ABOUT THE PAPER AWARDS

**Award for Advances in Communication**
Papers that open new lines of work, envision bold approaches to communication, formulate new problems to solve, and essentially enlarge the field of communications engineering. Given to an outstanding paper published in any IEEE Communications Society publication in the previous 15 calendar years.

**Best Survey Paper Award**
This award honors the author(s) of an especially meritorious paper published in a ComSoc owned journal dealing with a subject related to the Society’s technical scope.

**Best Tutorial Paper Award**
Given to an outstanding tutorial paper published in any IEEE Communications Society magazine or journal in the previous five calendar years.

**Fred W. Ellersick Prize**
Publication of an original paper in any IEEE Communications Society magazine in the previous 3 calendar years.

**Heinrich Hertz Award for Best Communications Letter**
This award is given to an outstanding manuscript published in any letter journal financially sponsored or co-sponsored by the IEEE Communications Society during the previous three calendar years which opens new lines of research, envisions bold approaches to communication, formulates new problems to solve, and essentially enlarges the field of communications engineering.

**Leonard G. Abraham Prize**
Publication of an original paper published in the IEEE Journal on Selected Areas in Communications in the previous three calendar years.

**Outstanding Paper Award**
To honor the author(s) of an outstanding technical paper in the areas of interest and scope of the IEEE Communications Society (ComSoc).

**Stephen O. Rice Prize**
Publication of an original paper published in the IEEE Transactions on Communications in the previous three calendar years.

**Young Author Best Paper Award**
Author(s) of an original paper in a subject related to the Society’s technical scope and appearing in one of the Society’s solely owned or jointly owned transactions or journals in the previous three calendar years and who, upon the date of submission of the paper, is (are) less than 30 years of age.

**Marconi Prize Paper Award in Wireless Communications**
Author(s) of an original paper in the field of wireless communications, published in the IEEE Transactions on Wireless Communications in the previous three calendar years, are eligible for the Award.

For more information, please visit: [www.comsoc.org/about/awards](http://www.comsoc.org/about/awards)
2022 AWARDS CEREMONY PROGRAM

Introductory Remarks
Xuemlin (Sherman) Shen, President

IEEE Fellows
Sumeli Sun, ComSoc Fellow Committee Chair

IEEE Communications Society Paper Awards
Xuemlin (Sherman) Shen, President

Journal of Communications & Networks Best Paper Award
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Nelson Fonseca, VP Conferences

Concluding Remarks
Xuemlin (Sherman) Shen, President

2022 IEEE Fellows
Bruno Clerckx
For contributions to multi-antenna communications and wireless power transmission

Kang-Won Lee
For contribution to development of SDN and virtualization technologies for 5G wireless networks

2022 Paper Awards
Award for Advances in Communication Sensing-Throughput Tradeoff for Cognitive Radio Networks
IEEE Transactions on Wireless Communications, vol. 7, no. 4, pp. 1326-1337, April 2008
Ying-Chang Liang, Yonghong Zeng, Edward C.Y. Peh, and Anh Tuan Hoang

Best Survey Paper Award
A Survey of Indoor Localization Systems and Technologies
IEEE Communications Surveys & Tutorials, vol. 21, no. 3, pp. 2568-2599, Third Quarter 2019
Faheem Zafari, Athanasios Gkelias, and Kin C. Leung

Best Tutorial Paper Award
When Entanglement Meets Classical Communications: Quantum Teleportation for the Quantum Internet
IEEE Transactions on Communications, vol. 68, no. 6, pp. 3808-3833, June 2020
Angela Sara Cacciapuoti, Marcello Caleffi, Rodney Van Meter, and Lajos Hanzo

Fred W. Ellersick Prize
Deep Learning in Physical Layer Communications
IEEE Wireless Communications, vol. 26, no. 2, pp. 93-99, April 2019
Zhijun Qin, Hao Ye, Geofffrey Ye Li, and Biing-Hwang (Fred) Juang

Fred W. Ellersick Prize
Walid Saad, Mehdi Bennis, and Mingzhe Chen

Heinrich Hertz Award for Best Communications Letter
Intelligent Reflecting Surface-Enhanced OFDM: Channel Estimation and Reflection Optimization
IEEE Wireless Communications Letters, vol. 9, no. 4, pp. 518-522, April 2020
Beixiong Zheng and Rui Zhang

Heinrich Hertz Award for Best Communications Letter
Cascaded Channel Estimation for Large Intelligent Metasurface Assisted Massive MIMO
Zhen-Qing He and Xiaojun Yuan

Leonard G. Abraham Prize
Intelligent Reflecting Surface Aided MIMO Broadcasting for Simultaneous Wireless Information and Power Transfer
IEEE Journal on Selected Areas in Communications, vol. 38, no. 8, pp. 1719-1734, August 2020
Cunhua Pan, Hong Ren, Kezhi Wang, Maged Elkaishan, Arumugam Nallanathan, Jiangzhou Wang, and Lajos Hanzo

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

Stephen O. Rice Prize
Optimal 3D-Trajectory Design and Resource Allocation for Solar-Powered UAV Communication Systems
IEEE Transactions on Communications, vol. 67, no. 6, pp. 4281-4298, June 2019
Yan Sun, Dongfang Xu, Derrick Wing Kwan Ng, Linglong Dai, and Robert Schober

Young Author Best Paper Award
Cellular-Enabled UAV Communication: A Connectivity-Constrained Trajectory Optimization Perspective
IEEE Transactions on Communications, vol. 67, no. 3, pp. 2580-2604, March 2019
Shuowen Zhang, Yong Zeng, and Rui Zhang

Young Author Best Paper Award
Federated Learning Over Wireless Fading Channels
Mohammad Mohammad Amiri and Deniz Gündüz

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

Journal of Communications & Networks Best Paper Award
Age of Information Performance of Multitaccess Strategies with Packet Management
Journal of Communications, vol. 21, no. 3, June 2019 Special Issue
Antzela Kosta, Nikolaos Pappas, Anthony Ephremides, Vangelis Angelakis

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Best Paper Awards
IEEE Transactions on Wireless Communications, vol. 21, no. 3, 2019 Quarter
Faheem Zafari, Athanasios Gkelias, and Kin C. Leung

IEEE Transactions on Wireless Communications, vol. 26, no. 2, 2019 April
Zhijun Qin, Hao Ye, Geoffrey Ye Li, and Biing-Hwang (Fred) Juang

IEEE Journal on Selected Areas in Communications, vol. 38, no. 8, 2020 August
Cunhua Pan, Hong Ren, Kezhi Wang, Maged Elkaishan, Arumugam Nallanathan, Jiangzhou Wang, and Lajos Hanzo

IEEE Transactions on Communications, vol. 19, no. 1, 2020 January
Emil Björnson and Luca Sanguinetti