

Manifestation
of
IEEE Uttar Pradesh Section
Young Professional Star Award
for the Month of December 2021



About Dr. Om Jee Pandey

Om Jee Pandey (Senior Member, IEEE) received the B. Tech. degree in electronics and communication engineering from Uttar Pradesh Technical University, Lucknow, India, in 2008, the M. Tech. degree in digital communications from the ABV-Indian Institute of Information Technology and Management, Gwalior, India, in 2013, and the Ph.D. degree from the Department of Electrical Engineering, Indian Institute of Technology Kanpur, Kanpur, India, in 2019. He worked as a Postdoctoral Fellow with the Communications Theories Research Group, Department of Electrical and Computer Engineering, University of Saskatchewan, Saskatoon, SK, Canada. From 2008 to 2011, he worked with Escorts Ltd., and FANUC India Private Ltd. He was a Senior Lecturer with the Jaipur Engineering College and

Research Centre, Jaipur, from 2013 to 2014. He worked as an Assistant Professor with the Department of Electronics and Communication Engineering, SRM University, Amaravati, Andhra Pradesh from December 2019 to November 2021. Currently, he is working as an Assistant Professor with the Department of Electronics Engineering IIT BHU Varanasi, Uttar Pradesh, India. His research interest includes the signal processing, communications, and networking for wireless networks with a specific focus on sensor node localization and tracking over wireless ad hoc networks. He also works on related areas, such as low-latency data transmission, time synchronization, data aggregation, and distributed detection and estimation in wireless sensor networks. Currently, he is also working in the area of UAV-assisted edge and fog networks, RIS-assisted wireless communication for improving the quality of service issues of 6G communication systems. He is a Regular Reviewer for various reputed journals of IEEE, including the IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY, IEEE ACCESS, IEEE INTERNET OF THINGS JOURNAL, IEEE SENSORS JOURNAL, IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS, and the IEEE TRANSACTIONS ON COMMUNICATIONS.

1. What are your words of motivation?

In my opinion, hard work is the key of success and we should always try our best to achieve it. I love the lines “Koshish Karne walon ki Kabhi Haar Nahi Hoti” and encourage all the

young minds that please follow your dreams on similar lines.

2. What was the specific reason, if any, which made you, join IEEE?

IEEE is a diverse organization with a large number of researchers and scientists associated with it. IEEE keeps us updated with recent and emerging technologies leading to improve our knowledge in the field of our research interest. IEEE is an organization which helps and motivates individuals to work in the direction of technical innovation towards humanity and the profession. By joining IEEE, the researchers are updated with recent and emerging technology of their field of interests. IEEE provides a good networking and career enhancement platforms. IEEE also provides exclusive member benefits. Some key features which made me to join IEEE are listed as follows:

- 1- **Networking opportunities:** IEEE is helping me to get connected with researchers of my research field across 160 countries. We can improve our research collaboration by joining IEEE.
- 2- **Access to cutting-edge knowledge:** IEEE updates me with latest technology through IEEE Spectrum Magazine and IEEE Explore.
- 3- **Member discounts:** It provides unique member discount for attending conferences and events conducted and sponsored by IEEE.
- 4- **Career Enhancement:** IEEE provides several awards, scholarships, and fellowships which would help

individual to grow in their professional career.

3. As a Young Professional, how do you position your interest in your own field with the activities and services you perform as an IEEE member/ volunteer?

I am a senior member of IEEE and regularly attend the conferences and seminars conducted and sponsored by IEEE. I am a regular reviewer for various journals of IEEE including IEEE Transactions on Vehicular Technology, IEEE Transactions on Wireless Communications, IEEE Transactions on Communications, IEEE Transactions on Network and Service Management, IEEE Transactions on Green Communications and Networking, IEEE Internet of Things, IEEE Sensors Journal, IEEE Systems Journal, and IEEE Access. I also served voluntarily various conferences of IEEE as TPC member including 2019 IEEE Pacific Rim Conference on Communications, Computers and Signal Processing (PACRIM). I also work as regular reviewer for several IEEE conferences. Additionally, I am always happy to provide my services to IEEE which is an organization for the benefits of humanity.

