Indian Institute of Technology Indore
Advertisement for Admission to Ph.D. Program in Electrical Engineering

February 13, 2019

IIT Indore is a premier institute for higher education and research in India and is currently ranked in the bracket of 351-400 in the Times Higher Education World University Rankings 2019, 2nd amongst Indian Institutes. IIT Indore invites applications from highly motivated and research oriented students for admission to its Ph.D. Program in the Discipline of Electrical Engineering for the Spring Semester of Academic Year (AY) 2018-19 as per the prescribed categories of admission and time schedule. Candidates MUST visit the profiles of the faculty members available at http://ee.iiti.ac.in/faculty.html before applying for the Ph.D. Program.

Kindly refer to the main Ph.D Advertisement of the Institute, available at http://academic.iiti.ac.in/phdadvt.php, for details on Admission Category, Minimum Educational Qualifications (MEQ), Qualifying Exam, Application Fee and Application Procedure.

Last date of Online Application through http://academic.iiti.ac.in:8080/registration.jsp March 24, 2019 (Sunday)

Date of Written Test and/or Interview March 30, 2019 (Saturday-Sunday)

IMPORTANT INSTRUCTIONS (for Indian Nationals):

1. Prospective applicants must apply online through our website (http://academic.iiti.ac.in:8080/registration.jsp). After submitting the online application, the candidates should send the signed hard copy of the application along with a recent photograph, printout of SBI i-Collct payment receipt, self-attested relevant certificates and other documents by post to DPGC Convener, Electrical Engineering, Scandum Building (Pod 1A), Indian Institute of Technology Indore, Simrol 453552, Indore, Madhya Pradesh, so as to reach IIT Indore latest by March 29, 2019. Please do NOT post any original certificates/testimonials or recommendation letters.

2. PhD written test and/or interviews shall be conducted on March 30, 2019 (Saturday and Sunday) at Manganese Building (Pod 1E), IIT Indore, Simrol 453552, Indore. Eligible candidates who have submitted online application (before the last date) and fulfilled the minimum eligibility criterion are strongly encouraged to participate. Communication in any form, regarding shortlisted candidates, accommodation, change of date, syllabus of written test and/or interview etc. will be entertained. Mere fulfillment of the minimum eligibility does not entitle a selection into the Ph.D program.

3. In addition to sending the documents by post (refer to Instruction 1), prospective candidates may also bring along the following documents on March 30, 2019, to present before the selection committee:
   (a) Printout of the application form submitted online and recent passport size photograph. Self-attested photocopies and originals of all relevant supporting documents such as degree certificates, mark sheets, date of birth certificate, etc., from Xth class onwards. Candidates may also bring original and attested photocopies of any other testimonials, documents or certificates that they wish to present to the selection panel.
   (b) A printout of the SBI i-Collct receipt confirming the payment of the application fee of Rs. 100.
   (c) Letters of recommendation duly signed and sealed in a confidential envelope from a minimum of two referees who have known the candidate in professional capacity. The letters are mandatory for PhD selection process and should be addressed to the Chairperson, PhD Selection Committee, Electrical Engineering, IIT Indore.

4. No TA/DA will be paid for attending the PhD selection process.

5. Candidates who wish to appear for the PhD selection process and fulfill the minimum eligibility criteria may also send their resume/CVs to the faculty members (from the list below) of their interest in addition to applying online through the website as stated above. Candidates are strongly advised to visit webpage of each faculty member to know about ongoing research and areas of interest. Applicants with UGC/CSIR Junior Research Fellowship (JRF) award in Electronic Sciences/Physical Sciences or any other external fellowship/scholarship are strongly encouraged to apply under the Fellowship Awardee (FA) category.

IMPORTANT INSTRUCTIONS (for International Applicants):

Prospective applicants must apply online through our website (http://academic.iiti.ac.in:8080/registration.jsp). After submitting the application online, the eligible candidates should send the signed hard copy of the application along with recent photograph, photocopies of self-attested relevant certificates and Statement of Purpose (SOP) to DPGC Convener, Electrical Engineering (Pod 1A), Indian Institute of Technology Indore, Simrol 453552, Indore, Madhya Pradesh, India, latest by March 20, 2019. Only shortlisted international candidates will be contacted for the selection process. For international applicants, application fee is exempted.

Faculty members and their research interests:

Dr. Abhinoy Kumar Singh (abhinoy.singh@iiti.ac.in)
Dr. Abhinoy Kumar Singh has recently joined IIT Indore as an INSPIRE Faculty after completing postdoc from McGill University, Canada. His major research interest is in estimation and filtering algorithms with application to target tracking problems. In recent years, he has also been working on tackling biomedical problems, especially, efficient glucose monitering in diabetes treatment, with application of estimation algorithms. Being a tool for target tracking problem, the estimation/filtering algorithm is key to several defense and space technologies. It is also well applicable in financial and biomedical modelling, artificial intelligence in robotics, diagnosis and prognosis of heavy industrial equipment etc. These domains contribute large in world GDP and open scope for huge carrier opportunities. Potential candidates with strong background in control systems and/or mathematics, especially probability and stochastic theory, are encouraged to apply. For further details, please visit IIT Indore website: http://people.iiti.ac.in/~abhinoy.singh/

