

Rabeet Singh

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Current position

I am a research associate at Indian Institute of Science. I am working with Prof. Manish Jain in the Department of Physics.

RESEARCH

I am interested in exploring and developing wavefunction and density-based methods for solving many-electron systems.

EXPERIENCE

Post - Postdoctoral Fellow (From Dec 29, 2017 to Dec 28, 2019)

Institute-National Institute of Science Education and Research

Main Activity - Research

Mentor - [Dr. Prasanjit Samal](#)

EDUCATION

Indian Institute of Kanpur, Kanpur — *Ph.D.*

Period: From July 2012 to May 2018

Serial No. : PG-61N535RK

CGPA-8.64 out of 10

Thesis Title - Adiabatic connection in density functional theory: Fundamental aspects and applications

Thesis Supervisor - [Prof. Manoj K. Harbola](#)

Indian Institute of Delhi, Delhi — *M.Sc.*

Period: From July 2010 to April 2012

Entry No. - 2010PHS7027

CGPA-6.511 out of 10

Subject- Physics

M.J.P Rohilkhand University, Bareilly-B.Sc.

Period: From July 2007 to July 2010

Enrol. No. - 0757723

Percentage - 67.9

Subjects - Physics, Chemistry, Mathematics

Conferences & Schools attended

EMN Meeting on Computation and Theory 2017, Dubai, UAE.

Hands on Training on Multiscale Simulation in Advanced Materials Science & Technology(HTMSAMST- 2016) July 14-24, 2016, Department of Applied Physics, S. V. National Institute of Technology, Surat, INDIA

Current Trends in Condensed Matter Physics(CTCMP2015)held at National Institute of Science Education and Research, Bhubaneswar (February 19-22, 2015).

Summer School on Materials Simulation Theory and Numerics(MASTANI) at IISER, PUNE on July 2014.

ICTS School and Discussion Meeting on Strongly Correlated Systems: From Models to Materials at the Deptt. Of Physics, IISc. , Bangalore (January, 2014).

Recent Trends in Nanophotonics, October, 2011 at IIT Delhi.

Prize

Prof. V. K. Saxena memorial science test, Second Prize(2010) at Bareilly College, Bareilly.

Teaching Experience

Worked as a Teaching Assistant in PHY 101(B.TechLab), PHY 102(Introductory Mechanics) and PHY 103 (Introduction to Electromagnetism) courses at IIT Kanpur.

Worked as a Teaching Assistant in the following online courses run through the National Program on Technology Enhanced Learning (NPTEL) by Prof. Manoj K. Harbola,

1. Introduction to Electromagnetism (Jan-April, 2015)
2. Introduction to Electromagnetic Theory (July-Sep, 2016)
3. Engineering Mechanics (July-Oct, 2016)
4. Introduction to Quantum Mechanics (Jan-March, 2017).

Hobbies

Cycling, Swimming, Traveling, Cricket, Script Writing

Referees

Name - Prof. Manoj K. Harbola
Institute - Indian Institute of Technology Kanpur
Position - Professor
Email - mkh@iitk.ac.in

Name - Dr. Prasanjit Samal
Institute - National Institute of Science Education and Research
Position - Reader
Email - psamal@niser.ac.in

COMPUTER SKILLS

Programming Languages

Fortran, C, Python, html, Parallel-programming in openmp

Calculation Tools

VASP (For bulk systems), *NWCHEM* (For atoms and molecules), *QUANTUM ESPRESSO* (For bulk systems), *DFTATOM* (For getting basic subroutines), *LIBXC* (For using exchange-correlation functionals), *APE and ldlf90* (For generating Pseudopotentials) *Mathematica* (For deriving and checking analytical expressions) *cif2cell*, and *atomsk* (For generating input files to perform the electronic structure calculations)

Writing tools

Latex (mostly in texstudio), Vim

Plotting Tools

Gnuplot, Pgfplot, and Latexdraw

Visualization Tools

Xcrysden p4vasp, and Vesta

Miscellaneous

Linx, Shell Script-writing, Makefile.