

Indian Institute of Technology Indore

Discipline of Electrical Engineering
Simrol, Khandwa Road, Indore – 453552

Advertisement for Admission to Ph.D. Program for spring semester of AY 2017-18

IIT/Acad/PhD Admissions/Adv/EE-SKV/Spring

Nov 21, 2017

IIT Indore invites applications from highly motivated and research oriented students for admission for its **PhD Program** in the discipline of Electrical Engineering for the **Spring semester of Academic Year (AY) 2017-18** as per the below mentioned categories of admission and time schedule. Candidates are strongly advised to visit the profiles of the faculty member at <http://ee.iiti.ac.in/faculty.html> before applying for the PhD Program. Candidates can join at any time of the year in the PhD program at IIT Indore. The PhD course work will start at the beginning of the semester.

Categories of Admission: Admission to Full-Time PhD program are offered under the following categories

- **FA (Fellowship Awardee):** Fellowship Awardees from the agencies such as CSIR, UGC etc. OR JRF/SRF OR with other position as a project staff working in a Sponsored Research Project (under a faculty member PI of the project) of IIT Indore. The scholarship will be as per the rules/guidelines of the concerned funding agency.
- **TA:** Teaching Assistantship with scholarship as per MHRD guidelines.
- **SW:** Sponsored from the reputed Industrial or Research organization WITHOUT any scholarship from the Institute.
- **IS:** Institute staff (part time) WITHOUT any scholarship from the Institute.
- **EC:** External Category Candidates from the central services and central government employees.
- **DF:** Serving personnel in the defense forces WITHOUT any scholarship from the Institute (can be part-time also).

Time Schedule of PhD admission:

Last date of Online Application through http://academic.iiti.ac.in:8080/nregistration.jsp	Dec 7, 2017 (Thursday)
Date of Written Test and/or Interview	Dec 9, 2017 (Saturday)

Eligibility/Shortlisting Criterion (Qualifying Degree and Exam)

1. Minimum first class* Master degree in the relevant discipline of the Engineering/Technology, **OR**
2. Minimum first class* Bachelor degree in the relevant engineering/technology discipline from a reputed Institute with a **valid GATE score**, **OR**
3. BTech degree from an Indian Institute of Technology (IIT) with a minimum CPI of 8.0 **OR**
4. Minimum first Class* Master degree in the relevant discipline of Science with **valid GATE** qualification or **UGC/CSIR-JRF** qualification **OR** equivalent fellowship

*The first class is defined as

- (i) 60 % marks for GEN/OBC (55% for SC/ST) category in aggregate or as specified by the university/institute **OR**
- (ii) CPI/CGPA of 6.0 for GEN/OBC (5.5 for SC/ST) category on the scale of 10 with corresponding proportional requirements when the scales are other than on 10 (for example 4.8 for GEN/OBC category (4.4 for SC/ST) on a scale of 8) , **OR**
- (iii) A first class as specified by the University/Institute awarding the degree.

Instructions:

1. PhD written test/interview would be conducted on **Dec 9 (Saturday) at 9.00 AM at POD Building**, IIT Indore, Khandwa Road, Simrol, Indore. Candidates fulfilling the **eligibility/shortlisting** criteria mentioned above are strongly encouraged to report for the written test and/or interview. **Interview may also be scheduled on the next day i.e. on Dec 10, 2017. Therefore, candidates are strongly advised to make their travel arrangements accordingly.**
2. **No emails or communication in any form regarding shortlisted candidates, accommodation, change of interview date, syllabus of written test and/or interview etc will be entertained.** For more details and latest updates, kindly visit <http://ee.iiti.ac.in/index.html>.
3. The candidates must apply online through our website (<http://academic.iiti.ac.in:8080/nregistration.jsp>).
4. **Candidates are strongly advised to bring the following on the day of the interview and/or written test: Do not post these documents**
 - a) Take a printout of their application form and bring the same on the day of the interview (subject to the condition that they fulfill the eligibility criterion)
 - b) 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 photo copies of any other testimonials, documents or certificates that they wish to present before the selection committee
 - c) Two recent passport size photographs
 - d) A fee of Rs.100/- to be paid through a Demand Draft (DD) drawn in favour of "**Registrar, IIT Indore**" and payable at Indore. If the fee of Rs.100 has been paid through SBI i-collect then a print out of the online receipt/confirmation must be submitted on Dec 9, 2017, along with other documents.
 - e) For SW candidates - NOC, Experience Certificate, last 3 months salary slip and Employer's PAN card should be submitted. Kindly note that the above documents should **NOT** be sent by post to IIT Indore.
5. Candidates who wish to appear for the PhD selection process and fulfill the eligibility criteria may also send their resume/CVs to the faculty member whose area is of interest to them. The areas of interest and detailed profile of faculty member is given below. Candidates are strongly advised to visit webpage of faculty member to know about ongoing work and areas of interest.