4. What are your thoughts about IEEE membership and its paybacks? Whether the IEEE membership benefited you at any time in your career growth? If so, how?

The most important advantage of IEEE membership is getting updated with latest technology via IEEE spectrum magazines, newsletters, and IEEE Explore. If we are the members of IEEE, the organization regularly

sends us latest updates through aforementioned mediums to get updated with latest technology. Additionally, IEEE provides us a good networking platform which helps us improve our research outputs by sharing and exchanging the knowledge. Furthermore, IEEE helps us to get registered with reduced charges at various conferences, workshops, and events sponsored by IEEE. In addition, IEEE also provides us travel support to attend the conferences and workshops. For instance, I received student travel grant support from IEEE to attend IEEE COMSNETS 2019 to present one of my research papers.

5. As a Young Professional, what are the changes or developments you would like to see in evolving this professional body as a group devoted to humanity and its causes?

As a young professional, I would like to deliver and attend various technical talks organized by IEEE, where we can get updated with latest technology in several fields. Apart from technical talks there must be several professional talks which help individuals to learn various things such as writing a good paper skill, conducting and organizing good conferences. There should be strong awareness about several IEEE awards and grants which help individuals to grow in their professional field along with financial supports. There must be a regular meeting where we can exchange our ideas towards the development of this professional body. In addition, we should call several new ideas from individuals towards the growth of this group and the few best ideas must get rewarded in some forms.

6. What are your suggestions and recommendations for those young professionals who may aspire to join IEEE?

In my opinion, joining IEEE is the best way to get updated with latest technological development. The young professionals must join IEEE to get associated with an excellent and large professional networking group, where we can enhance our research productivity. Joining IEEE will help young professionals to get benefited both financially and technically by attending conferences and workshops. IEEE also provides all of us to get various awards and fellowships, if we work efficiently towards the benefits of humanity by making technical contributions.

7. As a Young Professional and a young researcher in the field, how do you consider the prospects of scientific research in this field for the benefit of humanity?

Scientific research helps us to provide several benefits to the humanity. As a young professional, we can collaborate with various research groups and address several social issues towards the benefit of humanity. For instance, during COVID-19, various research groups developed testing kits, ventilators, robust masks, and even fast and effective vaccination to save the human life. Furthermore, with the help of such groups and collaboration, we are living in a smart world where we are able to provide cognitive healthcare, climate smart agriculture, intelligent transportation, ultra-reliable low-latency communication, among others towards the benefits of humanity.

8. What is your recent exciting research works that may have significant societal impact?

My research interest includes wireless sensor network, Internet of Things (IoT), cyber physical systems, UAV-assisted edge and fog networks, low-power wide-area networks, speech and image classification using lightweight machine learning models. One of my primary research focuses is design and development of small-world wireless networks to improve the quality of service of the IoT networks. Recently, I have developed machine learning based small-world LPWAN leading to reduce the data transmission delay and energy consumption of the IoT network devices' during data transmission. It also improves the data throughput performance Along with enhanced bandwidth utilization. This method can further be used for health monitoring of patients.

9. What's the advice you would give to a young professional who is just starting his/her career?

In my opinion, the young generation must focus on quality research by publishing their research work with top IEEE Journals. They should regularly visit IEEE journals website of their field of interest so that they can understand the recent technological development. Additionally, they should attend IEEE conferences where they can meet good researchers of their field of interest. Young professionals should exchange their research ideas and try to collaborate to develop a system which would be helpful for the society. Even at present, Government of India is also

focusing on developing novel systems for the benefits of the society. Government of India is also looking forward for such kind of researchers who can help them to build such systems. Young professionals must attend various conferences, workshops, and other events conducted to sponsor by IEEE for better awareness.

10. Anything else that you would like to add?

I am thankful to IEEE UP Section Young Professionals Award Committee for conferring me with the "IEEE UTTAR PRADESH SECTION YOUNG PROFESSIONALs STAR AWARD FOR THE MONTH OF DECEMBER 2021 ". Additionally, I am happy to share my expertise and experience as an IEEE volunteer with the members of IEEE Uttar Pradesh Section and IEEE young Professionals.