

## COMSoc AWARDS

The IEEE Communications Society honors members and individuals for accomplishments in education and research, significant contributions to the industry that benefits the public, conferences, publications, and globalization, and those whose leadership resulted in major advances in the information and communications technology field. In this issue of the President's Page, I am pleased to introduce Jelena Mišić, the Chair of IEEE ComSoc Awards Committee for 2022–2023 to share with you the ongoing activities.

JELENA MIŠIĆ is a professor in the Department of Computer Science at Ryerson University, Canada. She is an internationally recognized expert in the areas of IoT, blockchain, wireless networking, and network security, on which she has authored or co-authored four books, 160 journal papers, 24 book chapters, and 220 conference papers. She has chaired more than a dozen major international events and guest edited more than a dozen Special Issues in various journals. She serves on the Editorial Boards of *IEEE Transactions on Vehicular Technology*, the *IEEE Internet of Things Journal*, *IEEE Transactions on Emerging Topics in Computing*, *IEEE Network*, the *ACM Computing Surveys*, and the *Ad Hoc Networks Journal* (published by Elsevier). She is an IEEE Fellow and ACM member, and serves as an IEEE VTS Distinguished Lecturer.

IEEE ComSoc sponsors more than 20 awards, including monetary prizes, certificates, and plaques. It presents awards in three categories:

**Paper** — To recognize high impact technical studies that are published in IEEE ComSoc magazines and journals

**Career** — To recognize individuals for their distinguished and significant contributions to education, major industry advances, and major contributions to public welfare

**Service** — To recognize members who have demonstrated exemplary service to IEEE ComSoc in the areas of meetings and conferences, publications, globalization, and overall service to the Society

The Awards Committee reviews nominations for paper awards in the spring and those for service and career awards in the fall of each year. By the nomination deadline in February 2022, the committee received over 110 nominations for paper awards in 13 categories. Winners have been selected after thorough discussion about quality, originality, novelty, impact, and clarity of presentation, as follows:

1. The IEEE Communications Society Award for Advances in Communication: Ying-Chang Liang, Yonghong Zeng, Edward C.Y. Peh, and Anh Tuan Hoang, "Sensing-Throughput Tradeoff for Cognitive Radio Networks," *IEEE Transactions on Wireless Communications*, vol. 7, no. 4, Apr. 2008, pp. 1326–37.

2. The IEEE Communications Society Best Survey Paper Award: Faheem Zafari, Athanasios Gkelias, and Kin K. Leung, "A Survey of Indoor Localization Systems and Technologies," *IEEE Communications Surveys & Tutorials*, vol. 21, no. 3, 3rd qtr. 2019, pp. 2568–99.

3. The IEEE Communications Society Best Tutorial Paper Award: Angela Sara Cacciapuoti, Marcello Caleffi, Rodney Van Meter, and Lajos Hanzo, "When Entanglement Meets Classical Communications: Quantum Teleportation for the Quantum Internet," *IEEE Transactions on Communications*, vol. 68, no. 6, June 2020, pp. 3808–33.

4. The IEEE Communications Society Charles Kao Award for Best Optical Communications & Networking Paper: This year, no paper was awarded.

5. The IEEE Communications Society Fred W. Ellersick Prize: This year, the award was given to two papers:

–Zhijin Qin, Hao Ye, Geoffrey Ye Li, and Bing-Hwang (Fred) Juang, "Deep Learning in Physical Layer Communications," *IEEE Wireless*



Xuemin (Sherman) Shen



Jelena Mišić

*Communications*, vol. 26, no. 2, Apr. 2019, pp. 93–99.

–Walid Saad, Mehdi Bennis, and Mingzhe Chen, "A Vision of 6G Wireless Systems: Applications, Trends, Technologies, and Open Research Problems," *IEEE Network*, vol. 34, no. 3, May 2020, pp. 134–42.

