

Bio-Data

Personal Information:

- Name : Dr. TANAY GHOSH
- Father's Name : Tushar Kanti Ghosh
- Mother's Name : Renu Ghosh
- Date of Birth : 08-02-1988
- Marital Status : Single
- Permanent Address : Kalna Road, Jamtala
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Title of the Ph.d Thesis : “The Rotation of the Polarization Vector due to Heavy Massive Body”

Details of professional training and research experience:

During the course of research work leading to PhD in Physics Department, Assam University, Silchar, I have worked extensively on the application of **GTR** as well as **tensorial calculus** to analysis the property of **electromagnetic wave** and effect of **Black Hole** on the **optics**. To achieve my result I have extensively used **Maple**, **Mathematica** software as well as **FORTTRAN**, **C** and **Python** programming language. Currently looking for University position to achieve my goal to establish a research team and carry on my research focussing on Data Science, and relativistic astrophysics.

My Papers Published in one of the most reputed international journal “**Astrophysical Journal**” which have very high impact factor **6.99**, in which I am first and corresponding author.

My students are already in the reputed institutes such as **IIT Guwahai** and **NIT Silchar**, and **IISER Mohali**.

I have brief experience of more than **two years** as an Assistant Professor and also remained as **Head of the Department** of Physics. I was also **institutional Nodal officer** for national scholarship portal.

List of Publications:

1. **Ghosh T**, Sen A.K "THE EFFECT OF GRAVITATION ON THE POLARIZATION STATE OF A LIGHT RAY", The Astrophysical Journal, 833:82 (9pp), 2016 December 10. Impact Factor (2019)-6.9

2. **Ghosh, T**, and Sen, A. K "Change in the direction of the polarization vector and redshift of an incoming light ray as observed from a rotating frame." *Canadian Journal of Physics* 98.5 (2020): 433-441. Impact Factor (2019)-1.2

3. **Ghosh T**, Sen A.K Expression of Displacement Vector of Electromagnetic Wave Under The Uniform Accelerated System Department of Physics and Chemistry, S.S. College Hailakandi, Assam. [ISBN:978-81-933690-0-5].

4. **Working in Progress** Shukla D. K., Ghosh T. “**Relativistic particles in curved background**” (Title not finalised)

5. **Working in Progress** Ghosh T, Sen A.K. “THE EFFECT ON POLARIZATION OF LIGHT RAY DUE TO GRAVITATIONAL FIELD CREATED BY A BINARY SYSTEM”

Conference Workshops Attended (featuring important only):

- **National Frontiers of Research in Physical Science** organised by **Karimganj College, Karimganj, Assam**, during September 19{21,2014, sponsored by **BRNS, CSIR and ASTEC**.
- **XXVII IUPAP Conference on Computational Physics (CCP2015)** which was held at **IIT, Guwahati**, jointly organised by **Indian Institute of Technology (IIT), Guwahati, Assam**, and **Indian Institute of Mathematical Sciences (IIMS), Chennai, India** from 2nd Dec - 5th Dec, 2015
- **International conference on space and plasma science**. Sept 15-18, 2015 **Govt. P.G. college , M.P. India**
- **National Workshop on Gravitational Wave Astronomy (NWGWA)** organised by Department of Physics, **North Bengal University, Siliguri(India)** and **IUCAA, Pune (India)** during December 15{18, 2016, held at North Bengal University, Siliguri, India.
- Participated at the national seminar on **Gravitation & Cosmology** organised by Department of Physics **Assam University, Silchar** (5-6 Dec,2015)

Attended over 20 seminars.

