



# IEEE Aerospace Electronic Systems VP - Publications

*Lance Kaplan*

*2022 AESSE Fall Board of Governors Meeting*

*21-22 October 2022*

*Edinburgh, UK*



- Lance Kaplan
- Dale Blair
- Mike Cardinale
- Fabiola Colone
- Stefano Coraluppi
- Sabrina Greco
- Roberto Sabatini
- Luke Rosenberg
- Peter Willett

- SWOT
- TAES
- Magazine
- QEB
- OJSE
- TRS
- General Business

## ▶ Strengths:

- High quality publications
- Significantly faster review cycles

## ▶ Weaknesses:

- Identification of emerging areas of interest; especially related to Industry

## ▶ Opportunities:

- Collaborate with other AESS committees for content in our various publications
- New journal (OJSE and TRS) can increase exposure for AESS

## ▶ Threats:

- TRS is financially sponsored by eight different societies/councils
- Need continual tracking of open access policies

# Status of TAES



Michael Rice, EIC

Gokhan Inalhan, Associate EIC

Lyudmila Mihaylova, Associate EIC

- Giancarmine Fasano – Avionics
- Tim O’Connell – Energy Conversion Systems
- Genshe Chen – Intelligent Systems
- Shannon Blunt – Radar Systems
- Tanya Vladimirova – Space Systems

\*All their predecessors reached the ends of their IEEE-mandated terms.

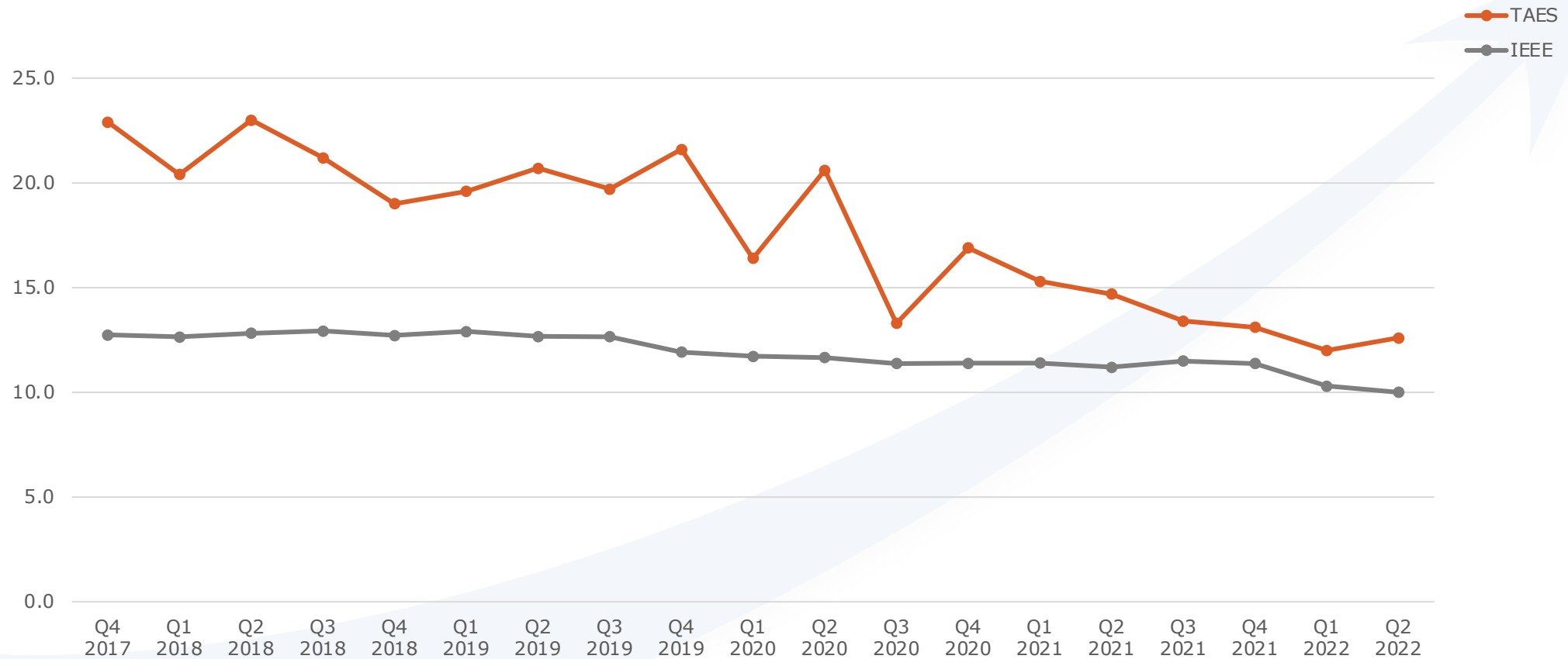
# TAES Associate Editors Appointed In 2022

