SERB Accelerate Vigyan Training and Skill Internship *VRITIKA on*

DESIGN AND DEVELOPMENT OF 'ANTENNA-FSS' FOR 5G AND 6G COMMUNICATION TECHNOLOGIES

5th June — 7th July, 2023

NATIONAL INSTITUTE OF TECHNOLOGY JAMSHEDPUR

About The Internship

VRITIKA is the call for initiation and practice in science through training and skill internship. The scheme is meant to support regular PG level students who are having a strong orientation towards scientific and engineering research and are pursuing their degree from University / Institution within India (primarily from universities, colleges, private academic institutions) in the fields of Science and Engineering and having an interest in scientific research.

The demand of high throughput with low latency in 5G and beyond wireless technologies demand research interest in the specific transceiver system where antenna is a crucial integral part. The design and development of antennas for 5G and its allied technologies is an important task for several contemporary and futuristic applications such as mobile phone, mobile base stations, AR-VR devices, CR systems, IoT enabled solutions etc. Research on MIMO and wideband (UWB/ SWB) antennas in microwave and millimeter-wave spectrum gained huge popularity as these technical aspects can provide the desired high data rate as aimed in 5G, 6G and beyond wireless technologies. Frequency Selective Surfaces (FSS) are EBG structures that can be used as Absorber, Shielding element, Radiation Enhancement surface, Polarization converter etc. Design of Frequency Selective Surfaces in microwave and millimeter-wave spectrums and integrating it with compatible antennas for such benefits can make it promising candidate for futuristic wireless technologies based on 5G/6G/beyond. The main objectives of the proposed training and skill internship are to train the interns about the design and development of modern and futuristic antennas and FSS in the microwave and millimeter-wave spectrums which will be applicable in the future 5G and 6G wireless devices.

Participants: Eligibility Criteria

- Regular PG students (Masters/ PhD Scholars) of relevant specialization who are pursuing their degree from University / Institution within India (primarily from universities, colleges, private academic institutions) are eligible.
- The applicants must upload the institute's identity card, detailed resume, all marksheets (from 10th class to the highest degree obtained), and a No Objection Certificate in Institute's Letter Head from Supervisor/Head of the Department/Head of the Institute for allowing their student to undergo internship, if selected.
- Seats are limited. Candidates will be selected based on the selection criteria. The selected candidates must confirm their acceptance by reply email within two days of selection, failing which waitlisted candidates will be given the chance.

Application Procedure

- Application/ registration is free of cost. Accommodation, Food, stationary items will be provided to the selected candidates for the internship period only. The interns will be eligible for Travel Allowance (TA) reimbursement for their journey to the host institute from their present institute, both ways, as per GoI norms.
- Certificate of successful completion of internship shall be issued to the eligible participants only. The IPR right of the assigned task will be reserved by the institute which can not be used by the intern without the permission of the concerned authority.
- Application Link: **https://forms.gle/kn3b3947T6FDfBBXA**

Important Dates

Application deadline: **May 15, 2023;** Notification to the selected candidates: **before May 22, 2023**

Event Coordinator

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