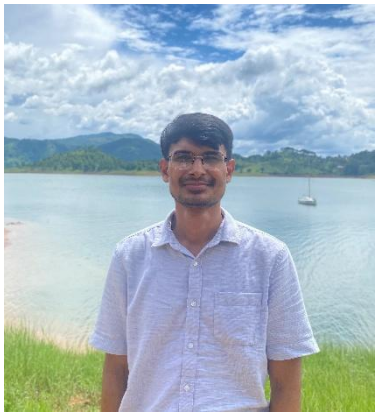
Dr. Dibya Jyoti Sivananda

Department of Physics
Bhattadev University
Bajali, Assam, India
Email: phy.dibya@bhattadevuniversity.ac.in



RESEARCH INTEREST

Experimental and Computational Condensed Matter Physics, Low temperature Physics, Magnetism, Micromagnetic Simulation of nanostructures.

EDUCATION

PhD: Indian Institute of Technology, Kanpur.
MSc: Indian Institute of Technology, Kanpur.
BSc: Cotton College, Guwahati.
HS: Cotton College, Guwahati.

PROFESSIONAL APPOINTMENTS

2021-2026: Assistant Professor Department of Physics Darrang College, Tezpur
2026 - present: Assistant Professor Department of Physics, Bhattadev University, Bajali

PUBLICATIONS

- "Exploring the non-equilibrium fluctuation relation for quantum mechanical tunneling of electrons across a modulating barrier." **Dibya J. Sivananda**, Nirmal Roy, P. C. Mahato, and S. S. Banerjee *Phys. Rev. Research 2, 043237 (2020).*

- "Magneto-optical imaging of stepwise magnetic domain disintegration at characteristic temperatures in EuB_6" **Dibya J. Sivananda**, Ankit Kumar, Md. Arif Ali, S. S. Banerjee, Pintu Das, Jens Müller and Zachary Fisk *Phys. Rev. Materials* 2, 113404 (2018).

- "Detecting sub-nanometer transverse vibrations on a piezo crystal oscillator surface, using time series tunneling current measurements" **Dibya J. Sivananda**, Amit Banerjee and S. S. Banerjee *J. Appl. Phys* 122, 114302 (2017).

- "Vortex depinning as a nonequilibrium phase transition phenomenon: Scaling of current-voltage curves near the low and the high critical-current states in $2\,H - NbS_2$ single crystals" Biplab Bag, **Dibya J. Sivananda**, Pabitra Mandal, S. S. Banerjee, A. K. Sood, and A. K. Grover *Phys. Rev. B* 97, 134510 (2018).

RESEARCH EXPERIENCE

I have research experience in the following experimental and simulation techniques:

- Micromagnetic Simulation of nanostructures.
- Low-temperature cryogenics.
- Scanning Tunneling Microscopy.
- Growing thin films using DC and RF Sputtering.
- Physical Vapour Deposition (PVD).
- Anodization of Alumina.
- Nanowire growth using anodized alumina and sputtering.

ACADEMIC AWARDS

- Awarded the best poster award in a National Conference on Quantum Condensed Matter (**QMat-2018**) held at Indian Institute of Science Education and Research (IISER) Mohali from 25th-27th July-2018.
- Cleared the Council of Scientific and Industrial Research-National Eligibility test (**CSIR-NET**) and was awarded a Junior Research Fellow Scholarship (**JRF**).

CONFERENCES ATTENDED

- National Conference on Quantum Condensed Matter (QMat-2018) held at Indian Institute of Science Education and Research (IISER) Mohali from 25th-27th July-2018. (National Conference).

- International Symposium on Integrated Functionalities (ISIF-2017) held in New Delhi from 10-13 September 2017. (International Conference).

- School on Frustrated Magnetism 2017 held at Indian Institute of Mathematical Sciences (IMSc) Chennai from April 3 -8 2017.

- First Indian Materials Conclave and 30th AGM of MRSI held at Indian Institute of Science (IISc) from 12th to 15th February 2019. (National Conference).