—*Judy Scharmann*

## Contributing Editors

Awards—*Erwin C. Gangl*  
Book Reviews Editor—*Darin Dunham*  
Conferences—*Mark Davis*  
Distinguished Lecturers &  
Tutorials—*Kathleen Kramer*  
Education—*Kathleen Kramer*  
History—*Hugh D. Griffiths*  
Student Research—*Wenbo Dou,*  
*Federico Lombardi*  
Technical Panels—*Walter Downing*  
Tutorials Editor—*W. Dale Blair*  
Website Updates—*Judy Scharmann*

## Associate Editors and Areas of Specialty

Scott Bawden—*Energy Conversion Systems*  
Erik Blasch, Roberto Sabatini—*Avionics Systems*  
Dietrich Franken—*Communications, Signal Processing, and Data Fusion*  
David Crouse—*Target Tracking*  
Mauro De Sanctis—*Signal Processing and Communication in Aerospace Systems*  
Michael Braasch—*Navigation, Positioning*  
Giancarmine Fasano—*UAS*  
Daniel O'Hagan—*Radar Systems*  
Open—*Astronautic and Aeronautic Systems*  
Haiying Liu—*Control System Engineering and Robotic Systems*  
Michael Cardinale—*Electro-Optic and Infrared Systems, Image Processing*  
Ruhai Wang—*Systems Engineering*  
Peter Willett—*Multi-Sensor Systems*

## How to Reach Us

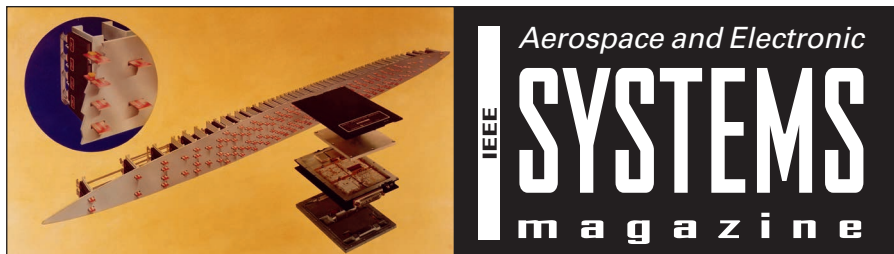
We welcome letters to the editor; but, we reserve the right to edit for space, style, and clarity. Include address and daytime phone number with your correspondence.

Email: Peter Willett,  
peter.k.willett@gmail.com  
David Crouse,  
david.crouse@nrl.navy.mil  
Clarissa Nemeth,  
cnemeth@allenpress.com

**Publishers:** Send books for review to Darin Dunham, Lockheed Martin, 208 Buddy Tate Ln, Meridianville, AL 35759. If you have questions, contact Darin by e-mail at darin.t.dunham@lmco.com.

## Advertisers

If you are interested in advertising in the AESS SYSTEMS Magazine, please contact Peter Willett at peter.k.willett@gmail.com



December 2018

ISSN 0885-8985

Volume 33 Number 12

## COLUMNS

In This Issue – Technically .....	2
From the Associate Editor-in-Chief .....	3

## FEATURE ARTICLES

<b>Passive SAR Satellite Constellation for Near-Persistent Earth Observation: Prospects and Issues</b> <i>Michail Antoniou, Andrew G. Stove, Alp Sayin, George Atkinson, Mikhail Cherniakov, Hui Ma, Heiner Kuschel, Diego Cristallini, Philipp Wojaczek, Craig I. Underwood, Antonio Moccia, Alfredo Renga, Giancarmine Fasano .....</i>	4
<b>RF Exciter Subsystem of Ka-Band Cloud Profiling Radar</b> <i>Rohan Kale, Arvind Agarwal, Krishnan Aurobindo .....</i>	16
<b>Lifetime Estimation of Off-The-Shelf Aerospace Power Converters</b> <i>Mohamed Halick Mohamed Sathik, Sundarajan Prasanth, Firman Sasongko, Josep Pou .....</i>	26
<b>Queueing Analysis of DTN Protocols in Deep-Space Communications</b> <i>Guannan Yang, Ruhai Wang, Kanglian Zhao, Xinggan Zhang, Wenfeng Li, Xiongwen He .....</i>	40
<b>Spectrum Allocations: The Aeronautical Telemetry Story in the USA</b> <i>Michael Rice, Kip Temple, Timothy Chalfant, Darrell Ernst, Carolyn Kahn ...</i>	50

## NEWS AND INFORMATION

<b>AESS Resource Center .....</b>	25
<b>Call for Papers: 2019 IEEE International Symposium on Phased Array Systems and Technology .....</b>	39
<b>Call for Nominations: The Fred Nathanson Memorial Radar Award .....</b>	49
<b>AESS Historical Interview: Mark Davis</b> <i>James Day .....</i>	60
<b>IEEE Aerospace &amp; Electronic Systems Society Organization 2018 .....</b>	66
<b>2018 Aerospace &amp; Electronic Systems Society Distinguished Lecturers ...</b>	67
<b>AESS 2018 Senior Members .....</b>	68
<b>Meetings and Conferences .....</b>	inside back cover