DST- SERB Sponsored
High End Workshop
on
Industrial Opportunities for VLSI, Artificial Intelligence and Communication Systems

June 10th – 14th, 2024

Organized by: **Department of Electronics & Communication Engineering,**

Dr B R Ambedkar National Institute of Technology Jalandhar, India

About NIT Jalandhar

Dr B R Ambedkar National Institute of Technology was established in the year 1987 as Regional Engineering College and was given the status of National Institute of Technology (Deemed University) by the Government of India on October 17, 2002 under the aegis of Ministry of Education (Shiksha Mantralaya), New Delhi. Now the Ministry of Education (Shiksha Mantralaya), Government of India has declared the Institute as *"Institute of National Importance"* under the act of Parliament-2007. A large number of reputed Industrial houses in the country visit the Institution and select the final year students as Engineers/ Management Trainees. As one of the National Institutes of Technology (NIT), the Institute has the responsibility of providing high quality education in Engineering, Technology and Sciences to produce competent technical and scientific manpower for the country. The Institute offers B.Tech., M.Tech., M.Sc., MBA and PhD programmes in the several disciplines of Engineering, Technology and Sciences. For more information, please visit https://www.nitj.ac.in/

About the Department

The Department of Electronics and Communication Engineering offers B. Tech in Electronics and Communication Engineering, two full time M.Tech program in Electronics and Communication Engineering and VLSI Design. Department also offers the Doctoral programs in the field of Communication, VLSI Design and Bio-Medical Engineering. The department has established state of-art laboratories with sophisticated equipment's for undergraduate, post graduate and Ph.D. research work. The department has an advanced VLSI lab sponsored by Ministry of Communication and IT under SMDP-C2SD and 5G Communication lab, IoT Lab as centre of excellence. In the VLSI lab Cadence, Mentor graphic, Synopsys, and Xilinx softwares are available for synthesis /simulation work.

About the Workshop

It is aimed to provide hands-on experience to the students primarily from universities, colleges, private academic institutions and newly established institutes in handling / troubleshooting of high-end scientific instruments, softwares and such skill development on themes required for research work. The program is meant to support motivated PG and Ph.D. level students, who are having a strong willingness to get excellence in their scientific and engineering research pursuits. Following are the objectives of this high end workshop:

1. To impart the knowledge of design of experiments and thus enable the scholars to understand it with real life examples.
2. To understand the fundamentals of VLSI, Communication Engineering, Machine learning and Artificial Intelligence.
3. To understand the integration of Artificial Intelligence in VLSI Design.
4. To understand the fundamentals applications of Machine Learning in VLSI, IoT, Cyber Security, DSP, WirelessCommunications, Information warfare, etc.
5. To Analyze and evaluate the cyber security needs of an organization using machine learning.
6. To develop skills that can plan, implement, and monitor cyber security mechanisms to help ensure the protection of information technology assets.
7. To Seamlessly integrate 5G, unlocking new possibilities in areas such as IoT, autonomous vehicles, and augmented reality.
8. To provide hands on training on Machine Learning, Deep Learning and industrial integration of Machine Learning models.

Who can attend: This workshop will be conducted in hybrid mode and is open to postgraduate student's/research scholars from all Institutes, Colleges and Universities. Preference will be given to the students having interest towards VLSI, Spintronic, Machine Learning, Deep Learning, Optimization Algorithms, Memory Design, and CAD tools. **Total numbers of seats are limited to 75. The selected candidates who will be attending in offline mode are to be provided with support in the form of stationary, consumables, accommodation, food etc., as per institute norms. There are no registration fees.**

How to Apply?

Click here to register: https://forms.gle/PkNj2AKK2JBd9GkA9

Tentative Resource Persons

Prof. Amitava Das, CSIR, Chandigarh
Prof. Brajesh K. Kaushik, IIT Roorkee
Dr. Patrick Corbett, CUNY, New York, USA
Dr. Jean Barbier, ICTP, Italy
Mr H. S. Jatana, PGIMER Chandigarh
Prof. Rajeevan Chandel, NIT Hamirpur
Prof. Divya Bansal, PEC Chandigarh
Dr. Neeraj Goel, IIT Ropar
Dr. Sanjay Madan. CDAC Mohali
Dr. Ranjan Jha, CSIO, Chandigarh
Dr. Gargi Khanna, NIT Hamirpur
Dr. Neerja Garg, CSIR, Chandigarh
Dr. Harshit Agarwal, IIT Jodhpur
Dr. Gopal Rawat IIT Mandi
Dr. Neena Gupta PEC, Chandigarh
Dr. Baljeet Singh, CSIR Chandigarh

Important Dates

Registration opens
May 27th, 2024
Last date for application
June 6, 2024
Display of shortlisted candidates
June 8, 2024
Workshop dates
June 10-14, 2024

Event Organizers

Dr Deepti Kakkar,
Associate Professor, ECE
Dr Tarun Chaudhary,
Assistant Professor, ECE

Dr Shveta Mahajan,
Assistant Professor, CSE
Dr Jaspal Kaur Saini,
Assistant Professor, IT