

IEEE

Aerospace and Electronic

SYSTEMS

magazine

June 2016
ISSN 0885-8985
Volume 31 Number 6



Editors

Editor-in-Chief—*Maria S. Greco*
Associate Editor-in-Chief—*Peter K. Willett*
Administrative Editor—*William P. Walsh*
Ass't. Admin. Editor—*Susanne J. Walsh*
Editor Emeritus—*David B. Dobson*
VP Publications—*W. Dale Blair*
AESS President—*Teresa L. Pace*
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,*
John Glass
Technical Panels—*Walter Downing*
Tutorials Editor—*W. Dale Blair*
Website Updates—*Judy Scharmann*

Associate Editors and Areas of Specialty

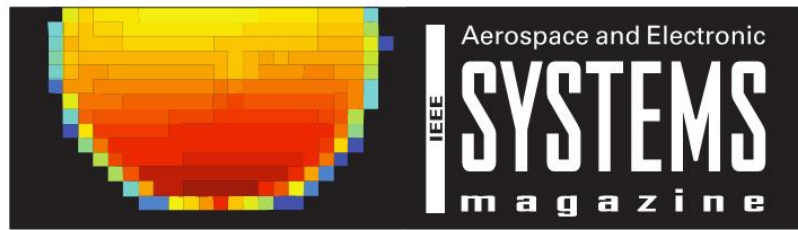
Scott Bawden—*Energy Conversion Systems*
Erik Blasch, Roberto Sabatini—*Avionics Systems*
Domenico Ciuonzo—*Communications, Signal Processing, and Data Fusion*
David Crouse—*Target Tracking*
Mauro De Sanctis—*Signal Processing and Communication in Aerospace Systems*
Michael Braasch—*Navigation, Positioning*
Daniel O'Hagan—*Radar Systems*
Moriba Jah—*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: sjwalsh4@gmail.com
wpwalsh7@gmail.com
rjanssen@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.



June 2016

ISSN 0885-8985

Volume 31 Number 6

COLUMNS

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

ARTICLES

Three-Axis Sun Sensor for Attitude Determination <i>Carl C. Liebe, Neil Murphy, Len Dorsky, Nythi Udomkesmalee</i>	6
Study of Similarity Analysis Methods for Aviation System Failures <i>Anouar H. Elbadiry, Samuel-Jean Bassetto, Mohamed-Salah Ouali</i>	12
Limited Angle BLDC for Scan Mirror Application in Space Satellite System <i>Ardhanari Jagadeeshwaran, Subramanian Vijayshankar, N. Kannan, Aravind, C. V.</i>	24
Atmosphere Effects on Sonar Sensor Model for UAS Applications <i>Umberto Papa, Giuseppe Del Core, Francesco Picariello</i>	34
AESS Historical Interview: A Conversation with a Friend: Alfonso Farina <i>Fulvio Gini</i>	41

NEWS AND INFORMATION

AESS Senior Members (June 2016)	4
IEEE Member Digital Library	5
2016 Robert T. Hill Best Dissertation Award Call for Nominations	23
Call for Papers: IEEE Aerospace and Electronic Systems Magazine Special Issue on Navigation and Positioning Systems	33
Part I: Special Issue on Sense and Avoid For Unmanned Aircraft Coming up in July	49
AESS Central Texas Chapter Announced as US Chapter of the Year	50
Call for Papers: RADAR 2017, International Conference on Radar Systems	51
2016 Distinguished Lecturers	52
Meetings and Conferences	inside back cover