

Indian Institute of Technology Indore

Advertisement for Admission to Ph.D. Program in Electrical Engineering (EE) for Autumn Semester of Academic Year (AY) 2022-23 (TA Category only – Online Mode)

ITI/Acad/PhD Admissions/22-23

June 21, 2022

IIT Indore invites applications from highly motivated and research-oriented students for admission to its PhD program in the Department of Electrical Engineering for the Autumn Semester of Academic Year (AY) 2022-23 as per the below-mentioned categories of admission and time schedule. Candidates can visit the profiles of the faculty members listed below at the link: <http://ee.iiti.ac.in/faculty.html> before applying.

Categories of admission (for Indian and International applicants): Refer to the main PhD advertisement available at <https://academic.iiti.ac.in/phdadvt.php>

Time Schedule of PhD admission:

Last date of online application through https://academic.iiti.ac.in:8443/nregistration.jsp (for Indian applicants)	06 July, 2022 (Wednesday) Latest by 24.00 hrs. IST
Last date of online application through https://academic.iiti.ac.in:8443/nregistration.jsp (for International applicants)	06 July, 2022 (Wednesday) Latest by 24.00 hrs. IST
Dates of PhD selection process (online written test and online interviews)	08 and 09 July, 2022 (Friday and Saturday)

Minimum Educational Qualifications (MEQs) and Qualifying Examination

For Indian Applicants: Master's degree in Electrical/ Electronics/ Electronics & Communication / Physics / Instrumentation and Control Engineering / Material Science & Engineering or any other equivalent degree with specialization in the areas of communication and signal processing or micro/nanoelectronics & VLSI area or power electronics and power systems/control systems (with first division as defined by the awarding Institute/University) having GATE qualification in EE/EC/IN subjects.

OR

Four-year Bachelor's degree OR five-year integrated degree in Electrical Engineering/ Electronics and Communication Engineering OR Electrical & Electronics Engineering/ Instrumentation & Control Engineering (with first division as defined by the awarding Institute/University) AND valid GATE qualification in EE/EC/IN only.

For International Applicants:

MEQ: Master's degree in Electrical Engineering with specialization in either Communications & signal processing/ VLSI/ Nanoelectronics/ Image processing/ Speech processing/ RF-Microwave / Power electronics / Power systems / Control systems or any other related areas (with first division as defined by the awarding Institute/University)

QE: Valid TOEFL/IELTS or equivalent qualification OR valid GATE qualification

Instructions:

- All interested candidates, fulfilling the minimum eligibility criteria, must apply online through the website (<http://academic.iiti.ac.in:8080/nregistration.jsp>). **FA/DF/IS/CT/SW Category candidates should not apply in this round of selection process**
- After applying online, the applicants should take a print out of the application form and sign the same. The scanned copy of duly signed application form along with the following documents should be sent by email to admission-ee@iiti.ac.in
 - Self-attested photocopies/scanned originals of all relevant supporting documents such as degree certificates, mark sheets, date of birth certificate, **GATE score card**, etc., from 10th class onwards that they wish to present before the selection committee.
 - Two recent passport size photographs.
 - Receipt of fee (Rs.100/-) paid through SBI i-collect.
 - Letters of recommendation duly signed by a minimum of **two referees**, who have known the applicant in a professional capacity, are mandatory for PhD selection process and must be sent directly to admission-ee@iiti.ac.in
The format of the recommendation letter can be found along with this advertisement.
- Important: DO NOT** send any form or documents by post.
- Online PhD written test and online interviews** shall be conducted on **July 08 and 09, 2022 (Friday & Saturday)**. Eligible candidates who have submitted their online application (before the last date) and fulfil the minimum eligibility criteria are strongly encouraged to report for written test in an online link, which will be sent to all candidates who have shown interest, on **July 07, 2022**. Those who qualify in the written test will be called for interview. **No emails or communication, in any form, regarding shortlisting process, change of interview date, syllabus of interview, etc. will be entertained.**
- Candidates who wish to appear for the PhD selection process and fulfill the eligibility criteria may also send their Resume/CV to the faculty member whose area is of interest to them. The areas of interest and detailed profile of faculty members are given below. Candidates are encouraged to visit webpage of faculty member listed below to know more about ongoing research work and areas of interest.

- Mere fulfillment of the minimum eligibility criteria does not entitle anyone for admission into the PhD program in Department of Electrical Engineering.
- Candidates who have applied against our last PhD advertisement dated May 10, 2022 need to re-apply against this advertisement**



Prof. Santosh Kumar Vishvakarma

Dr. Santosh Kumar Vishvakarma is leading “Nanoscale Devices, VLSI Circuit and System Design” research group at IIT Indore. His research interests are VLSI Circuit and System design including Energy-Efficient and Reliable SRAM Memory Design; Enhancing Performance and Configurable Architecture for DNN Accelerators; SRAM based In-Memory Computing Architecture for Edge AI; Reliable, Secure Design for IoT Application and Design for Reliability. He has a very strong collaboration in Industry and Academia across India and globe. As of now, 17 PhD Scholars have been awarded from his group. For details, please visit: <https://sites.google.com/site/svishvakarma/>. He may be contacted at his email id skvishvakarma@iiti.ac.in



