

Shamik Chanda

Junior Research Fellow
Department of Chemical Sciences, IISER Kolkata
Kalyani, West Bengal, India, Pin - 741246
Mob - +91 7278377019
email - shamikchanda1996@gmail.com, sc22rs004@iiserkol.ac.in

CAREER OBJECTIVE

I have completed M.Sc in Physics from IEST Shibpur in 2020. I am interested in the field of Theoretical Chemistry /Physics more specifically on developing quantum chemical methods to explore strong correlation and relativistic effects in many electron systems and pursuing my research career in this field. I have worked as a Project-JRF in a BRNS project at IISER Kolkata from April 2021 to March 2022. Currently, I am a PhD student of the same department working on the field of theoretical chemistry under the supervision of Dr. Sangita Sen.

EDUCATION

Master of Science, Physics Jun 2018 - Aug 2020
IEST Shibpur, Howrah, India
Special Paper - Nuclear Physics
Elective Paper - Computational Physics
CGPA - 6.79
Important Courses - Advanced Quantum Mechanics, Classical Mechanics, Statistical Mechanics, Atomic and Molecular Physics, Electromagnetic Theory, Numerical Analysis and Fortran Programming

Bachelor of Science, Physics Hons May 2015 - June 2018
Barasat Govt College (Under WBSU), Barasat, India
Percentage of Marks - 68.13

Higher Secondary (XII), Pure Science 2015
Barasat MGM High School, Barasat, India
Percentage of Marks - 89.4
Subjects - Physics, Chemistry, Mathematics, Bengali, English, Biology

Secondary (X), 2013
Barasat MGM High School, Barasat, India
Percentage of Marks - 88.57
Subjects - Mathematics, Bengali, English, Physical Science, Life Science, History, Geography

SKILLS

Programming: Fortran, C, Python, Julia, Bash, C++, MATLAB, HTML/CSS, LaTeX

Operating Systems: Linux, Windows

Software & Tools: Origin 8.0, GNU Plot, Mathematica, MS Office, SRIM, TRIM

Research Skills:

1. Learned to use few Quantum Chemistry Softwares ORCA, GAMESS, DIRAC, GAUSSIAN, VASP, Q-Chem and Molecular Dynamics Software CP2K.
2. Familiar to handle and set up HPC Cluster system.

3. Learned Parallel Programming in Fortran.
4. bash/shell scripting.
5. Code optimization techniques.

Languages: English, Bengali, Hindi

WORK EXPERIENCE

Junior Research Fellow April 2021 - Mar 2022
Department of Chemical Sciences, IISER Kolkata, India

- Gained experience in DFT Program development. Implemented Relativistic DKH Hamiltonian in the inhouse DFT Program of the lab.
- Implemented ECP integral matrix element in the program.

RESEARCH INTEREST

- Theoretical and Computational Chemistry/Physics.
- Density Functional Theory.
- Atomic & Molecular Spectroscopy and Photo-physics.
- Quantum Chemistry in Quantum Computers.
- Relativistic and QED Effects in Chemistry.
- Molecular Excitation in Strong Magnetic Field.

Special Interest in developing Computer Programs/Software for solving Unknown Problems of Theoretical Physics/Chemistry.

PERSONAL DETAILS

Date Of Birth : 09/12/1996
Sex : Male
Category : General
Father's Name : Gauranga Chanda
Mother's Name : Shila Chanda
Aadhar No. : 219541994433
Permanent Address : Pioneer Park, Barasat, West Bengal, India, Kolkata - 700124
Phone No. : +91 - 7278377019, 7980216008
Email - shamikchanda1996@gmail.com, sc22rs004@iiserkol.ac.in
Marital Status : Single
Hobbies : Singing , Reading Novels, Playing Cricket

RESEARCH EXPERIENCE

M.Sc Project

Project Topic: *Interacting Bose system using Feshbach Resonance LHY interaction*

Project Supervisor: Dr. Dwipesh Majumder , Department of Physics , IEST Shibpur (2020)

BRNS JRF Project

Project Topic: *Implementation of the relativistic quantum chemical methods in DFT framework to study the relativistic effects in many electron systems.*

Project Supervisor: Prof Amlan K Roy, Department of Chemical Sciences , IISER Kolkata (April 2021 - March 2022)

SPECIAL MENTIONS

- Qualified GATE 2021
- Receptient Of DST INSPIRE SCHOLARSHIP (SHE) from Department of Science and Technology , Govt Of India (2015-2020)
- Qualified IEST Shibpur M.Sc. Admission Test in 2018 with GMR 13
- Receptient of National Talent Search Examination (NTSE) scholarship from class VIII-XII from Govt. of India (2011-2015)
- Participated in Theoretical Chemistry Symposium (TCS) 2021 organised by IISER Kolkata in Virtual mode.
- Poster Presentation at DCS Day conference 2022 at IISER Kolkata on relativistic implementation in DFT.
- Attended Intersection of Chemical Theory and Computation (ICTC) conference at IISER Kolkata. (2022)
- Completed 4 days Winter School of Quantum computing at IISER Kolkata (Dec 2022)
- Poster Presentation at DCS Day conference 2023 at IISER Kolkata on Inverted singlet-triplet.
- Participated in Sustainability and Interdisciplinarity in Chemical Sciences (SICS) conference (2023) at DCS, IISER Kolkata.

REFERENCES NAME OF THE REFEREES :

1. Dr. Sangita Sen

Assistant Professor, Department of Chemical Sciences, IISER Kolkata
Highest Qualifications: M.Sc., Ph.D
Area of Research: Theoretical and Computational Chemistry
Phone: +91-33-6136 0000 (Extn - 1359)
Email: sangita.sen@iiserkol.ac.in

2. Dr. Dwipesh Majumdar

Assistant Professor, Department of Physics, IEST Shibpur
Highest Qualifications: M.Sc., Ph.D
Area of Research: Theoretical condensed matter physics
Phone: +91 76022 07766
Email: dwipesh@gmail.com, dwipesh@physics.iests.ac.in

3. Dr. Syed Minhaz Hossain

Associate Professor and Head , Department of Physics, IEST Shibpur
Highest Qualifications: M.Sc., Ph.D
Area of Research: Physics of nano-dimensional solids for Photonic, Photo- voltaic and sensing applications
Phone: +91 92304 46483
Email : shminhaz@physics.iests.ac.in, shminhaz@gmail.com