



Dr. Arnab Gangopadhyay

Assistant Professor

Department of Physics

Contact Information

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Specialization

- Quantum Field Theory
- Particle Physics



**THE BHAWANIPUR
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Biographical Sketch

Dr. Arnab Gangopadhyay is currently associated as Assistant Professor, in the Department of Physics, The Bhawanipur Education Society College, affiliated to University of Calcutta. Prior to joining this institution, he worked as senior research fellow(SRF). He started his research carrier as JRF,(UGC/CSIR). He completed his B.Sc. and M.Sc degrees from University of Calcutta, Kolkata, with Quantum Theory of Fields and Particle Physics as specialization. He holds Ph.D degree in Physics from Jadavpur University. An progressive learner and researcher, he has more than 10 years of experiences in Teaching and Research. He has presented his research papers in numerous conferences (both national and international) and published research papers in reputed journals as well. He has also participated in several national and international seminars / webinars / workshops / conferences.

Academic Qualifications

Abbreviation of the Degree	Name of the College / University	Class Obtained	Area of Specialization	Year of Passing
Ph.D	Jadavpur University	N.A	Physics	2017
M.Sc	University of Calcutta, Kolkata	1 st Class	Physics	2008
B.Sc. (Honors)	University of Calcutta, Kolkata	1 st Class	Physics	2005

Position Holding (Full Time)

Assistant Professor, Department of Physics, The Bhawanipur Education Society College, University of Calcutta, 16th July, 2016 - Present.

College Whole Time Teacher, Department of Physics, The Bhawanipur Education Society College, University of Calcutta, September 2015 to 15th July 2016,



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Orientation Program And Refreshers Courses

- Completed Orientation Program from Jadavpur University (MHRD) in 2019.
- Completed Refreshers course from Jadavpur University (MHRD) in 2020.
- Completed Refreshers course from Jadavpur University (MHRD), 2023

Position Held (Full Time)

- Senior Research Fellow,(UGC/CSIR) at Bijoy Krishna Girls College, Howrah, August 2012 - July 2015.
- Junior Research Fellow,(UGC/CSIR) at Bijoy Krishna Girls College, Howrah, August 2010 - July 2012.
- Project Research Fellow,(UGC) at Bijoy Krishna Girls College, Howrah, August 2009 - July 2010.

Research Experience

- Senior Research Fellow,(UGC/CSIR) at Bijoy Krishna Girls College, Howrah, August 2012 - July 2015.
- Junior Research Fellow,(UGC/CSIR) at Bijoy Krishna Girls College, Howrah, August 2010 - July 2012.
- Project Research Fellow,(UGC) at Bijoy Krishna Girls College, Howrah, August 2009 - July 2010.
- Collaborative work with RRCAT, Indore.
- Collaborative research work with Jadavpur University.

Administrative Assignment

- Mentorship of 6th semester students, Department of Physics, The Bhawanipur Education Society College, University of Calcutta, 2020 - Present.
- Examination committee member 2019, 2020 -2021.
- Member, Library committee, 2018.
- Head Examiner, (CU) PHSG(I) 2017,2018,2019.

Subjects Taught

Mathematical Physics | Classical Mechanics | Electrostatics and electrical engineering | Numerical Methods | Nano materials and applications.





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Research Interests

Nano Materials | Electronic Processes

Journal Publications

- "Characterization of ZnO biopolymer nano composite" by Arnab Gangopadhyay and A. Sarkar in Advances in Applied Science Research, USA .2011, 2(1) ,149-152.
- "Left-handed Maxwellian behaviour of natural Mica", Aditi Sarkar, Arnab Gangopadhyay and A. Sarkar , Modern Physics Letters B. [Vol. 25, No. 30 (2011) 2323-2333].
- "Left-handed Maxwellian nature of nano structured layered material- Mica", Aditi Sarkar, Arnab Gangopadhyay and A. Sarkar , proceedings of Asian Journal of Chemistry [Vol. 23, No. 12 (2011) 5557-5560].
- "Electrical characterisation of ZnO nano composite", Arnab Gangopadhyay, Aditi Sarkar and A.Sarkar , proceedings of Asian Journal of Chemistry [Vol. 23, No. 12 (2011), 5581-5583].
- "Material characteristics of sea shell", Aditi Sarkar, Arnab Gangopadhyay and A. Sarkar , Proceedings of the 56th DAE Solid State Physics Symposium 2011, AIP Conf. Proc. [1447, (2012) 191-192].
- "Experimental investigation on core shell nano composite of Cr_{1-x}V_xS₂", Arnab Gangopadhyay, Aditi Sarkar and A. Sarkar Proceedings of Advanced Material Research, Trans Tech Publication [Vol. 665 (2013) pp 233-238].
- "Left-handed Maxwellian aspects of natural pearl", Aditi Sarkar, Arnab Gangopadhyay and A. Sarkar, Proc. SPIE 8423, 84230I (2012).
- "A Study on Natural Coral Stone – a Fractal Solid", Arnab Gangopadhyay, Aditi Sarkar and A. Sarkar, special issue of Applied physics A , December 2012, Vol. 109, Issue 4, pp 979-983].
- Characterization of Gd₂O₃ nano clusters, Somnath Paul, Arnab Gangopadhyay and A.Sarkar Proceedings of Advanced Material Research, Trans Tech Publication Vol. 665 (2013) pp 127-131.





