

Editorial

2024 Reflections and Perspectives for the Year Ahead

HAPPY NEW YEAR! As we step into 2025, I am delighted to reflect on the milestones achieved over 2024 and share our aspirations for the *Transactions* for the year ahead. The past year was equally rewarding and formative for our journal which continued to strengthen its position as the flagship journal in the field of antennas and propagation (AP) [A1].

By responding to the advancements and evolving trends in the field, the *Transactions* has remained committed to publishing timely and rigorous research, driving innovation, and shaping the future of the discipline. The 2024 volume has delivered 977 meticulously selected articles from across the AP field, covering not only core AP topics but also emerging areas at the intersection with other engineering and science disciplines. We entered 2024 with the publication of the second part of the *Special Issue on Frontiers in Computational Electromagnetics*, which completed a collection of 32 articles of archival value, showcasing advances in all major computational electromagnetics methodologies and numerical discretization techniques in the frequency and time domains [A2], [A3]. Moreover, we invited authors to contribute with their research to the *Special Issue on Measurement Technologies for Emerging 5G and Beyond Channel Characterization and Antenna Systems*, which will be published in 2025.

Throughout the previous year, our community's increasing interest in the *Transactions* has been demonstrated by the observed surge in original submissions, which in 2024 reached their all-time highest levels, as shown in Fig. 1, with overall submissions' growth expanding to 13% with respect to 2023.

Published content has garnered significant public interest, as evidenced by the 6,677,648 article views and downloads (according to data from IEEE Xplore analytics), which have placed the journal third (second by excluding open-access journals) among IEEE periodicals in terms of article usage in 2024. The above usage levels reflect an increase with respect to 2023—despite the lower number of published articles—which further underscores the growing interest in the journal's content. The *Transactions*' leading role as a venue for shaping advances in AP research and beyond has also been reflected in the latest bibliometric data, which report an Impact Factor of 4.6 and an Eigenfactor and Article Influence Scores of 0.04543 and 1.136, respectively. The Impact Factor, widely recognized as an indicator of a journal's popularity,

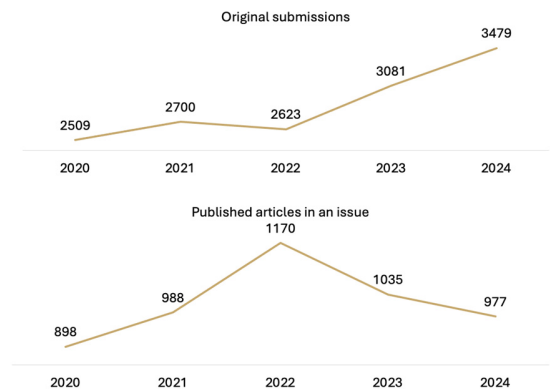


Fig. 1. Number of original submissions/published papers per year during the period 2020–2024.

reflects the number of citations to articles published in the previous two years. In contrast, the Eigenfactor and Article Influence Scores provide an understanding of a journal's prestige and impact, as they weigh citations based on the influence of the citing source and exclude self-citations. Based on these metrics, the *Transactions* has been ranked as a Q1 journal in both *Electrical and Electronic Engineering* and *Telecommunications* categories by Impact Factor and has been placed 6th among the top 10 journals in *Telecommunications* by Eigenfactor Score. While these metrics may highlight some aspects of the journal's influence, they are subject to fluctuations and should be considered alongside additional data for a more comprehensive assessment of research impact. All the previously reported indicators highlight the journal's mission to lead and inspire meaningful progress within the AP field.

To fulfill this mission, the journal has been implementing a multifaceted editorial strategy, founded on thorough and multilevel editorial assessment, while taking appropriate actions to further elevate the overall publishing experience for authors, editors, and reviewers. These actions include the streamlining of the submission process through the journal's transition to the IEEE Author Portal, the reinforcement of the editorial prescreening mechanism as a strategic measure for securing swifter editorial outcomes to the journal's and the authors' benefit, and the continuous monitoring and appropriate adjustment of editorial workflows to ensure the delivery of timely editorial decisions and content. The efforts towards harmonization of editorial decisions across all disciplines through the establishment of clear, consistent quality criteria

