

Indian Institute of Technology Indore

Advertisement for Admission to Ph.D. Program for Autumn/Spring Semester of AY2017-18

IITI/Acad/PhD Admissions/2017

August 7, 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 **Autumn/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 members at <http://www.iiti.ac.in/People/faculty.html> before applying for the PhD Program.

Categories of Admission: Admission to full-time PhD program are offered under the following categories .

- FA: Fellowship Awardees from the agencies such as CSIR, UGC, etc. or the JRF/SRF project staff working in a Sponsored Research Project under a faculty of IIT Indore being PI of the project. The Scholarship will as per the rules/guidelines of the concerned Funding Agency. Candidates applying under the Visvesvaraya PhD Scheme for Electronics and IT will be considered as FA category students.
- 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.

Last date of Online Application through <http://academic.iiti.ac.in:8080/nregistration.jsp>

September 8, 2017 (Friday)

IMPORTANT: **DO NOT** post the application form, bank draft or any other document. Please refer to instructions below.

Date of Written Test and/or Interview

September 09-10, 2017 (Saturday and Sunday)

Electrical Engineering

Qualifying Degree and Examination (Minimum Eligibility)

1. Minimum first class* Master degree in the relevant discipline of 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 UGC/CSIR-JRF qualification or equivalent fellowship, OR
 3. B.Tech. 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 externally funded fellowship.
- *A 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 and/or interview would be conducted on **September 09-10, 2017 (Saturday and Sunday)** at **POD 1E, IIT Indore, Simrol 453552, Indore**. Candidates fulfilling the eligibility criteria mentioned above are strongly encouraged to report for the written test and/or interview on **September 09, 2017 at 9 am**. Kindly be advised that the interviews may be also scheduled for the next day (September 10, 2017). Therefore, outstation candidates are requested to make their return ticket arrangements accordingly. If the prospective applicant fulfils the minimum eligibility criterion and is interested to pursue PhD program then he/she must appear in the selection process on **September 09-10, 2017**. Candidates must take a note that no separate email/communication will be sent to applicants regarding PhD selection process. **No communication in any form regarding short listed candidates, accommodation, change of date, syllabus of written test and/or interview etc. will be entertained. Mere fulfilment of the minimum eligibility does not entitle a selection into the PhD program.**
2. The candidates must apply online through our website (<http://academic.iiti.ac.in:8080/nregistration.jsp>).
3. **Candidates are strongly advised to bring the following documents with them on September 09, 2017, at 9 am. DO NOT post these documents.**
 - (a) Print out of the application form submitted online (subject to the condition that they fulfil the minimum 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 photocopies of any other testimonials, documents or certificates that they wish to present before the selection committee.
 - (c) Two recent passport size photographs.
 - (d) An application fee of Rs. 100/- to be paid through a Demand Draft (DD) drawn in favour of "Registrar, IIT Indore" and payable at Indore. If fee has been paid online, then a print out of the receipt should be submitted on **September 09, 2017**, along with other documents.
 - (e) For SW candidates, No Objection Certificate, Experience Certificate, last 3 months salary slip and Employer's PAN card. Please see the academic website for the list of required documents for SW category candidates.
 - (f) **Letters of recommendation duly signed and sealed in a confidential envelope from two/three referees who have known the candidate in professional capacity. The letters are mandatory for the PhD selection process and should be addressed to the PhD selection committee.**
4. Kindly note that documents should NOT be sent by post to IIT Indore. Prospective candidates MUST bring the above documents with them on **September 09, 2017**. Please ignore any other instruction given elsewhere with respect to sending the application form and documents. No TA/DA will be paid for attending the PhD selection process.
5. Candidates who wish to appear for the PhD selection process and fulfil the minimum eligibility criteria may also send their resume/CVs to the faculty members of their interest in addition to applying online through the website as stated above. The areas of interest and detailed profile of faculty members is given below. Candidates are strongly advised to visit webpage of each faculty member to know about ongoing work 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.

