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Current Position: Physics Lecturer
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Educational Background

1. Master's degree in Science (M.Sc.), 2012-2016, Major- Physics, St. Xavier's College, Maitighar, Kathmandu, Nepal.
2. Bachelor's degree in Science (B.Sc.), 2007-2010, Major- Physics, Mathematics and Statistics, Tri-Chandra Multiple Campus, Tribhuvan University, Kathmandu, Nepal.
3. Higher Secondary Education Board in Science (10+2 or HSEB), 2005-2007, Major- Physics, Rehdon Higher Secondary School/College, Samakhushi, Kathmandu, Nepal.
4. School Leaving Certificate (S.L.C.), 2005, Shree Bheemodaya Higher Secondary School/College, Arughat Bazar, Gorkha Nepal.

Research Field

- Quantum Mechanics, Biomedical Physics, Geophysics and Solar Physics

Member of Moderator and Editorial Board:

- A St. Xavier's College Physics Department Annual Publication "NEW DIMENSION".

Publications

1. Correlation of solar wind velocity with different parameters during geomagnetic disturbances. Article history: Received 29 April, 2018; Accepted 04 November, 2018 DOI: <http://dx.doi.org/10.3126/bibechana.v16i0.20960>. This work is licensed under the Creative Commons CC BY-NC License. <https://creativecommons.org/licenses/by-nc/4.0/>
2. Case studies of intense and super intense Geomagnetic storms. Article history: Journal of PMC-Physics council. Volume-1, Page Number-(18-24), Jan 2018.

Under Review

1. Analysis of total electron content and electron density profile during different geomagnetic storms.
2. Study on the arrangement of pigment molecules in the purple bacteria reaction center.
3. The theoretical and graphical study of spherical harmonics for higher order.

4. Various form of Dirac delta functions and deviation from its ideal result.

Thesis Handled as Supervisor/Co-Supervisor

1. Study on the arrangement of photosynthesis pigments and co-factors in purple bacteria reaction center in the periphery of ubiquinone (Q_A).
2. Computational study on various properties of bacteriochlorophyll molecules using acetone solvent.
3. Computational study on vibrational properties of various bacteriochlorophyll molecules in gases phase.
4. Theoretical analysis of coulomb and exchange integrals of helium atom.
5. Theoretical analysis of coulomb and exchange integrals of lithium atom.
6. Computational study on vibrational properties of various pheophytin molecules in solvent.
7. Computational study on vibrational properties of various pheophytin molecules in gas phase.
8. Construction of the interaction Hamiltonian of a Fermion Boson system using method of second Quantization.

Project Handled as Supervisor

1. To build a low power, portable F.M. transmitter and study it's construction.
2. Adsorption of oxygen in Li-decorated graphene: a density-functional theory study using quantum espresso.
3. Adsorption of nitrogen on boron nitride: a density-functional theory study using quantum espresso.
4. Study on the arrangement of photosynthesis pigments molecules in the periphery of ubiquinone (Q_B)
5. Study on the arrangement of photosynthesis pigments molecules in the periphery of bacteriochlorophyll (L BCL282).
6. Structural and spectroscopic properties of beta β -carotene.
7. Computational study on vibrational properties of xanthophyll.

Thesis/Project work Handled as Supervisor/ Co-Supervisor (Bachelors and Master)

1. More than 18 Students for master dissertation.
2. More than 12 students for Master and Bachelors project work.

Conferences Attend

1. National workshop on New Research Trends in Physics in September 2016 Organized by St. Xavier's College, Maitighar, Kathmandu, Nepal.

Research Team

1. Prof. Dr. Narayan Chapagain, Central Department of Physics, Tribhuvan University.
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3. Dr. Binod Adhikari, St. Xavier's College, Maitighar, Kathmandu, Nepal.
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