- Maarten Uijt de Haag – Avionics Systems
- Andreas Knopp – Communication Systems and Networks
- Wayne Weaver – Energy Conversion Systems
- Paolo Rech – Fault Tolerant Systems
- Luis Entrena Arrontes – Fault Tolerant Systems
- Marcello Romano – Guidance and Control Systems
- Shubhendu Bhasin – Guidance and Control Systems
- Zhenbo Wang – Guidance and Control Systems
- Roberto Furfaro – Guidance and Control Systems
- Quanyan Zhu – Intelligent Systems
- Priyadip Ray – Networked Sensor Systems
- Engin Masazade – Networked Sensor Systems
- Sevgi Gurbuz – Radar Systems
- Igal Bilik – Radar Systems
- Stéphanie Bidon – Radar Systems
- Jingwei Xu – Radar Systems
- Gang Wang – Target Tracking and Multisensor Systems
- Junkun Yan – Target Tracking and Multisensor Systems
- Full List of Senior and Associate Editors
  - <https://ieee-aess.org/publications/taes/technical-areas-editors>

These AEs will transition to T-RS.  
They were appointed to TAES  
specifically for training and  
experience.

# TAES Progress on Reducing Timelines

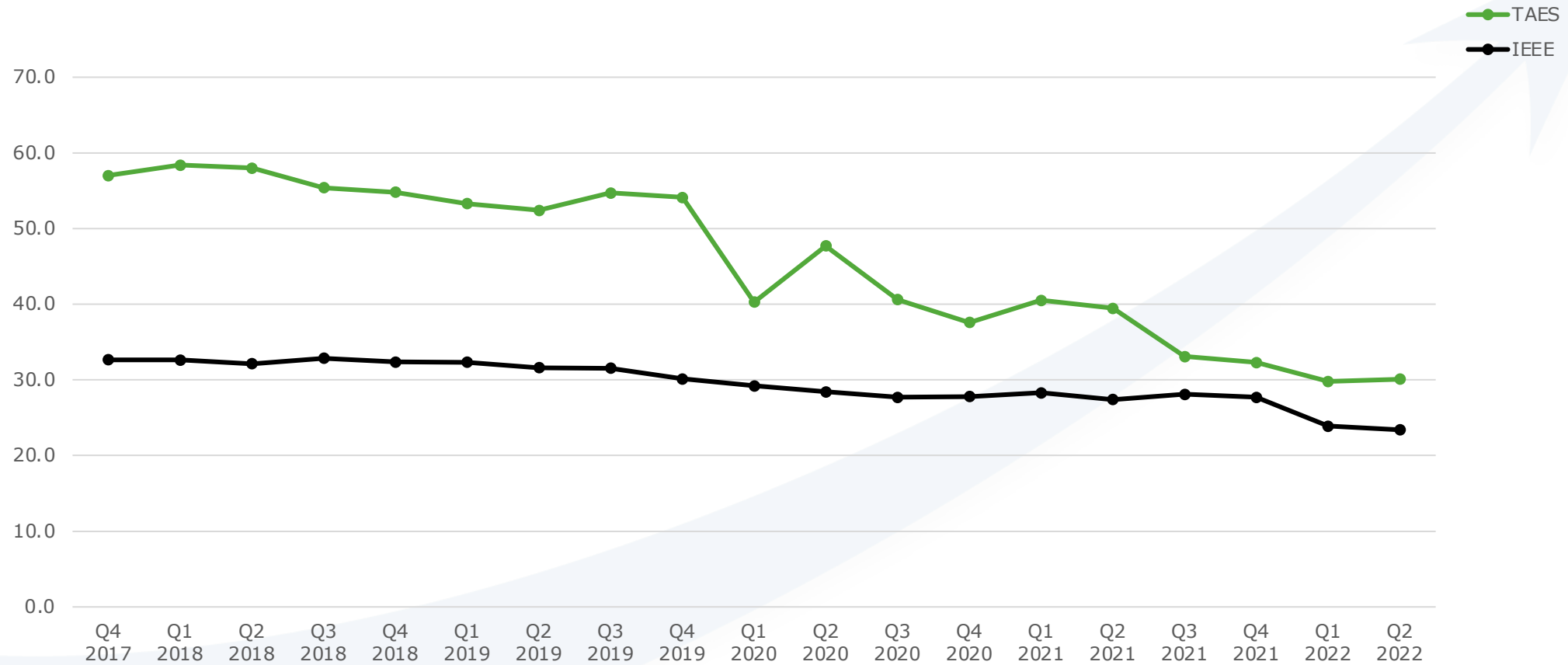
Average Number of Weeks to First Decision





