

EDUCATION

HBTU KANPUR

B.TECH. IN CHEMICAL ENGINEERING
 2018 | Kanpur, India
 First Division

DPS KALYANPUR

INTERMEDIATE (AISSCE)
 May 2013 | Kanpur, India
 Central Board of Secondary Education
 (CBSE), 87.2%

HIGH SCHOOL (AISSE)

May 2011 | Kanpur, India
 Central Board of Secondary Education
 (CBSE), CGPA 9.8

INTERNSHIPS

R&D INDUSTRIAL INTERN

2017-2018
 Keva Fragrances Ltd, Mumbai

SURGE SCHOLAR

Summer 2017
 Department of Chemistry, IIT Kanpur
VISITING SCHOLAR

Summer 2017
 Physics Department, IMSc. Chennai

RESEARCH INTERN

Summer 2016
 Department of Chemistry, IIT Bombay

MEMBERSHIPS

CURRENT

OSA, 2014, Student→Early Career
 AIChE, 2015, Student→Young Professional
 APS, 2015, Student→Early Career
 IEEE, 2015, Student→Young Professional
 IChemE, 2019, Associate (AMICHEM)
 URSI, 2019, Corresponding
 ACM, 2019, Professional
 SPIE, 2019, Early Career

SKILLS

SIMULATION

ESPreSSoMD • LAMMPS • GROMACS •
 VMD • OVITO • LineageOS Developer • Linux
 Kernel • QT • CMake • Matlab

CREATED

zenYoda • docuYoda • d-SEAMS •
 pyQtNumSim • starDoc • grimoire • hzArchIso

PROGRAMMING

C++ • FORTRAN • Python • Ruby • Julia • Lua
 • LaTeX • Javascript • Golang • Sass • CSS
 • Awk • HTML

EXPERIENCE

IIT KANPUR | SENIOR PROJECT ASSOCIATE

2019 – present | Department of Chemistry

I am affiliated to the Femtolab under the project “Femtosecond Laser Approaches to Quantum Information and Quantum Computation (SPO/MEITY/CHM/2018356)”

IIT KANPUR | PROJECT ASSOCIATE

2018 – 2019 | Department of Chemical Engineering

I was associated with the Computational Nanoscience group. Over the course of two centrally funded projects, “Nucleation On Nanostructured Surfaces Computer Simulation Studies (SPO/DST/CHE/2017294)” and “Advanced Computation Research and Education (SPO/MHRD/CC/20130176)”:

- I worked on the implementation of an enhanced version of the CHILL (CHILL+) algorithm for tracking ice types.
- Designed a linear discriminant analysis technique for near-surface ice structure determination which is undergoing rigorous testing
- Implemented a graph based network connectivity model for ice structures
- Spearheaded the development of High Performance GPU accelerated molecular dynamics simulation analysis tools
- Worked on the determination of optimal GPU cluster configurations
- Designed and administered academic outreach websites

PUBLICATIONS

PEER REVIEWED | JOURNALS (1), CONFERENCES (2), PREPRINTS (1)

- [1] R. Goswami, A. Goswami, and D. Goswami. “Space Filling Curves: Heuristics For Semi Classical Lasing Computations”. In: *2019 URSI Asia-Pacific Radio Science Conference (AP-RASC)*. Mar. 2019, pp. 1–4. doi: 10.23919/URSIAP-RASC.2019.8738612.
- [2] Prerna, Rohit Goswami, Atanu K. Metya, S. V. Shevkunov, and Jayant K. Singh. “Study of Ice Nucleation on Silver Iodide Surface with Defects”. In: *Molecular Physics* (Aug. 25, 2019), pp. 1–13. issn: 0026-8976, 1362-3028. doi: 10.1080/00268976.2019.1657599.
- [3] Nairhita Samanta, Rohit Goswami, and Rajarshi Chakrabarti. *Diffusion of self-propelled Janus tracer in polymeric environment*. 2017. arXiv: 1704.06207.
- [4] R. Goswami and D. Goswami. “Quantum Distributed Computing with Shaped Laser Pulses.” In: *13th International Conference on Fiber Optics and Photonics* (2016). doi: 10.1364/photonics.2016.w4c.3.

ACCOLADES, CERTIFICATIONS & WORKSHOPS

SPRINGER BEST STUDENT PAPER AWARD | PHOTONICS 2016

JOURNAL OF OPEN SOURCE SOFTWARE | REVIEWER (7)

Workshops

- Artificial Intelligence, E&ICT IIT Kanpur, May-June 2019
- AI Foundations Certificate Course, univ.ai, June 2019
- Rare Events Summer School, IISc Bangalore, July 2019

NPTEL Courses

- Graph Theory, IISER Pune, Jan-Apr 2019
- Computational Chemistry and Classical Molecular Dynamics, IIT Bombay, Aug-Sep 2018
- Introduction to Parallel Programming in OpenMP, IIT Madras, Aug-Sep 2018
- Quantum Computing, IIT Kanpur, Jan-Apr 2018