Prof. Shaibal Mukherjee

Hybrid Nanodevice Research Group (HNRG) led by Prof. Shaibal Mukherjee needs sincere and motivated PhD students to work in **Nanofabricated RRAMs in Image Processing, AI and Machine Learning, and Data Security; HEMTs for Electric Vehicles (<http://hnrng.iiti.ac.in/>)**. HNRG has strong collaboration with industries and institutions in India and in the USA, Russia, France, Portugal, Israel, Italy, Japan, Australia, Sweden, and Germany. **Candidates, having prior knowledge in MATLAB / CAD / Circuit Design tools or cleanroom experimentations are desirable. Till date, 15 PhD students have graduated by completing their research at HNRG.**

Former PhD graduates from HNRG are successfully placed in IIT, IISc, NITs, IIITs, and Japan (http://hnrng.iiti.ac.in/phd_graduated.php). For details, contact at shaibal@iiti.ac.in



Prof. Vipul Singh

Dr. Vipul Singh's research group MNRG focuses on wide range of topics primarily related to **Organic electronics, Oxide based semiconductors, LSPR effect, Optoelectronic devices, Bio/chemical/gas sensors, synthesis of nanostructured materials**. MNRG strives for academically brilliant and motivated candidates having past background in Electrical/Electronics/ Instrumentation engineering/ Material Science & Engineering and Applied Physics and having passion to pursue research at the forefront of nanoelectronics and allied areas. Fellowship awardees are encouraged to apply to our group under FA category. For more details please visit our homepage: <http://www.iiti.ac.in/people/~vipul/>, for more details contact me at vipul@iiti.ac.in



Prof. Abhinav Kranti
(akranti@iiti.ac.in)

Low Power Nanoelectronics Research Group is engaged in pioneering research on capacitorless DRAM, steep switching transistors, material-device-circuit co-design and vertically stacked transistors, all of which are essential for the development of next generation logic and memory technology. The group has very strong collaborations with leading international researchers, and after completing PhD, students often receive offers for post-doctoral positions abroad. Exceptionally talented and motivated candidates, with strong interest in Semiconductor Devices, CMOS, Nanoelectronics, Biosensors, VLSI and Circuit Design intending to work on emerging research problems are strongly encouraged to apply. For more information, please visit: <http://iiti.ac.in/people/~akranti/>



Dr. Nitya Tiwari

Dr. Nitya Tiwari works in the areas of signal processing and speech processing, particularly speech enhancement for listeners with hearing impairment. Her research interests include development of signal processing based and machine learning based techniques for single microphone and multi-microphone speech enhancement. She is also interested in development of real-time noise suppression algorithms with low memory, latency, and computational complexity for use in hearing assistive devices. She is looking for Ph.D. students who have background in and are keen to work in above mentioned areas.

Email: hnityatiwari@gmail.com

Website: <https://sites.google.com/view/nityatiwariiticom/home>



Dr. Sumit Gautam

Dr. Sumit Gautam joined the Department of Electrical Engineering at IIT Indore in Dec'21. He has prior working experience in both industry and academia. His research interests pertain to (but not limited to): Simultaneous Wireless Information and Power Transmission (SWIPT), Wireless Energy Harvesting Methods, Wireless Edge-Caching based cooperative networks, Fronthaul load management: 5G-and-beyond/6G Wireless Communications, and Intelligent Reflecting Surface (IRS)-assisted SWIPT. Interested candidate(s) with good background in Communications/Signal Processing/Mathematics (Optimization Theory)/Computer Science (good coding skills in MATLAB/Python/C++) or equivalent is/are highly encouraged to apply. For more information about his works, please visit: <https://sites.google.com/site/sumitgautamjbp/home>, or kindly write to him at: sumit.gautam@iiti.ac.in



Dr. Vijay A. S.

Dr. Vijay received the M.Tech. and PhD degrees from the Indian Institute of Technology, Bombay, Mumbai, India in 2012 and 2020 respectively. He was a battery systems engineer at Sony Energy Devices Corporation, Japan from 2012 to 2014 and worked as a post-doctoral fellow at IIT Bombay in 2021. His primary research focus is on the applications of power electronics and the areas include AC, DC and Hybrid Microgrid systems, Real-time simulation, Power level emulation, Power electronics in Distributed generation and Power quality. ([E-mail:vijay_as@iiti.ac.in](mailto:vijay_as@iiti.ac.in))



**Dr. Srivathsan
Vasudevan**

Research areas: Biomedical Instrumentation, Photoacoustic imaging; FPGA based electronic development; Electronic hardware development.
Motivated students interested in building electronic hardware instrumentation and application of the same in hospitals are encouraged to apply. The main motivation of Biophotonics Lab is to focus on developing instruments for hospitals for clinical research and diagnosis of cancer.
Motivation to travel to hospitals and other clinical centres is a must to apply. For further details, please contact svasudevan@iiti.ac.in



Dr. Amod C. Umarikar

Dr. Amod C. Umarikar works in the area of applications of power electronics in renewable energy systems. The power electronics lab is well equipped with all the basic instruments required for the research. The department also has the facility of Real Time Digital Simulator (RTDS) facility to perform real time simulation of power electronic systems.
The applicant should be highly motivated and also should have good hardware design and programming skills.
Personal Website: <http://people.iiti.ac.in/~umarikar/>

For any queries, please contact:

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