

The world is becoming smaller as communication technology improves. Even twenty years ago, we couldn't think of such a thing, what we are doing today. The way we think and interact with each other is changing as a result of technological advancements. My curiosity in technology and interest about science intrigue me for choosing Electronics and Electrical Communication Engineering. I am applying to the University of Indian Institute of Technology, Kharagpur to pursue graduate studies in Wireless Communications Systems in order to pursue this interest further. . My particular areas of interest are 5G networks, Antenna design, Wireless Communication and Artificial intelligence.

It was difficult for me to overcome all of the barriers from the beginning of my studies. Because there were few schools where I was born, and the people there were uninterested in education. However, after securing GPA 5.00 out of 5.00 in both Secondary School certificate (SSC) and Higher School Certificate (HSC), I got admission into Rajshahi University of Engineering and Technology (RUET) one of the renowned university in Bangladesh.

We had several communication courses in undergraduate level, these are Communication Engineering – I, Communication Engineering-II, Mobile Cellular Communication, Radio and TV Engineering and some sessional courses related to aforementioned courses. In my undergraduate Thesis & Project course, I worked on Hollow core PCF design for low confinement loss. In this correspondence, different design of photonic crystal fiber is proposed. We mainly analyze the confinement loss due to change of cladding number and structure.

I'm now working on a research project titled, "Secrecy Performance of Mixed Generalized η - μ and Málaga RF-FSO Variable Gain Relaying Channel". Our main goal is to keep information safe from eavesdropper. I want to mention another ongoing paper titled "Performance Analysis of Linearly Arranged Antenna Array with Robust NVL technique". This proposed beamformer is investigated using robust techniques such as ODL, FDL, VDL and NVL significantly reduce beamwidth and NVL has performed better than others.

Those two works have provided me with an understanding of how research may be conducted. I intend to take my research to the next phase and gain more knowledge about this subject. In comparison to 4G, emerging 5G networks have lower latency, larger capacity, and more bandwidth. These network upgrades will have a significant impact on how people live, work, and play around the world. My long-term goal is to improve 5G technologies and artificial intelligence. Cognitive Radio Technology and Beam Division Multiple Access are anticipated to be used in 5G technology.

The Master's Program in Electronics and Electrical Communication Engineering at IIT Kharagpur, with a focus on 5G technology, is an excellent match for my professional goals. The institute's wide curriculum and good peer network have impressed me. More importantly, I'm particularly interested in Assistant Professor Sarang Pendharkar's current study on the interaction of electromagnetic waves with matter, and I hope to learn from him and possibly join his elite team. I'm also intrigued by the University's Communication Networks Lab, Communication Systems Lab, and Microwave Lab, as well as the superb infrastructure that would support my ambitions to do my own independent research. To summarize, I have the skills and ambitions, and now I'm looking for the proper platform to help me achieve my goals. And your university gives me with the same opportunity.