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Department of Economics

Journal Publications

- Presented a paper at “CHEMISTRY BEHIND PHYTOCHEMICALS AND THEIR MEDICINAL IMPORTANCE IN CURING VARIOUS DISEASES OF HUMAN BEING” sponsored by “Inclusion Diversity Fund, Royal Society of Chemistry, London and organized by the Department of Chemistry of The Bhawanipur Education Society College on 30.03.2023
- Interaction of Yeast Cells with Nanoparticles-An FTIR Study, M. Mukherjee, Arnab Gangopadhyay, N. Das and A. Sarkar, Journal of Biomimetics, Biomaterials & Tissue Engineering, Vol. 14 (2012) pp 65-73.
- “Photonic aspect of sea shell”, Aditi Sarkar, Arnab Gangopadhyay and A. Sarkar, Proceedings of the 57th DAE Solid State Physics Symposium 2012, AIP Conf. Proc 1512, 1222 (2013).
- “Study of Optical Nature of Fish Scale”, Aditi Sarkar, Arnab Gangopadhyay and A. Sarkar, International Journal of Engineering Research and Technology, 1, 1, 2013.
- “Analysis of electrical properties of Nano Composites with LRC Circuit Simulation”, Arnab Gangopadhyay, Aditi Sarkar and A. Sarkar, International Journal of Engineering Research and Technology, 2013, 1, 1, 2013.
- “Transport Properties of Nano Composites and its Simulation with L-R-C Circuit”, Arnab Gangopadhyay, Aditi Sarkar and A.Sarkar Proceedings of the 58th DAE Solid State Physics Symposium 2013, AIP Conf. Proc, 1591, 336, 2014.
- A. Gangopadhyay, A. Sarkar And A Sarkar, Estimation of particle size distribution of nanoparticles from electrical characteristics Bull. Mater. Sci. (2018) 41:15
- “A model of oil spilling on sea surface”. Arnab Gangopadhyay, Aditi Sarkar. Coherence, 2(2), 66-69, 2017.
- “Pollution state of a lake: An analytical model” Aditi Sarkar, Arnab Gangopadhyay and A. Sarkar, Coherence, 2(2), 62-65, 2017.
- Characterization of nanocomposite from oscillations in charging current in nanocomposite filled parallel plate capacitors . International Journal of Nano sc ISSN (print): 0219-581X | ISSN (online): 1793-5350 communicated.
- Charge and Current Conduction in Nanocomposite and Its Simulation with Discrete Circuit Components Journal of Nano Research ISSN: 1661-9897 communicated.





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Publications In Edited Conference Volumes

- “Left-handed Maxwellian nature of nano structured layered material- Mica”, Aditi Sarkar, Arnab Gangopadhyay and A. Sarkar , proceedings of Asian Journal of Chemistry [Vol. 23, No. 12 (2011) 5557-5560].
- “Electrical characterisation of ZnO nano composite”, Arnab Gangopadhyay, Aditi Sarkar and A.Sarkar , proceedings of Asian Journal of Chemistry [Vol. 23, No. 12 (2011), 5581-5583].
- “Material characteristics of sea shell”, Aditi Sarkar, Arnab Gangopadhyay and A. Sarkar , Proceedings of the 56th DAE Solid State Physics Symposium 2011, AIP Conf. Proc. [1447, (2012) 191-192].
- “Photonic aspect of sea shell”, Aditi Sarkar, Arnab Gangopadhyay and A. Sarkar, Proceedings of the 57th DAE Solid State Physics Symposium 2012, AIP Conf. Proc1512, 1222 (2013).