Dr. Saptarsi Ghosh (sgghosh@iiti.ac.in)
Dr. Saptarsi Ghosh has completed his Ph.D. from IIT Kanpur and Postdoc from Chung-Ang University, Seoul, South Korea. His areas of research interest include electromagnetics, frequency selective surfaces, metamaterials, microwave absorbers, antennas, and other passive microwave devices. He is also working on various cutting-edge technologies, such as 3-D printing, Inkjet printing, microfluidic technologies, and 5G communication. Motivated candidates, having a strong background in Electromagnetics and related areas, are highly encouraged to apply. For more information and recent publications, please visit the webpage: http://iiti.ac.in/people/~sgghosh/

Prof. Vimal Bhatia (vbhatia@iiti.ac.in)
Prof. Bhatia completed his Ph.D. from The University of Edinburgh (UK), and is currently leading Signals and Software Group (SaSg) @ IIT Indore with active collaborations with researchers from the UK, Ireland, Norway, France, South Africa, and the US, with external funding of over 12.5 Crores. The SaSg research group is actively involved in R&D on a) Performance analysis of beyond 5G communication links, b) Adaptive algorithms, c) OFDM, MIMO, NOMA, Cognitive Radio, Visible Light Communications for 5G and beyond networks, d) RADAR signal processing, e) Bio-inspired signal processing, machine and deep learning algorithms and f) Solutions for industry and defence. The group has attracted students from abroad, IISc/IITs/NIITs/IITians and other institutes. Bright and highly motivated candidates, having background in Communications/Signal Processing/Physics/Mathematics/Statistics/Electronics/Electrical Sciences/Engineering/Computer Science & Engineering or equivalent are encouraged to apply. For more information and recent publications, please visit the web site: http://iiti.ac.in/people/~vbhatia/

Prof. Ram Bilas Pachori (pachori@iiti.ac.in)
Prof. Ram Bilas Pachori works on the development of new methodologies based on the non-stationary signal models for analysis and classification of biomedical signals. He also works on time-frequency analysis-based methods for speech signal processing and non-stationary signal processing. He is looking for the Ph.D. students to work in the areas of Speech Signal Processing, Biomedical Signal and Image Processing, Signal Processing, Machine Learning, Brain-Computer Interfacing. Please visit his homepage for more details: http://www.iiti.ac.in/people/~pachori/

Dr. Shaibal Mukherjee (shaibal@iiti.ac.in)
Hybrid Nanodevice Research Group (HNRG) led by Dr. Shaibal Mukherjee works in advanced devices in Nanoelectronics, VLSI, Plasmonics and Photonics, HEAT/HFET/RF/Artificial Neural Network/Hardware Security, Organic Electronics, Non-volatile Memory, Bio-chemical Sensors, and Solar Energy (http://iiti.ac.in/people/~shaibal/). HNRG has been involved in strong collaborative research activities with industries and institutions in India (Intel, EnvironWires, IISc Bangalore, IIT Bombay, CEERI Pilani, RRCAT etc.) and in USA, Russia, France, Japan, Australia, Sweden, and Germany. Bright and inspired candidates, having a background in Physics/ Materials Science/ Electronics/ Instrumentation are strongly encouraged to apply. Former PhD graduates from HNRG are successfully placed in IIT Ropar, IIT Patna, IIIT Pune, and IIT Madras (http://iiti.ac.in/people/~shaibal/phd_graduated.php).
Dr. Santosh Kumar Vishvakarma is leading the research group "Nanoscale Devices, VLSI Circuit and System Design" at Discipline of Electrical Engineering, IIT Indore, MP, India. His research interests are: Custom SoC Design for IoT WSN; Ultra Low Power SRAM Memory Design; High Speed SerDes Design; Bluetooth Low Energy (BLE) Design for IoT; Microcontroller Design for IoT Node; PLL Design for IoT Node; Secure IC Design for IoT Node; Internet of Things (IoT) Enabled System Design; Reliable SRAM Memory Design: Device Circuit Co-Design Approach; SRAM Design using 3D TFET Devices; Performance analysis of 2D/3D Flash Memory Devices; Graphene-based MOS Transistor for analog/RF Circuit Applications; On-chip Memory Architecture and Efficient Data Flow for DCNN Accelerators; Design of Low power SRAM and In-Memory Computation and Patent of Electronics and IoT Circuits and Systems. Please visit his homepage for more detail: https://sites.google.com/site/svishvakarma/

Dr. Mukesh Kumar, The research group of Dr. Mukesh Kumar, in Optoelectronic Nanodevice Research Laboratory (OptoNano Group), has been working in Optoelectronic Devices, Nanoelectronics, Integrated Photonics, and Device fabrication for applications in optical interconnects, high speed communications and bio-sensing. OptoNano Group is actively involved in Device Innovations through novel designs and cost-effective fabrication of smart on-chip devices based on Silicon and other hybrid materials (Graphene, ITO, Zinc Oxide, Silicon Nitride etc.) for future communication, computing and sensing. The group has ongoing research collaborations with leading scientists in India, France, UK, Russia, South Korea, Germany and USA. Motivated and bright candidates, having a background in Electronics and related areas are ideally suitable and thus strongly encouraged to apply. Candidates with UGC/CSIR JRF or DST INSPIRE fellowship or equivalent fellowship will be given preference. For further details, please visit http://iiti.ac.in/people/~mukesh.kr