# TAES Progress on Reducing Timelines

Average Number of Weeks to Online Post




- ScholarOne opened 1 March 2021
- EJ Press msubmit is still open.
  - All TAES submissions to msubmit have reached final decision. The accepted manuscripts have all been published.
  - MDR has need to get information about once every four months.
  - MDR does not know how expensive it is to keep msubmit open. (Bob?, Peter?) If it is a lot, then it is safe to shut down for TAES.
- No system is perfect (S1 has its issues). Authors, reviewers, and new editors are all familiar with S1. (This was not true for EJ Press msubmit.)

- Information and Communications Technologies (ICT) for a New Space Vision
  - Guest Editors: Sacchi, Granelli, Marchese, Cheung, Noble
  - Glue Technologies Panel
  - 11 articles Appeared in October 2022 issue of TAES
- Industrial Information Integration in Space Applications
  - Guest Editors: Ip, Bi, Travana, Gupta, Pham
  - 34 submissions, 19 accepted, 2 awaiting final decision
  - scheduled to appear in 1Q 2023
- Machine Learning Methods for Aerial and Space Positioning and Navigation
  - Guest Editors: Yu, Braasch, Cloasas, Dunik, Dovis
  - 1 submission (submissions close 1 Dec 2022)
- Deep Learning for Radar Applications
  - Guest Editors: Gurbuz, Bilik, Rosenberg
  - Radar Systems Panel
  - submissions now open
- Automotive Engineering and Super-Resolution Radar Systems
  - Guest Editors: Bilik, Tabrikian, Gini
  - Radar Systems Panel
  - submissions now open

All current and future Special Sections are listed at <https://ieee-aess.org/publications/taes/callboard>

