**Manifestation**

**of**

**IEEE Uttar Pradesh Section Young Professional Star for the Month of April 2021**

Dr. Kavindra kandpal has been selected IEEE Uttar Pradesh Section Young Professional Star for the month of April 2021. We congratulate Dr. Kavindra Kandpal, IIIT Allahabad, UP for the achievement. His perception about the IEEE, society and young professionals are reflected in this discussion. Here are the exerts of the interview with Kavindra Kandpal made by Kamlesh Kumar Singh, IEEE UP Section Young Professionals Committee member.

**About Dr. Kavindra Kandpal**

Dr. Kavindra Kandpal is a senior member of IEEE and has a teaching experience of more than 8 years. He received his B.Tech. degree in Electronics and Communication Engineering from Kumaon Engineering College Dwarahat with distinction in year 2010. In 2012, he received his M.Tech. degree in Microelectronics specialization from Indian Institute of Information Technology Allahabad. He was also awarded with ‘*Chancellor Gold Medal’* in the 7th convocation of IIITA.  He joined the ECE department of IIIT-Allahabad as an Assistant Professor on 16th Dec. 2019. Before joining IIITA, he has been associated with Birla Institute of Technology and Science (BITS) Pilani, Pilani Campus, as a lecturer/ Assistant Professor in the Electrical and Electronics Engineering Department, since Sep. 2013. He completed his Ph.D. program in the EEE department of BITS Pilani, in the area of oxide-based thin-film transistors in 2018. During his Ph.D., he worked closely with CSIR-CEERI Pilani for the experimental work related to TFT fabrication. His research interests include thin-film deposition, characterization, semiconductor devices and display electronics. Apart from his interest in semiconductor devices, he also possesses strong analog, digital circuit design and layout design skills. For the two successive years, 2017 and 2018, he has successfully guided the teams comprising of undergraduate (B.E.) and postgraduate (M.E.) students from BITS Pilani and won **Cadence India Design Contest**. Currently, he is actively working in solid-state applications of topological insulators, device-to-circuit integrated design with applications ranging from display electronics, biosensors, and photodetectors. He has more than 35 research publications in peer reviewed journals and international conferences.

**1. What are your words of motivation?**

Please do not hesitate to experiment in life. Do not be afraid of failures. Only failures can give you the courage and motivation to achieve something great. Collaborate with experts in your field, experiment with dynamic ideas, persevere with your ideas and most importantly, while doing this, never compromise on your integrity. As you aim higher, do remember that victory without virtue has no meaning and it would never be beneficial to the society in the long run. I wish you all the best for all your future endeavours.

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

IEEE is one of the largest technical organization related to advancement of electrical and electronics engineering technology. I found various sister societies of IEEE helpful in developing my research area and understanding of the advanced topics. It includes the electronic device society, circuit and system society and solid state society. Reading regular IEEE newsletter and relevant research papers keeps me updated and help in evolving my research dimensions.

**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?**

As a young professional, I can say, I am still learning and exploring most of the emerging IEEE designated areas like flexible electronics, topological insulators and data converters/ modulator design. In terms of being an IEEE member / Volunteer I am serving actively as a reviewer of various IEEE journals and conferences. Moreover, recently I have taken the role of Secretary, IEEE Photonics Society Chapter UP Section.

**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?**

Sometimes some young professionals can’t see the direct benefits instantaneously. But, those who follow IEEE routinely will find it extremely useful. For example, the IEEE membership gives one the access to one of the biggest research database through IEEE xplore. Almost 2 out of 4 times I consult the articles from IEEE xplore. Moreover, along with this membership if one takes the membership of specific society related to his/her research interest/s, it gives one monthly updates in the relevant research area/s. Needless to say, as a member or a senior member one finds recognition among the peers. So, I would say, directly and indirectly, this membership has helped me a lot in career growth.

**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 say that we should not ignore the things happening in our society. Ignoring something is never a solution. We should extend our technical skills for the cause of society. For example, this year and last year has caused lots of disturbance due to COVID. We must help the needy people in such situation as a group and need to develop the awareness in our society. Moreover, we must stand together with the government and initiate awareness program in society like motivating them for vaccination, and follow the COVID protocols. This would go beyond our regular academic endeavours and research agenda, and help us situate ourselves more strongly within the society.

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

I would advise, without any hesitation, join IEEE. IEEE covers all the area of advancement in electrical and electronics engineering. You do get a very good chance of networking with the peers by participating in various events like workshop, conferences, webinars organized by IEEE. You can find and connect with the people working in your research area. Also, you can keep yourself updated by reading various state-of-art articles published in IEEE journals and conference proceedings.

**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?**

As a young professional we should definitely address the societal problems. When we talk about addressing the societal problems for the benefit of humanity the observation is a key. Through a close observation of your surrounding only, you will be able to find the problem statement. Most of time the societal problems are interdisciplinary in nature and could be messy. The solution could be very simple or complex. It may or may not fall in your research area. Therefore, to solve such inter-disciplinary problems you may need to interact with societal or industrial stake holders, collaborate with other faculty, discipline or institutions.

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

**My recent works are mostly in the area of printable and flexible electronics. It uses a-IGZO based TFTs to develop circuits and systems on a flexible substrate. All the societal problems where the solution needs circuits, sensors and systems can be made over a flexible substrates and lead to wearable electronics. Moreover, you can also integrate these circuits and systems with conventional electronics. For example, one of the recent work that we had presented in *IEEE Latin America Electron Devices Conference (LAEDC)*. April 19-21, 2021, shows the device-to-circuit integration of a silicon nanowire biosensor with CMOS preamplifier. I have seen most of the time undergraduate students also come with some nice ideas. E.g. one group of my students found that the small scale industry lags in the automation due to the high cost. So they developed a low-cost IoT enabled, integrated industrial automation for small scale Fast Moving Consumer Goods (FMCG) industry.**

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

My advice to all the young professional is to stay focused and develop their skills. They must interact, interact and interact. This will reflect in their understanding and learning. And finally for achieving the larger goals they should never hesitate on collaboration. Sharing skillset will lead to a better final product or solution.

**10. Anything else that you would like to add?**

It is indeed an honor and I would like to thank the IEEE Uttar Pradesh section young professional committee to consider me worthy of this award.