Computer Proficiency:

- **MatLab**, Mapple, Mathematica, **Scilab**, Simulation with **R-Studio**, Scilab and Python
- **FORTRAN 77, C, R, Python (SciPy, matplotlib, pandas)**
- MS Office, Libre Office, LaTeX
- Operating Systems: Windows 10, Linux OS
- Data Analysis using Python and R

Experiences:

1. Worked as a **research scholar** in the Department of Physics, **Assam University Silchar** from 12th September 2012 to 13th April 2019.
2. Worked as an **PGT teacher** in **Saint Capitanio Sr. Secondary School** from December 2018 to April 2019 (before PhD).
3. Worked as an **Assistant Professor** in Department of Physics under **University of Science and Technology, Meghalaya**, 9th Mile Kiling Road Baridua, Meghalaya-793101, from 17th July 2019 to 30th September 2020.
4. Worked as an **Assistant Professor** and **Head of the Department** in Department of Physics under **Maryam Ajmal Womens' College of Science and Technology**, Borpukhuri Jugijan Road, Hojai-782435, from 2nd November 2020 to 4th November, 2021.
5. Working as an **Assistant Professor** in Department of Physics under **Sunbeam Women's College, Varuna**, Varanasi, Uttar Pradesh (affiliated under Mahatma Gandhi Kashi Vidyapith) from 8th November 2021 to current.

Have brief experience in giving lectures in both B.Sc and M.Sc Physics classes in University of Science and Technology Meghalaya. Also have experience as a **supervisor of 6 M.Sc project thesis**.

Subjects taught:**Theories:**

Statistical Mechanics (B.Sc), Computer programming for Mathematical Physics (B.Sc), Bio-Physics (B.Sc), Wave and Optics (B.Sc), General Physics (B.Sc), Nuclear Physics (B.Sc), C and Python programming(B.Sc)

Astrophysics (B.Sc and M.Sc), Mathematical Physics (B.Sc and M.Sc), General Physics for multidisciplinary course (M.Sc), Classical Mechanics (M.Sc)

Practicals:

Mathematical Physics Lab, Thermal Physics, Nuclear Physics, Wave and Optics, Astrophysics, **MATLAB, Scilab, C and Python3 Programming, Simulation.**

Language Known: English, Bengali, Hindi, Assamese, French

REFERENCES**1. Professor Asoke Kumar Sen**

Department of Physics, Assam University, Silchar India-788011

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2. Professor N. Nimai Singh

Department of Physics

Manipur University, Imphal, Chachipur, Indo-Mayanmar Road, India-795003

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3. Professor Atri Deshamukhya

Department of Physics ,Assam University, Silchar, India-788011

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Academic Background

Degree	Board/University	Year	Subjects	Percentage
PhD	Assam University, Silchar	2020 (26 th August)	Awarded	NA
Integrated Pre-PhD(IPP) Course Work	Assam University, Silchar	2012	Research Methodology-I & II, Physics, Term Paper	62.5
M.Sc	Assam University, Silchar	2011	Physics (Specialization Astrophysics)	65
B.Sc	University of Burdwan	2009	Physics (Hons.), Math, Chemistry	53.53
12th	WBCHSE	2005	Bengali, English, Physics, Mathematics, Chemistry, Biology(Addl)	66.9
10th	WBBSE	2003	Bengali, English, Physical Science, Mathematics,	82.5

			Life Science, Geography, History, Mechanics(Addl)	
French Certificate Course	Assam University, Silchar	2018	French	62.00
AICTE Certificate Course	AICTE Training and Learning (ATAL) Academy	2022	SCILAB and XCOS – FOSS Alternatives for MATLAB and SIMULINK	NA
SWYAM Course	NPTEL	Ongoing (exam on 24 th April, 2022)	Data Analytics with Python	NA
SWYAM Course	NPTEL	Ongoing (exam on 24 th April, 2022)	Essentials Of Data Science With R Software - 2: Sampling Theory And Linear Regression Analysis	NA

Declaration

I hereby declare that the above information is true to the best of my knowledge and I shall be solely responsible for any false/misleading information furnished has been attached

DR. TANAY GHOSH

Head of Department, Physics
Maryam Ajmal Womens' College of Science and Technology, Hojai