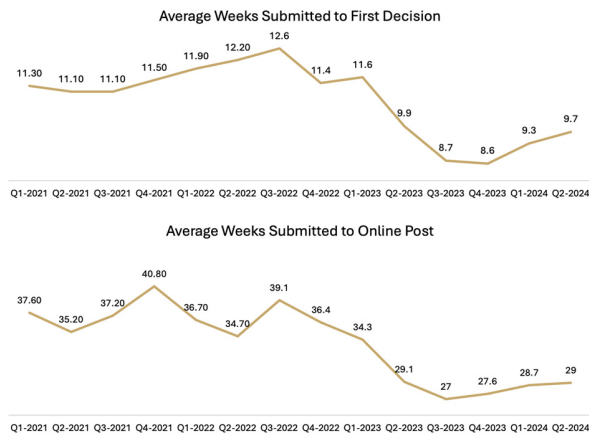


Fig. 2. Quarter analysis on timeliness by IEEE. Average weeks from original submission to first decision (top) and average weeks from original submission to online post (bottom) for accepted manuscripts during the period 2021–2024.

have continued, aiming to uphold the highest standards of scholarly excellence, rigor, timeliness, and credibility.

Our continuing editorial endeavors to better serve our community of authors and readers have been reflected in the journal’s timeliness metrics, as depicted in the quarterly analysis conducted by IEEE (Fig. 2). The latest data, covering up to the second quarter of 2024, reveal that despite the unprecedented surge in submissions, the journal’s time from submission to first decision stands at 9.7 weeks, with a time from submission to online publication equal to 29 weeks. These metrics showcase the journal’s commitment to establishing timely and efficient processes throughout the entire publication lifecycle, while adhering to the highest standards of scientific rigor.

To amplify the potential of exceptional research to drive innovation within the AP field, the *Transactions* has further expanded its strategic efforts to ensure the dissemination of impactful research findings across and beyond the AP Society through the production of enhanced content for regular newsletters and an active presence on social media platforms. The journal’s website has undergone further improvements to support its growing content and improve accessibility. These include the introduction of a “For Readers” section, facilitating navigation across published content, the monthly update of the “Featured Articles” section, the expansion of our Special Issue Archive section and the dedicated website section showcasing articles with shared data and/or code, and the continuation of the *What’s Hot in Antennas and Propagation* video collection. A roadmap for impact has also been created and is now offered on the website, providing authors with practical tips to maximize the reach of their published work. I am truly thankful to our Associate Editors, Lei Guo and Marco Salucci, for their unwavering commitment and efforts in supporting the journal’s multilevel dissemination activities in collaboration with the editorial office.

The curation of Special Article Collections has been introduced as a means of showcasing published content while facilitating the tracking of research advancements. In this

direction, a four-part special article collection, accompanied with a mini video series, has been created to highlight published research with key contributions by women (appearing as first, last, or corresponding authors). Similarly targeted initiatives, launched as part of the 70-year celebration of the journal, have continued, including the expansion of our thematic video collection, *TAP Focus*, which has been designed to engage readers with timely research topics drawn from the journal’s popular articles. Featured topics cover, among others, patch antennas, frequency-selective structures, Machine Learning-assisted antenna design, wireless power transfer, metasurface antennas, and reconfigurable antennas. Notably, the article by the AP-S New Technology Directions Committee, which explores future trends in the AP field and was announced during the 70th-anniversary celebration, is now published in this first issue of 2025 [A4].

As part of the Antennas and Propagation Society’s (AP-S) 75th-anniversary celebrations, two Special Article Collections have been curated and are available on the journal’s website, aligning with the broader initiative of curated special collections, which aim at identifying and grouping online articles from various journal issues into cohesive topical collections, offering readers access to high-quality, impactful content that reflects the current state and future potential of the AP field [A5]. The Special Article Collection on *5G/6G Communications*, comprising 31 articles, curated by F. Falcone, M. Khalily, Z. N. Chen, T. Rappaport, and P. Rocca, highlights key aspects of wireless connectivity, including antenna design, propagation analysis, novel devices, and emerging applications and scenarios. The Special Article Collection on *Climate Change Research*, currently featuring eleven articles, is an expanding article collection aimed at exploring innovative approaches able to transform climate change research.

