INDIAN INSTITUTE OF TECHNOLOGY GANDHINAGAR

Research & Development Office

ADVERTISEMENT NO. SPON/10455/Advt0302 DATED 21.08.2026

Applications are invited for a temporary position of Project Scientist at IIT Gandhinagar. The details are as below:

Name of PI	Prof. Nihar Ranjan Mohapatra	Department	EE
Project title	Silicon and Advanced Semiconductor Manufacturing Research and Training Hub (SAMARTH)		
Designation	Project Scientist		
Number of positions	One (01)		
Application Link	http://recruitment.iitgn.ac.in/projectstaff/ Applicants must submit the following documents as part of their application: **1. Curriculum Vitae (CV)** The CV should clearly include: • Educational qualifications, including degrees, institutions, year of graduation and CGPA/grades. • Details of relevant academic, research and industry projects. • Technical expertise and tool experience. • Professional experience, including internships or full-time employment (if applicable). • Publications, patents, open-source contributions, technical reports, or other notable academic/professional achievements (if applicable). • Awards, scholarships, certifications, and other accomplishments relevant to the position. **2. Statement of Purpose (SOP)** ***(1–2 pages)*** The Statement of Purpose should address the following: • Your motivation for applying for this position. • Your prior experience and expertise relevant to the role. • How your technical skills, research experience and career aspirations align with the job description. • Your long-term career goals and how this position will help you achieve them.		
Last date of application submission	18th September 2026		
Consolidated Monthly Remuneration including HRA	INR 60,000 – 1,25,000 (based on the qualification)		
Duration of appointment	One year, extendable based on satisfactory performance.		
Eligibility Norms[1]	☒ Institute norms	☐ Funding Agency norms	
Required Qualification*	Ph.D. or equivalent in Electrical/Electronics/Physics/Materials Science discipline with a very good academic record throughout. ***OR*** M.Tech./M.S. or equivalent qualification in Electrical/Electronics/Physics/Materials Science discipline with a minimum of 02 years of post-qualification experience in Teaching/Research/Industrial/Design in an organization/Industry of repute.		

	The percentage/grade points with respect to the academic qualification will be a minimum 60% or equivalent grade from graduation onwards and 55% or equivalent grade in class 10^{th} and 12^{th}.
Key Responsibilities	• Build and calibrate physics-based TCAD models of diamond MOSFETs. • Perform device and process simulations to optimise the gate stack, drift-region design, field plates and edge-termination schemes for high breakdown voltage and low specific on-resistance. • Develop and execute cleanroom process flows for diamond devices, covering surface termination, photolithography, atomic layer deposition of high-k gate dielectrics, ICP-RIE dry etching and Ohmic and Schottky metallisation. • Carry out material and structural characterisation using Raman spectroscopy, AFM, XPS, SEM/TEM and ellipsometry to qualify epitaxial layers, surface terminations and dielectric interfaces. • Perform electrical characterisation of fabricated devices, including I-V, C-V, transfer and output characteristics, breakdown, Hall and TLM measurements, along with high-temperature and reliability testing. • Correlate measured device data with simulation, extract model parameters, and feed the outcome back into the next design iteration and process split. • Maintain process parameters, calibration records and design databases; prepare technical reports and manuscripts; track project milestones and guide junior project team members.
Essential Skills	• Strong fundamentals in semiconductor device physics, MOS electrostatics, carrier transport and power-device design, including breakdown, on-resistance and electric-field management. • Hands-on experience with TCAD device and process simulation using Synopsys Sentaurus, Silvaco Atlas/Athena, COMSOL or an equivalent platform. • Practical cleanroom experience in at least two of the following: photolithography, thin-film deposition (ALD, PECVD or sputtering), dry etching, metallisation and lift-off, or rapid thermal processing. • Working knowledge of semiconductor electrical characterisation and the use of parameter analysers, probe stations, LCR meters and high-voltage measurement setups. • Proficiency in Python or MATLAB for data analysis, measurement automation and post-processing of simulation results. • Strong technical documentation, communication, problem-solving and project-ownership skills, together with the ability to work safely and methodically in a shared cleanroom environment.
Desirable Skills	• Prior experience with wide- or ultra-wide-bandgap semiconductors such as diamond, Ga_2O_3, GaN, SiC or AlN, in either simulation or fabrication. • Familiarity with diamond-specific processes, including MPCVD homoepitaxial growth, hydrogen and oxygen surface termination, boron doping, and diamond ICP-RIE etch chemistries. • Experience with high-voltage and high-temperature device measurement, edge terminations and field plates, and reliability or stress testing. • Exposure to compact or SPICE model extraction, or to mixed-mode TCAD-circuit simulation of power converters.

	• Familiarity with mask layout tools such as Cadence Virtuoso, KLayout or L-Edit, and with design-of-experiments methods for process optimisation. • A record of peer-reviewed publications, conference presentations or patents, or independent execution of a device fabrication or simulation project.
Contact	Prof. Nihar Ranjan Mohapatra Professor, EE IIT Gandhinagar nihar@iitgn.ac.in

*Merely fulfilling minimum eligibility criteria does not entail a call for written test/ interview for the selection. Only candidates shortlisted based on better qualification and quality of relevant experience shall be called for written test/ skill test/interview etc. The authorities reserve all rights, not to call an applicant for selection test or not to fill up a position through this round of selection process without assigning any reason.