

SHIV NADAR UNIVERSITY

School of Natural Sciences Department of Physics

Announcement of Monsoon Ph.D. Admissions for the AY 2019-20

The Department of Physics in the School of Natural Sciences at Shiv Nadar University (SNU) invites applications for admission in the Ph.D. program starting from August, 2019. Our graduate program is designed to serve a wide range of research interests and offers an excellent learning and research environment to motivated and ambitious students. Many of our research projects are interdisciplinary in nature, involving collaborations across multiple departments in the School of Natural Sciences, as well as other schools and research centers of the university. Diverse research interests, publications and other relevant information of our faculty members can be found at <https://physics.snu.edu.in/people/faculty> and <https://physics.snu.edu.in/>

Department is preferably looking for those candidates who are interested to perform research in the following underlined research topics. If interested, one may also apply/choose fields from the non-underlined topics. **Candidate should give three options for their preferred research topics** (for example, Topics 1, 2, 3 or Topics 2,4,5 or Topics 3,7,9, etc.) in any combination during the application process from the following:

- Topic 1.** Computational materials science
- Topic 2.** Soft matter physics (Experimental)
- Topic 3.** Statistical properties of complex/chaotic systems using random matrix theory
- Topic 4.** Optical & electronic transport properties of 2D materials for energy devices (Experimental)
- Topic 5.** Theory of strongly correlated electron systems and novel quantum materials
- Topic 6.** Analytic and algebraic problems in quantum mechanics and Entropic gravity
- Topic 7.** Studies of nanostructured materials for energy storage and biosensors
- Topic 8.** Bandgap Engineering of epitaxial oxide thin films for optoelectronic devices (Experimental)
- Topic 9.** Physics of semiconductor materials and devices (Experimental)

Eligibility: A candidate should have (or expected to have) a Master's degree by July 2019 in the appropriate science discipline, with a minimum of 60% marks or an equivalent grade point. Candidates who have qualified for CSIR-UGC- NET-JRF, GATE, JEST, ICMR-JRF, or NBHM Fellowship will be preferred.

Selection Process: Eligibility criteria mentioned above are minimum standards and applications not meeting the same will be summarily rejected. Please note that not all candidates meeting the minimum eligibility criteria may be shortlisted. Short-listed candidates will be required to demonstrate their knowledge through an on-site written test and interview, to be held tentatively on **23rd May 2019**. Please note that the University reserves the right to not to admit any student if suitable candidates, according to the admission committee, are not found. TA for 3rd AC by train or equivalent will be paid for attending the test/interview. Local transport and accommodation will also be provided.

Assistantship: All candidates admitted to the Ph.D. program are eligible for teaching/research assistantships of ₹50, 000 for first two years and ₹55,000 for 3rd and 4th year. The assistantship is subject to satisfactory performance in the program evaluated continuously, and compliance with all the University regulations.

Application Fees: You will be required to pay a non-refundable application fees of Rs. 1,200 (One Thousand Two Hundred Only) through online mode.

Application Instructions:

All interested applicant shall apply online from the link given below or on the website. Please follow the instructions carefully.

- Fill all the mandatory fields
- **Online upload** of following documents are required
 - Passport size color photograph
 - Current CV
 - All Mark sheets/Degree Certificates (10th Standard onwards)
 - Standardized Examination Certificate- CSIR, UGC, GATE etc. (If applicable)
 - A Statement of Purpose
- After the online submission, a copy of the completed form should be sent by email to **heena.slathia@snu.edu.in**. The subject heading of email should clearly mention, “Application for Physics Ph.D. Programme”.

Please note that the application is not deemed complete until we receive all the necessary prescribed documents and application fees.

Online submission of application will be closed on **Wednesday, 8th May 2019**

For any queries related to the application and admission, you may contact:

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EA to the HOD Physics,

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About SNU

Shiv Nadar University (<http://snu.edu.in/>) is a multi-disciplinary research university, established by the Shiv Nadar Foundation in 2011 through an act of the State of Uttar Pradesh, India. It is built on a spacious 256 acres fully-residential campus, near Dadri, U.P., at the outskirts of Delhi. The University is driven by its distinguished faculty in natural sciences, humanities and social sciences, engineering, management & entrepreneurship, communication, education, art and design. The Ph.D. program at SNU is full-time and completely residential.

Physics Research Infrastructure

Physics research Laboratories are equipped with baresearch facilities, which include clean room, thermal deposition, chemical vapor deposition, pulsed electron deposition, magnetron sputtering, spin coater, ball-milling, vacuum annealing, high temperature oven, high temperature split tube furnaces, hydraulic press, glove box, microwave furnace, fume hoods, bio-safety cabinets, shaker incubators, XRD, AFM, 325nm PL, Raman Spectroscopy, Cryostat, UV-visible-IR spectrophotometers, I-V measurement system, polarization loop-tracer, polarization microscope, fluorescence microscope, surface profiler, viscometer, thermal conductivity, contact angle, DSC, TGA, and many others equipment within the school of Natural science.

Computational facilities at SNS include a high performance IBM cluster (“*Magus*”) consisting of 60 compute nodes (plus two nodes with GPU processors) delivering a theoretical peak performance of ~30 TF. Additionally, there are several stand-alone Linux workstations that are being used for teaching and research purpose. Several software for molecular modeling, molecular dynamics, quantum chemistry, statistic learning, bioinformatics and cheminformatics, are also available.

Our library, housed in a modern 5-storey building, provides online access from anywhere in the campus, to the e-books, electronic journals and databases from APS, AIP, ACS, RSC, AMS, SIAM, Springer, Elsevier, Wiley, Nature, and others.

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