reports01.manuscriptcentral.com/cognos10/cgi-bin/cognos.cgi?b\_action=cog

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### Technical Area report

# of Manuscripts	Accept	Pending	Reject	Withdrawn	Summary
Autonomous Systems	6	24	30		<b>60</b>
Avionics Systems	1	13	12	1	<b>27</b>
Communication Systems and Networks	13	25	44	1	<b>83</b>
Electro-optic and Infrared Systems	1	7	2		<b>10</b>
Electronic Warfare Systems	2	16	21		<b>39</b>
Energy Conversion Systems	4	5	10		<b>19</b>
Fault Tolerant Systems	5	16	9		<b>30</b>
Guidance and Control Systems	25	98	93		<b>216</b>
Intelligent Systems	11	17	24		<b>52</b>
Navigation	6	40	63	1	<b>110</b>
Networked Sensor Systems	4	12	10		<b>26</b>
Radar Systems	33	107	118	4	<b>262</b>
Signal Processing in Aerospace and Acoustic Systems	11	33	43	1	<b>88</b>
Space Systems	5	19	39		<b>63</b>
Target Tracking and Multisensor Systems	16	51	54		<b>121</b>
			1		<b>1</b>
<b>Summary</b>	<b>143</b>	<b>483</b>	<b>573</b>	<b>8</b>	<b>1,207</b>

Oct 14, 2022 - 1 - 11:40:58 AM

- **Michael Rice stepping down as EIC on Dec. 31**
- **Radar SE Shannon Blunt is now EIC of TRS**
- **Need new EIC and new Radar SE**
- Senior Editor and Associate Editor expectations document published
- Outstanding Associate Editor Awards established
  - EIC is tracking the data needed for the award criteria
- Instructions for Special Section proposals updated and posted
- TAES Wikipedia page is now fully populated!
  - [https://en.wikipedia.org/wiki/IEEE\\_Transactions\\_on\\_Aerospace\\_and\\_Electronic\\_Systems](https://en.wikipedia.org/wiki/IEEE_Transactions_on_Aerospace_and_Electronic_Systems)

# Status AES Magazine



Daniel O'Hagan, EIC

Associate EIC - Vacant

Dale Blair, AE for Tutorials

- Scott Bawden (Energy Conversion Systems)
- W. Dale Blair (Tutorials)
- Erik Blasch (Aeronautics and Astronautics)
- Stefan Brueggenwirth (Applications of Artificial Intelligence and Machine Learning to Aerospace Systems)
- Michael Cardinale (EO/IR Systems and Image Processing)
- Mauro De Sanctis (Signal Processing and Communication in Aerospace Systems)
- Dietrich Fraenken (Fusion & Signal Processing)
- Giancarmine Fasano (Unmanned Aircraft Systems)
- Jason Gross (Navigation, Positioning)
- Raktim Bhattacharya (new AE for Space Systems – replaced Richard Linares in 2022)
- Federico Lombardi (Student Highlights)
- Daniel O'Hagan (EiC and AE for Radar Systems)
- Roberto Sabatini (Avionics)
- Samuel Shapero (Book Reviews)
- Ruhai Wang (Systems Engineering)
- Marco Frasca (Quantum Technologies in Aerospace Systems)
- Christof Schuepbach (Radar Systems – is leaving– recruiting new AE for Radar Systems)

Some important Special Issue theme were published in 2022, such as:

- Special Issue on Multi-Platform and Multi-Functional RF Systems (MPRFS) and (MFRFS) (O'Hagan, Joe Fabrizio, Michael Brandfaß, Josef Worms and Piotr Samczynski) **Published in April 2022**
- Special Issue on Current Applications and Innovations of Artificial Intelligence and Machine Learning in Aerospace (Chang, Mohammed, Ramos, Kim) **Published in June 2022**

The Magazine attracts quite a lot of SI proposals, but the SI process could run faster and more streamlined

Improvement measures will be proposed at a future Editorial meeting



- Urban Air Mobility and UAS Airspace Integration: Vision, Challenges, and Enabling Avionics Technologies (Fasano, Crespillo, Sabatini, Roy, Ogan)
- Special Issue on Avionics Systems: Future Challenges (Sabatini, Kramer, Roy, Blasch, Fasano)
- Special Issue on Systems and Solutions for Arctic Challenges (Reese, McGee, Eicken, Mahoney, Bawden)
- Special Issue on Space Domain Systems (Blasch, Linares, Jah)

- **Published June 2022:**
  - Survey of X-Ray Pulsar Based Navigation Technology [Lohan & Putnam]
  - Detecting a target with quantum entanglement [Sorelli et al.]
  - A Rationale for Backprojection in Spotlight Synthetic Aperture Radar Image Formation [Bauck]
  - A Survey on the Applications of Convolutional Neural Networks for Synthetic Aperture Radar: Recent Advances [Oveis & Guisti]
- Three papers currently under review
- One paper accepted:
  - Monocular visual autonomous landing system for quadcopter drones using software in the loop [Saavedra-Ruiz et al.]