Faculty members and their research interests:

Dr. Prabhat K. Upadhyay
(pkupadhyay@iiti.ac.in)

Dr. Prabhat Kumar Upadhyay is leading a **Wireless Communications (WiCom) Research Group** at IIT Indore. The WiCom group is intended to conduct fundamental and applied research to cater to the emerging needs of the next generation wireless communication systems. The group has strong international collaborations with leading scientists from France, Brazil, Greece, and Korea. Over the last 5 years, Dr. Upadhyay has supervised many projects and dissertations toward PhD (2 completed, 1 submitted, & 4 ongoing), MTech (7 completed & 1 ongoing), and BTech (11 completed & 3 ongoing) degrees. The research work has contributed many publications in premier IEEE journals and conferences. Highly interested and motivated students to work in the new and exciting research areas of (1) **Green ICT**, (2) **Internet of Bio-nanotechnology (IoBNT)**, (3) **Molecular Communication and Nanonetworking**, and (4) **Cognitive Satellite-Terrestrial Communications** are encouraged to apply. For more details, please visit the following websites: <http://pkupadhyay.webs.com/> and <http://wicom.webs.com/>

Dr. Shaibal Mukherjee
(shaibal@iiti.ac.in)

Hybrid Nanodevice Research Group (HNRG) led by Dr. Shaibal Mukherjee explores new physics of micro- and nano-structured materials, and to apply this knowledge in realizing advanced devices for **Nanoelectronics, Non-volatile Memory, Heterostructure Transistor, VLSI, and Solar Energy**. HNRG has been actively involved in the cutting-edge **collaborative research activities with industries and institutions in India (IISc Bangalore, IIT Bombay, CEERI Pilani, RRCAT)** and in **USA, Russia, Japan, Australia, and Germany**. Bright and inspired candidates, having a background in **Physics/ Chemistry/ Materials Science/ Electronics/ Electrical Sciences/ Electrical Engineering/ Instrumentation** are ideally suitable for and thus strongly encouraged to apply. Candidates with strong analytical, quantitative, and Computer Programming skills are desired. **Candidates with UGC/CSIR JRF or DST INSPIRE fellowship or equivalent fellowship will be given preference. PhD graduates from HNRG are placed in IIT Patna, IIT Ropar, NIT Warangal, and University of Minnesota, USA.** Prospective candidates should visit for more information: <http://iiti.ac.in/people/~shaibal/>

Dr. Vimal Bhatia
(vbhatia@iiti.ac.in)

Dr. Bhatia has mix of academic and industrial experience both in India and the UK. He completed Ph.D. from Institute for Digital Communications at The University of Edinburgh, and currently leads Signals and Software Group (SaSg) @ IIT Indore. The SaSg research group is actively involved in R&D on a) Channel estimation and equalization, b) Performance analysis of cooperative communication links, c) Adaptive algorithms and solution development, d) OFDM, CDMA, SISO, MIMO, WLAN, Co-operative and Relay Networks, Cognitive Radio for 5G and beyond networks, e) RADAR signal processing, f) Bio-inspired signal processing and learning algorithms, and g) Optical Metrology. Bright and inspired candidates, having background in **Communications/ Signal Processing/ Physics/ Mathematics / Statistics/ Electronics/ Electrical Sciences/ Electrical Engineering / Computer Science & Engineering** or equivalent are encouraged to apply. For further details, please visit <http://iiti.ac.in/people/~vbhatia>

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

Dr. Abhinav Kranti is leading the Low Power Nanoelectronics Research Group and engaged in research in **Emerging Solid-State Devices, VLSI, Capacitorless Dynamic Memories, Nanotechnology, Biosensors and Circuit Design**. Over the past few years, the research work from the group has resulted in several key contributions aimed at understanding and applications of steep switching devices, junctionless transistors, analog/RF performances, tunnel FET based DRAM and biosensors. The group has ongoing international and national collaborations with leading scientists through funded sponsored research projects. Exceptionally talented and motivated candidates, **with strong background in Electronics and Physics**, intending to work on challenging research problems in the above areas are strongly encouraged to apply. For more information, please visit the web links: <http://iiti.ac.in/people/~abhinav/> and <http://abhinavkranti.yolasite.com/>.

Dr. Mukesh Kumar
(mukesh.kr@iiti.ac.in)

The research group of Dr. Mukesh Kumar, in **Optoelectronic Nanodevice Research Laboratory**, has been working in **Integrated Optoelectronics, Silicon Photonics, Nano Devices, and Nanofabrication** for applications in optical interconnects, Bio-sensing and in future-flexible optical fiber networks. The primary focus of the research is to come up with some novel designs of Si and/or Graphene based on-chip devices and then to optimize the process steps for cost-effective fabrication. The group is presently involved in realizing a platform for on-chip guidance and control of optical signal with the proposed novel designs for low power and high speed optical interconnects/networks. Motivated and bright candidates, having a background in **Electronics and related areas** are ideally suitable and thus strongly encouraged to apply. For further details, please visit <http://iiti.ac.in/people/~mukesh.kr/>

NOTE: Please do not post the application form, bank draft and any other documents. Please refer to point number 3 of Instructions.