The dedication of our Editorial Board, reviewers, and contributors is instrumental in solidifying the standing of the *Transactions* in our field. I am thankful to the six outgoing Associate Editors, Prof. Marco Antoniadis, Prof. Shi-Yuan Chen, Prof. Yue Li, Dr. CJ Reddy, Prof. Francesca Vipiana, and Dr. Rod Waterhouse, and I would like to express my gratitude to our outgoing Track Editor, Prof. Francesco P. Andriulli. I extend a warm welcome to our four incoming Associate Editors, Prof. Bratin Ghosh, Prof. Athanasios Kanatas, Prof. Mohsen Khalily, and Prof. Nikolaos Tsitsas. I am grateful to Prof. Hakan Bagci, Prof. George Eleftheriades, and Prof. Alessio Monti, who, after successfully serving the journal as Associate Editors, have joined the Editorial Board as Track Editors. It is a privilege to collaborate with a dedicated team of Track Editors and Associate Editors, whose commitment and expertise are critical to ensuring meticulous and timely editorial decisions. I am particularly appreciative of our Track Editors for their invaluable contributions and feedback towards refining the journal’s policies and editorial processes. I equally commend the over 2000 reviewers whose thorough and insightful evaluations remain the cornerstone of TAP’s commitment to excellence. The establishment of the Outstanding Associate Editors and Top Reviewers annual recognition serves as a modest gesture of gratitude for the dedication and support shown by our Associate Editors and

Reviewers. Their unwavering commitment plays a vital role in upholding the rigor and quality of the work published in our journal.

I would also like to acknowledge our Administrative Editor, Dr. Maria Athanasiou, our editorial assistants, Ms. Gabriella Kourtidou and Ms. Chrisoula Stamatoukou, as well as our Journal's Production Manager, Ms. Sharon Turk, and the staff of AP-S and IEEE, for their support towards ensuring the seamless operation of the journal. My heartfelt appreciation goes to our authors for choosing the *Transactions* as a platform for their work and for inspiring us with their engagement and trust to continually improve and innovate. Finally, I am thankful to our readers for their continued curiosity, dedication, and passion and the entire AP community for serving as the driving force of advancements in the AP field.

The past year has provided moments to celebrate and reflect on the evolving landscape of our field, reaffirming the vitality of our community and its capacity to inspire progress. As we step into 2025, we continue to grow as a scientific community and illuminate new and emerging areas of inquiry, enriching the scope and impact of our journal. Aiming to carry forward the momentum of 2024, we invite you all to contribute to our two new Special Issues on: 1) *Microwave, mm and THz Imaging and Sensing Systems and Technologies for Medical Applications* and 2) *Numerical and Analytical Methods for Complex Electromagnetic Media*.

Our aspirations for the year ahead include expanding our reach across and beyond the AP community and continuing to serve as a trusted platform for innovative research, driving

important achievements and breakthroughs within our field. With exciting new initiatives on the horizon and the support of the broader AP community, 2025 promises to be a year of both consolidation and exploration.

With gratitude and best wishes,
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APPENDIX: RELATED ARTICLES

- [A1] K. S. Nikita, "Editorial: Reflections from my first year as Editor-in-Chief of the transactions," *IEEE Trans. Antennas Propag.*, vol. 72, no. 1, pp. 5–7, Jan. 2024, doi: [10.1109/TAP.2024.3352776](https://doi.org/10.1109/TAP.2024.3352776).
- [A2] B. M. Notaroš, F. P. Andriulli, and H. Bagci, "Guest editorial frontiers in computational electromagnetics," *IEEE Trans. Antennas Propag.*, vol. 71, no. 12, pp. 9175–9177, Dec. 2023, doi: [10.1109/TAP.2023.3337967](https://doi.org/10.1109/TAP.2023.3337967).
- [A3] B. M. Notaroš, F. P. Andriulli, and H. Bagci, "Guest editorial frontiers in computational electromagnetics—Part II," *IEEE Trans. Antennas Propag.*, vol. 72, no. 1, pp. 8–10, Jan. 2024, doi: [10.1109/TAP.2024.3358148](https://doi.org/10.1109/TAP.2024.3358148).
- [A4] C. Pichot et al., "New and emerging directions in the fields of antennas and propagation," *IEEE Trans. Antennas Propag.*, vol. 73, no. 1, pp. 566–581, Jan. 2025, doi: [10.1109/TAP.2024.3514092](https://doi.org/10.1109/TAP.2024.3514092).
- [A5] K. S. Nikita, "A message from the Editor-in-Chief: Introducing the special article collection on antennas and propagation for emerging 5G/6G communications," *IEEE Trans. Antennas Propag.*, vol. 72, no. 8, p. 6172, Aug. 2024, doi: [10.1109/TAP.2024.3438388](https://doi.org/10.1109/TAP.2024.3438388).