- Chris Baker delivered a good review of Nadav Levanon's online Radar book. The review was published in the April issue.

- Magazine is publishing quality content:
  - Special Issues
  - Regular Articles
  - Tutorials
- Room for improvement
  - Streamline the process to collect and review papers for special issues
  - Improve the quality of reviews

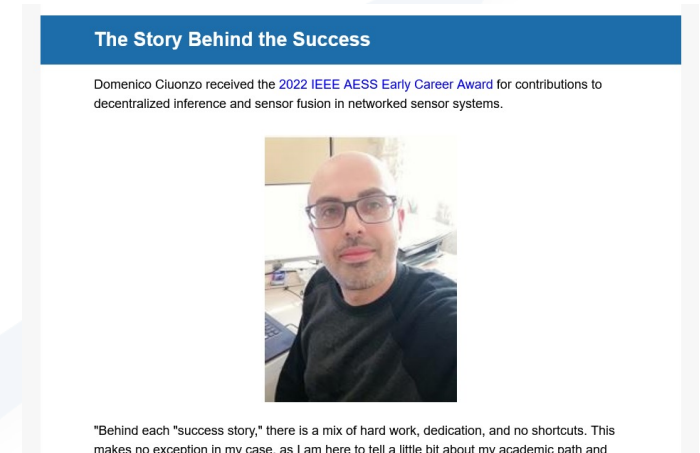
# Quarterly Email Blast



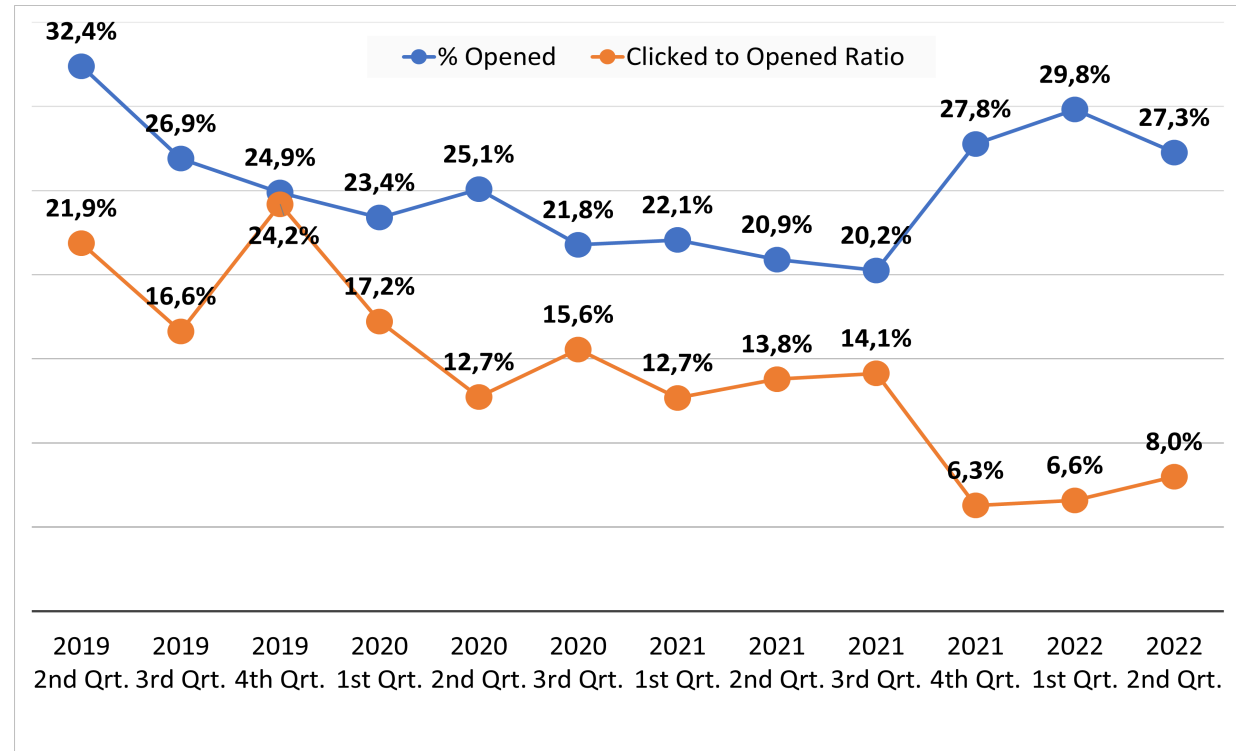
Philipp Markiton, EIC

Francesca Filippini, EIC

- Include more non-radar awardees in “Story behind a success” section, e.g.:
  - Early Career Award **DONE!**
  - Student paper competition winners from other conferences.
