School of Natural Sciences
Department of Physics
Ph.D. Admissions Announcement: 2015-16

The Department of Physics in the School of Natural Sciences at Shiv Nadar University invites applications for admission in its Ph.D. program starting in August 2015. Current research interests of the physics faculty members are broadly in the following areas.

- Computational Materials Physics
- Statistical Mechanics and Computational Physics
- Theory of Strongly Correlated Electron Systems & Computational Many-body Physics
- Low Dimensional Functional Materials
- Carbon Materials and Microfluidics
- Dielectric Materials
- Semiconductor Materials and Devices
- Electronic Structure, Surface and Nano Science
- Nano Electronics
- Soft Matter Physics
- Investigating the strong force of Particle Physics at the LHCb experiment at the Large Hadron Collider at CERN and at a future Electron Ion Collider
- Atmospheric and Environmental Physics

More detailed descriptions of research interests of our faculty can be found at http://snu.edu.in/naturalsciences/natural_sciences Physics_faculty.aspx. 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.

**Eligibility:** A candidate should have (or expect to have by August 2015) a Masters degree 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, DBT-JRF, GATE-JRF, JEST, ICMR-JRF, or NBHM Fellowship are preferred. Short-listed candidates will be required to demonstrate their knowledge through an on-site written test and interview. Selections will be based on past academic performance, written examination and/or interview.

**Financial Assistance:** All candidates admitted to the Ph.D. program are eligible for teaching/research assistantships of **Rs. 35,000 per month** along with tuition fee waiver, and hostel fee waiver. The assistantship is subject to satisfactory performance in the program evaluated continuously, and compliance with all University regulations.

**Application Process:** All interested candidates should apply in the prescribed form. Click here to download the form. The duly filled form along with supporting documents, current CV and a non-
refundable demand draft of Rs.1,000/- (in favor of “Shiv Nadar University” payable at Delhi) should be sent by post to:
Ms. Nitisha Saxena, EA to the HOD Physics
School of Natural Sciences
Shiv Nadar University, NH-91, Teshil Dadri
District Gautam Buddha Nagar, UP 201314.
Email: nitisha.saxena@snu.edu.in
Telephone: 0120 3819100 Ext: 386

The last date of sending the application is extended till Friday, 15th May, 2015, 5 p.m.

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.

Research Infrastructure
Laboratories in the School of Natural Sciences (SNS) are equipped with basic research facilities including fume hoods fitted with Schlenk lines, single crystal and powder XRD, photoluminescence, AFM, LCMS-qToF, UV-visible spectrophotometers, Infrared spectrophotometers, ball-milling, I-V measurement system, thermal evaporator, glove box, microwave furnace, polarization loop-tracer, bio-safety cabinets (for mammalian, bacterial and plasmodium cultures), CO2 Incubators, shaker incubators, flow cytometry, inverted microscope, plate reader, cell counter, fluorescent microscope, electroporator, PCR, RT-PCR, surface profilometer, pulsed electron deposition, magnetron sputtering, vacuum annealing oven, split tube, and cylindrical furnaces etc. Advanced analytical instrumentation such as 400 MHz NMR, HPLC, CHN, MEMS analyzer, DSC, TGA, rheometer, SEM and Raman spectrometer are in the process of being acquired.

Computational facilities at SNS include a high performance IBM cluster (“Magus”) consisting of 32 compute nodes (plus two nodes with GPU processors) delivering 332.8 Giga flops with each node and a theoretical peak performance of 10.649 TF from over all compute nodes. Additionally, there are several stand-alone Linux workstations that are being used for teaching and research purpose. Several software for bioinformatics and cheminformatics, molecular modeling, molecular dynamics, quantum chemistry, and statistic learning are also available.

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