Editors

Editor-in-Chief–*Daniel W. O'Hagan, Fraunhofer FHR, Germany*

VP Publications–*Lance Kaplan, U.S. Army Research Laboratory, USA*

AESS President–*Mark Davis, Independent Consultant, USA*

Operations Manager, AESS–*Amanda Osborn, LLC, USA*

Contributing Editors

Awards–*Fulvio Gini, University of Pisa, Italy*

Book Reviews Editor–*Samuel Shapero, Georgia Tech Research Institute, USA*

Conferences–*Braham Himed, Air Force Research Laboratory, USA*

Distinguished Lecturers & Tutorials–*Alexander Charlish, Fraunhofer Institute for Communication, Information Processing and Ergonomics, Germany*

Education–*Alexander Charlish, Fraunhofer Institute for Communication, Information Processing and Ergonomics, Germany*

History–*Hugh Griffiths, University College London, UK*

Student Research–*Federico Lombardi, University College London, UK*

Technical Panels–*Michael Braasch, Ohio University, USA*

Tutorials–*W. Dale Blair, Georgia Tech Research Institute, USA*

Website Updates–*Amanda Osborn, Conference Catalysts, LLC, USA*

Associate Editors and Areas of Specialty

Scott Bawden–*Energy Conversion Systems, Arctic Submarine Laboratory, USA*

Erik Blasch, *US Air Force Research Lab (AFRL), USA*

Roberto Sabatini, *RMIT University, Australia–Avionics Systems*

Stefan Brueggenwirth, *Fraunhofer Institute for High Frequency Physics and Radar Techniques FHR, Germany–AI and ML in Aerospace*

Dietrich Fraenken, *Hensoldt Sensors, Germany–Fusion and Signal Processing*

Lyudmila Mihaylova, *The University of Sheffield, UK–Target Tracking*

Mauro De Sanctis, *University of Rome "Tor Vergata," Italy–Signal Processing and Communications*

Jason Gross, *West Virginia University (WVU), USA–Navigation, Positioning*

Giancarmine Fasano, *University of Naples Federico II, Italy–Unmanned Aircraft Systems*

Daniel O'Hagan, *Fraunhofer Institute for High Frequency Physics and Radar Techniques FHR, Germany–Radar Systems*

Richard Linares, *University of Minnesota, USA–Space Systems*

Haiying Liu, *DRS Technologies, Inc., USA–Control and Robotic Systems*

Michael Cardinale, *Retired, USA–Electro-Optic and Infrared Systems, Image Processing*

Ruhai Wang, *Lamar University, USA–Systems Engineering*

Marco Frasca, *MBDA, Italy–Quantum Technologies in Aerospace Systems*

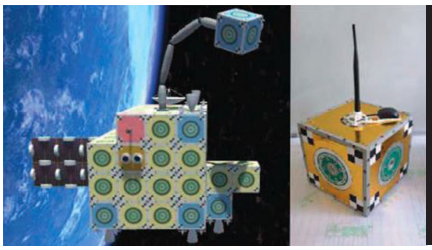
Christof Schüpbach, *Swiss Department of Defense, Switzerland–Radar Systems*

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.

E-mail: Daniel W. O'Hagan, danieloha@gmail.com

Catherine Van Sciver, c.vansciver@ieee.org



IEEE Aerospace and Electronic SYSTEMS magazine

June 2022 **ISSN 0885-8985** **Volume 37 Number 6**

COLUMNS

In This Issue –Technically **3**

EDITORIAL

From the Editors of the Special Issue on Current Applications and Innovations of Artificial Intelligence and Machine Learning in Aerospace
S. Mohammed, R.-S. Chang, C. Ramos, T.-H. Kim **4**

FEATURE ARTICLES

Using MLSTM and Multioutput Convolutional LSTM Algorithms for Detecting Anomalous Patterns in Streamed Data of Unmanned Aerial Vehicles
A. Alos, Z. Dahrouj **6**

GPS Spoofing Detection by Neural Network Machine Learning
S.C. Bose **18**

Cognitive Radio for Aeronautical Mobile Telemetry: A Machine Learning-Based Approach
N. Nelson, E. Garcia, R. Harris, M. Rice **32**

Reinforcement-Learning-Based Task Planning for Self-Reconfiguration of Cellular Satellites
Y. Zhang, W. Wang, P. Zhang, P. Huang **38**

NEWS AND INFORMATION

AESS Senior Members Elevated in 2022 ..... **2**

Aerospace & Electronic Systems Society Distinguished Lecturers **16**

IEEE Aerospace & Electronic Systems Society Organization 2022 ..... **17**

Call for Papers **48**

AESS Meetings and Conferences ..... **inside back cover**

Publishers: Send books for review to Samuel Shapero, 407 Angier Place NE, Atlanta, GA 30308. If you have questions, contact Samuel by e-mail at samuel.shapero@gtri.gatech.edu.

Advertisers

If you are interested in advertising in the AESS SYSTEMS Magazine, please contact Anthony Land at Naylor Associates at aland@naylor.com or Daniel W. O'Hagen at danieloha@gmail.com