Paper Presentations At Conferences

- “National Conference on Recent Advances in Condensed Matter Physics” organized by the Department of Physics, Aligarh Muslim University, Aligarh during March 14-15, 2011 to present a poster.
- “International Conference on Theoretical and Applied Physics (ICTAP)” by the Department of Physics and Meteorology, Indian Institute of Technology Kharagpur, Kharagpur during December 1-2, 2011 to present a poster.
- “56th DAE-Solid State Physics Symposium (DAE-SSPS-2011)” sponsored by Board of Research in Nuclear Science, DAE, Government of India in SRM University, Kattankulathur, Tamilnadu during December 19-23, 2011 to present a poster.
- “3rd National Conference on Condensed Matter and Material Physics CMMP-2012” by the department of Physics, Sardar Patel University, Vallabh Vidyanagar, Gujrat during March 3-5, 2012.
- “57th DAE-Solid State Physics Symposium (DAE-SSPS-2012)” sponsored by Board of Research in Nuclear Science, DAE, Government of India in IIT Bombay, Mumbai during December 3-7, 2012.
- “International workshop on materials modelling and simulation” organized by the Department of Applied Physics, Shri Shankaracharya Group of Institutions, Chhattisgarh, India with the collaboration of the Department of Physics, Michigan Technological University, Houghton, USA, during June 24-27, 2013.





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Paper Presentations At Conferences

- 3rd National Conference on Advanced Materials and Radiation Physics (AMRP-2013) organized by Department of Physics Sant Longwal Institute of Engineering and Technology, Longwal, Sangrur, Punjab during November 22-23, 2013.
- “58th DAE-Solid State Physics Symposium (DAE-SSPS-2013)” sponsored by Board of Research in Nuclear Science, DAE, Government of India in Thapar University, Patiala, Punjab, during December 17-21, 2013.

Participation In Seminars / Webinars / Workshops / Conferences

- SCOPE OF VIRTUAL LABS IN UG PHYSICS AND CHEMISTRY TEACHING, arranged by Sarojini Naidu College for Women, on 29-06-2020.
- Environment and Climate Concerns : Rethinking Education Strategies, , arranged by The BES College, 5/6/2020.
- Teaching Physics at the UG & PG Level using Python, Victoria Institution (College), , arranged by 6-10/07/2020 .
- Best Practices for Teaching Online, , arranged by ABPEducation, 4/7/2020.
- A new view of the solar system , , arranged by Surendranath College 8/7/2020.
- THE SKY & BEYOND , , arranged by The BES College, 23/06/2020.
- APPLICATION OF NUMBER THEORY IN CYBER SECURITY - FEW ILLUSTRATIONS THROUGH SAGEMATH, , arranged by The BES College, 20/06/2020 .
- History of Science, Science in History, , arranged by The BES College, 15/06/2020.
- Hospitality Management : What is the career outlook for aspirants in hotel, travel and tourism management sectors, in the Covid-19 era? , , arranged by ABPEducation, 20/06/2020.
- Simplifying Artificial Intelligence, Machine Learning and Data Science , , arranged by The BES College, 13/06/2020.





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Participation In Seminars / Webinars / Workshops / Conferences

- Media Educators' Round Table, , arranged by ABPEducation, 6/6/2020 VCs' Round Table - Higher education beyond COVID-19, , arranged by ABPEducation, 30/05/2020
- Quantum World: Past, Present & Future, , arranged by PRABHAT KUMAR COLLEGE, CONTAI, 3,8,11/07/2020

Online Certifications

- Completed an online Short term Course conducted by IUCAA on and from 25 July to 10 Oct 2020

Awards / Recognitions

- Achieved National Top 1% Position in National Graduate Physics Examination NGPE-2004-2005. Qualified NET examination (JRF-UGC/CSIR) with rank 203/395 in 2009.

Special Invitations

- Invited as resource person in a Extension Lecturer in Physics in Bijoy Krishna Girls College on OPTICS on 26th April 2019.

Other Notable Activities

- Organized the webinar “ The Enigma of Gravity: From The Apple to the Black Hole” in the department of physics of The Bhawanipur Education society College on 17th July, 2020.
- Organized the webinar “ Neutrinos: The Nobel Connection” in the department of physics of The Bhawanipur Education society College on 28thAugust, 2020.
- Organised international webinar “ Nano medicine, the Future” in the department of physics of The Bhawanipur Education society College on 12th September, 2020.
- Organized the webinar “ Application of quantum mechanics in Nanomaterials ” in the department of physics of The Bhawanipur Education society College on 3rd July, 2021.





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Vision Statement

- Promote the virtues of scientific method, research and scholarly inquiry so students can bring important critical thinking skills to their pursuits outside of college.
- Inspire the minds of a generation.
- Prepare students to be change makers in their professional workforces after graduation.

Arnab Gangopadhyay

Signature of the
Faculty Member

Date: 01st September, 2022



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