    - DASC: **invited for 4<sup>th</sup> Qrt 2022.**
    - Aerospace conference: to be invited for 2023.
- **Review content (Work in progress):**
  - Based on: Number of clicks / opened links.
  - Potentially reduce or improve to generate more interest and awareness.
  - Modify the layout of the QEB to make it more readable that as it is now within the body of the email.
- Include contents for Industry (maybe a new column?).



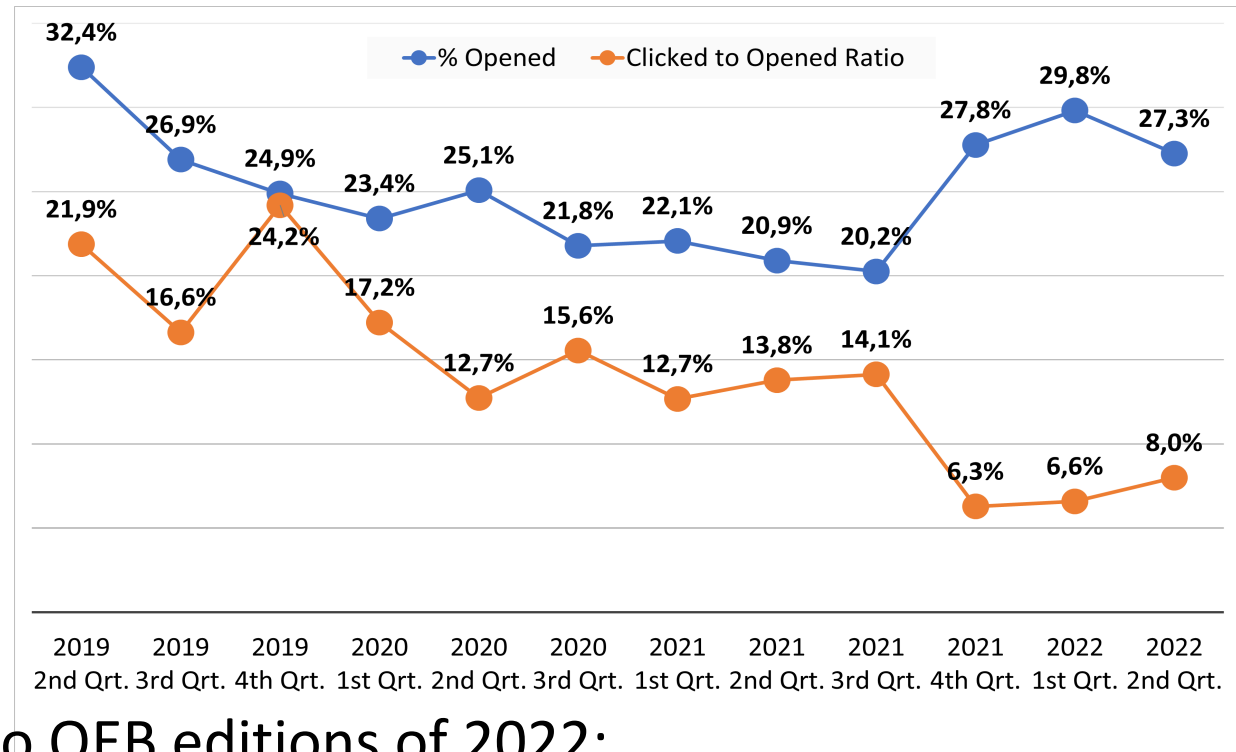
- Based on QEB statistics until 2nd Qrt 2022
  - Percentage of opened QEB mails has decreased until 2021 3rd Qrt.
  - Ratio of clicked hyperlinks to opened mails: slowly increasing after decrease.