6. The IEEE Communications Society Heinrich Hertz Award for Best Communications Letter: This year, the award was given to two papers:

–Beixiong Zheng and Rui Zhang, "Intelligent Reflecting Surface-Enhanced OFDM: Channel Estimation and Reflection Optimization," *IEEE Wireless Communications Letters*, vol. 9, no. 4, Apr. 2020, pp. 518–22.

–Zhen-Qing He and Xiaojun Yuan, "Cascaded Channel Estimation for Large Intelligent Metasurface Assisted Massive MIMO," *IEEE Wireless Communications Letters*, vol. 9, no. 2, Feb. 2020, pp. 210–14.

7. The IEEE Communications Society Leonard G. Abraham Prize: Cunhua Pan, Hong Ren, Kezhi Wang, Maged Elkhachan, Arumugam Nallanathan, Jiangzhou Wang, and Lajos Hanzo, "Intelligent Reflecting Surface Aided MIMO Broadcasting for Simultaneous Wireless Information and Power Transfer," the *IEEE Journal on Selected Areas in Communications*, vol. 38, no. 8, Aug. 2020, pp. 1719–34.

8. The IEEE Communications Society Outstanding Paper Award: Marco Di Renzo, Konstantinos Ntontin, Jian Song, Fadil Habibi Danufane, Xuwen Qian, Fotis I. Lazarakis, Julien de Rosny, Dinh-Thuy Phan-Huy, Osvaldo Simeone, Rui Zhang, Mérouane Debbah, Geoffroy Lerosey, Mathias Fink, Sergei A. Tretyakov, and Shlomo Shamai (Shitz), "Reconfigurable Intelligent Surfaces vs. Relaying: Differences, Similarities, and Performance Comparison," the *IEEE Open Journal of the Communications Society*, vol. 1, June 2020, pp. 798–807.

9. The IEEE Communications Society Stephen O. Rice Prize: Yan Sun, Dongfang Xu, Derrick Wing Kwan Ng, Linglong Dai, and Robert Schober, "Optimal 3D-Trajectory Design and Resource Allocation for Solar-Powered UAV Communication Systems," *IEEE Transactions on Communications*, vol. 67, no. 6, June 2019, pp. 4281–98.

10. The IEEE Communications Society William R. Bennett Prize: This year, no paper received the award.

11. The IEEE Communications Society Katherine Johnson Young Author Best Paper Award: This year, two papers have received this award:

–Shuowen Zhang, Yong Zeng, and Rui Zhang, "Cellular-Enabled UAV Communication: A Connectivity-Constrained Trajectory Optimization Perspective," *IEEE Transactions on Communications*, vol. 67, no. 3, Mar. 2019, pp. 2580–2604.

–Mohammad Mohammadi Amiri and Deniz Gündüz, "Federated Learning Over Wireless Fading Channels," *IEEE Transactions on Wireless Communications*, vol. 19, no. 5, May 2020, pp. 3546–57.

12. The IEEE Communications Society & Information Theory Society Joint Paper Award: Vamsi K. Amalladinne, Jean-Francois Chamberland, and Krishna R. Narayanan, "A Coded Compressed Sensing Scheme for Unsourced Multiple Access," *IEEE Transactions on Information Theory*, vol. 66, no. 10, Oct. 2020, pp. 6509–33.

13. IEEE Marconi Prize Paper Award in Wireless Communications: Emil Björnson and Luca Sanguineti, "Making Cell-Free Massive MIMO Competitive with MMSE Processing and Centralized Implementation," *IEEE Transactions on Wireless Communications*, vol. 19, no. 1, Jan. 2020, pp. 77–90.

The nomination deadline for service and career awards is August 31, 2022, and the committee will meet and discuss nominations in September.

We strive to accomplish the award goals by communication, transparency, and openness in collaboration with ComSoc members, volunteers, and staff. Together, we will keep IEEE ComSoc growing with technical excellence and prestige. Thank you.