Dr. Santosh Kumar Vishvakarma skvishvakarma@iiti.ac.in	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. At present, he is focusing on Energy efficient SRAM memory design, SerDes design for high speed communication, Bluetooth low energy (BLE) design for IoT node, PLL design for IoT node, Secure IC design for IoT devices, SoC Design for IoT and light fidelity (LiFi) system, Internet of Things (IoT) enabled system design, Reliable SRAM design for IoT devices, Device circuit co-design for robust SRAM design, Voltage doubler and SRAM design using 3D TFET devices, Performance analysis of 2D/3D Flash memory devices and Graphene based MOS transistor for analog/RF circuit applications. He is looking for the PhD students to work in the area on SRAM memory design for versatile physiological signal monitoring system, Radiation Hardened based SRAM design, SRAM memory design for LiFi enabled system, IoT Security, High Bandwidth Memory and GPU. Please visit his homepage for more detail: https://sites.google.com/site/svishvakarma/
Dr. Ram Bilas Pachori pachori@iiti.ac.in	Dr. Ram Bilas Pachori works on the development of new methodologies based on non-stationary signal models for analysis and classification of bio-signals like electroencephalogram (EEG), electrocardiogram (ECG), phonocardiograph (PCG), center of pressure (COP), electromyogram (EMG). He also works on time-frequency decomposition based methodologies for speech signal analysis. He is also interested in the applications of signal processing. Recently, his group has developed new methodologies for analysis and classification of EEG signals for diagnosis of epilepsy, detection of sleep stages and identification of human emotions. His group has also developed new methodologies based on the low-frequency region for robust speech signal analysis. New methodologies for detection of heart valve disorders, septal defects, and segmentation and classification of heart sound signals have been developed by his group. He is looking for the Ph.D. students to work in the area of Speech Signal Processing, Brain-Computer Interfacing, Biomedical Signal and Image Processing, Non-stationary Signal Processing. Please visit his homepage for more detail: http://people.iiti.ac.in/~pachori/

<p>Dr. Vipul Singh vipul@iiti.ac.in</p>	<p>Dr. Vipul Singh's research group (Molecular & Nanoelectronics Research Group) focuses on wide range of topics primarily related to semiconductor device physics. Members of MNRG are presently engaged in carrying out research and development on the following themes:</p> <ul style="list-style-type: none"> • Organic electronic devices viz. OFETs, OSCs, OLEDs and OPDs. • Hybrid optoelectronic devices. • ZnO based optoelectronic/photonic devices. • Surface plasmonresonance effect in optoelectronic devices. • Biosensors/chemical sensors incorporating Graphene, CNTs and other functional materials. • Photo generated charge carrier dynamics in organic thin films. • Si- nanodevices, MOSFETs, SETs, and LFN in Si nanodevices etc. • Growth of Nanostructures <p>Five students have already finished their Ph.D. from MNRG and several more are presently pursuing their respective research work. MNRG strives for academically brilliant and motivated students looking to pursue challenging research problems on the forefront of science and technology. For more details the prospective students are encouraged to visit our homepage: http://iiti.ac.in/people/~vipul/</p>
<p>Dr. M. Anbarasu anbarasu@iiti.ac.in</p>	<p>Dr. M. Anbarasu's research group focuses on advanced memory technologies including phase change memory for the development of next generation high-speed, non-volatile random access memories (NVRAMs) and also design of novel devices with all-round characteristics, as '<i>universal memory</i>' for future electronics. This research group has extensively been investigating various key aspects of memory design such as scaling, ultrafast electrical switching dynamics, programming characteristics in picosecond timescale, using custom-built advanced programmable electrical tester and other in situ experiments. Some of the key research topics are listed below;</p> <ul style="list-style-type: none"> • Sub-nanosecond electrical switching dynamics • Multi-bit data storage for high-density memory applications • Vertically stackable cross-point memory devices • Ovonic threshold-switch selector devices • Simulation and device modeling • Design and development of '<i>universal memory</i>' <p>Please visit his homepage for more detail: http://iiti.ac.in/people/~anbarasu/</p>

NOTE: Please do not post the application form, bank draft and any other documents. Please refer to point number 4 of Instructions.