## Legend:

- %opened = ratio of opened mails to sent mails in percentage.
- Clicked to opened ratio = ratio of clicked hyperlinks to opened mails in percentage.

- Based on QEB statistics until 2nd Qrt 2022
  - Percentage of opened QEB mails has decreased until 2021 3rd Qrt.
  - Ratio of clicked hyperlinks to opened mails: slowly increasing after decrease.



If trend is confirmed for last two QEB editions of 2022:

- **Objective for 2023:** improve the number of opened mails by means of e.g.:
  - Improve layout, also based on IEEE suggestions.
  - Check for redundancy with other AESS newsletters.



# Status of OJSE



W. Dale Blair, EIC

Ljiljana Trajkovic, Associate EIC

- ▶ *OJSE is on manuscriptcentral.com and we have 13 submissions.*
  - *<https://mc.manuscriptcentral.com/ojse>*
- ▶ *ISSN/CODEN information for the IEEE OJSE.*
  - **ISSN:** 2771-9987
  - **CODEN:** IOJSCH
- ▶ *OJSE should be on IEEE Xplore.*
- ▶ *Web page for OJSE in progress on web sites for AESS and Systems Council*
  - *<https://ieee-aess.org/ojse>*
  - *<https://ieeesystemscouncil.org/ojse>*
  - *Web page for OJSE sent to SMC for their web site. Waiting on response.*
- ▶ *OJSE announcement included in 2Q Newsletters for AESS, System Council, and SMC*
- ▶ *OJSE Editors announcement in 3Q Newsletters for AESS, System Council, and SMC*
- ▶ *Three special issues are in progress.*
  - *Special Issue on Artificial Intelligence and Systems Engineering*
  - *Special Issue on Resilience in Systems Engineering*
  - *Special Issue on Front-end Need Analysis*
- ▶ *Working other topics for special issues: Radar signal processing metrics, tracking metrics*

Position	Name
Co-Chair and Systems Council Representative	Paolo Carbone
Co-Chair and SMC Society Representative	Shun-Feng Su
Systems Council Representative and Secretary-Treasurer	Bob Rassa
AES Society Representative	Stefano Coraluppi
AES Society Representative	Lance Kaplan
SMC Society Representative	Adrian Stoica
Editor-in-Chief	Dale Blair
Associate EIC	Ljiljana Trajkovic

Name	E-mail
Dale Blair (EIC)	Dale.blair@gtri.gatech.edu
Ljiljana Trajkovic (Associate EIC)	ljilja@cs.sfu.ca
Vincenzo Piuri	vincenzo.piuri@unimi.it
Peter Willett	willett@engr.uconn.edu
Don Brown	deb@virginia.edu
James Lambert	lambert@virginia.edu
Michael Sievers	michael.w.sievers@jpl.nasa.gov

Topic	Number
General	7
<i>Special Issue on Artificial Intelligence and Systems Engineering</i>	3
<i>Special Issue on Resilience in Systems Engineering</i>	1
<i>Special Issue on Front-end Need Analysis</i>	2
Total	13

- ▶ A scholarly journal that publishes articles that bring the scientific and technical contributions found in other IEEE journals to the practice of systems engineering.
- ▶ Go to source of practicing systems engineers for the most recent developments that will help them do their job.
- ▶ Premier publication for researchers who want their contributions to have an impact on the practice of systems engineering.

- *Getting the snowball rolling down the hill.*
  - Special issues for address the areas that are unique to OJSE.
  - Promotion of the vision
- *Making the connection between researchers and the real-world problems faced by systems engineers*
  - Identification and characterization of problems that occur in systems engineering for researchers.
  - Development of appreciation of those involved in rigorous, scholarly research of the problems faced by practicing systems engineers.
- *Funding for the publication costs*
  - *Not aware of any large funding for research into systems engineering.*
  - *“Hobby” authors may not be willing to pay to publish to publish.*

- ▶ *Regular Technical Papers with novel and meaningful contributions*
- ▶ *Technical Surveys that include Literature Reviews*
- ▶ *Tutorials*
- ▶ *Problem Definition with Challenge Problems*



- Dale and Amanda to finalize information for authors for web pages
- Dale and Amanda to prepare announcements for next society newsletters
- Finalize OJSE on IEEE Xplore
- Continue recruit proposals for Special Issues: Committee and Editorial Board
- Recruit authors: Committee and Editorial Board

# Status of TRS



Shannon Blunt, EIC

Fabiola Colone, Associate EIC

Martin Vossiek, Associate EIC

**IEEE Transactions on Radar Systems** focuses on advances in the study and development of radar systems for a wide range of applications. Articles on theoretical, application-oriented, and experimental studies with a focus on novelty of radar systems are considered.

The Journal is sponsored by:

- ▶ IEEE Aerospace and Electronic Systems Society (24%)
- ▶ IEEE Microwave Theory and Tech. Society (24%)
- ▶ IEEE Signal Processing Society (17%)
- ▶ IEEE Geoscience and Remote Sens. Society (7%)
- ▶ IEEE Sensor Council (7%)
- ▶ IEEE Antennas and Propagation Society (7%)
- ▶ IEEE Vehicular Technology Society (7%)
- ▶ IEEE Instrumentation and Measurement Society (7%)

## Status of the journal:

- ▶ Phase 1: approved in February 2022, Phase 2: approved in June 2022.
- ▶ Submissions ready to start on ScholarOne.
- ▶ First papers published in the second half of 2023.
- ▶ **EiC: Shannon Blunt (University of Kansas).**
- ▶ **AEiCs: Fabiola Colone (University of Rome Sapienza) and Martin Vossiek (Friedrich-Alexander University Erlangen-Nürnberg).**
- ▶ Worked with IEEE on the advertisement material (graphics for banner, logo, letterhead).
- ▶ T-RS website will be hosted by AESS and linked by all the other sponsoring societies. Working with ConferenceCatalyst for the website.
- ▶ Planned email blast in next days.

## Steering Committee:

- ▶ AESS: Maria S. Greco (Chair), Igal Bilik, Joe Fabrizio
- ▶ MTTTS: Thomas Zwick, Greg Lyons (Treasurer), Christian Waldschmidt
- ▶ SPS: Fulvio Gini, Moeness Amin
- ▶ IMS: George Xiao
- ▶ GRRS: Alejandro C. Frery
- ▶ SC: Lorenzo Lo Monte
- ▶ APS: Yang Hao
- ▶ VTS: James Irvine

# General Summary



- Sunsetting of EJPress Portal
- Operations Manual for TAES and AESM
- Coordination with technical panels for special section topics
- Active engagement with our editors to improve operations
- Recognize outstanding reviewers, editors and papers
- Tracking Open Access and other trends
- Support Integrated Sensing + Comms initiative

Thank You!