Curriculum vitae

PERSONAL DETAILS

Name: Sreetama Das Choudhury
Father's Name: Shauvik Das Choudhury
Mother's Name: Swati Das Choudhury
Date of birth: 17/10/1995
Gender: Female
Nationality: Indian
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ACADEMIC DETAILS

Examination	Board/university	Percentage/CGPA obtained	Division
M.Sc (2019)	St Xaviers College(Calcutta University)	76.5	First
B.Sc (2017)	Calcutta University	63	First
STD XII (2014)	CBSE(Central Board for Secondary Education)	90.6	First
STD X (2012)	CBSE(Central Board for Secondary Education)	9.8	First

PRESENT POSITION

Research Scholar(Junior), Department of Physics, Indian Institute of Technology, Guwahati
Supervisor: Prof. Santabrata Das

WORK EXPERIENCE

27/08/2021-present
PhD Student
Indian Institute of Technology Guwahati, Guwahati:
Working under the supervision of Prof. Santabrata Das on the following topic:

a) "Probing the effect of strong gravity with Quasi-periodic Oscillations from black hole X-ray binaries": We are trying to probe the strong gravity effect of Black Hole and constrain parameters of BH via X-ray data analysis from BH X-ray binaries, with observations from space based telescopes, Rossi X-ray Timing Explorer (RXTE) and India's first multi-wavelength space based telescope, AstroSat.
b) Analysing the spectral and temporal properties of ω class observations of GRS 1915+105 using AstroSat data.

01/08/2019–07/2021
Project Student
St. Xaviers College, Kolkata, Kolkata (India): Research projects under Dr Suparna Roychowdhury is on:

a) "Stationary fluid solutions in accretion disk around a black hole":We studied about Bondi accretion and moved to pseudo potentials for non-spherical models of accretion disk like Constant height,Vertical and Conical equillibrium model.For Packzinsky-Witta potential,we generated the Mach number v/s distance plot and studied the instability of critical point.For Artemova potential the stability properties were studied.Further we tried to theoritically reproduce the (Banibrata potential) vector-potential from which derivation of scaler potential might be possible, replace it in equation of motion and analyse stationary fluid solution,critical points on and off-equatorial plane of the Kerr-black hole.
b) "Sun-Jupiter-Asteroid system in elliptically restricted three-body-problem":In this project we obtained initial conditions from JPL Small body database system of NASA,placed the asteroids in Kirkwood-gaps,evolved its eccentricity,semi-major axis with time,saw their variation,studied its chaotic behavior using Poincare-Maps.We did this using Integrators in Rebound.

07/2018–03/2019
Project Student
St. Xaviers College, Kolkata (India):
Did my Masters project on X-Ray binaries,Pulsars, emission procedeur of X- Rays in Vela-X1 and Vela Pulsar under Dr. Suparna Roychowdhury in St.Xaviers College, Kolkata.

05/2018–07/2018
Project Student
National Centre for Radio Astrophysics, Pune (India):
Did a project on pulsar and strong pulse detection and its behaviour with time and frequency, in NCRA, Pune under Dr. Bhaswati Bhattacharyya.

12/2017–12/2017
Project Student
InterUniversity Centre For Astronomy and Astrophysics, Pune (India):
Did a project on detection of gravitational waves in IUCAA, Pune under Prof. Somak Raychowdhury.

SEMINARS ATTENDED

1. REcent Trends in the study of Compact Objects (RETCO-V), organised by Indian Insitute of Astronomy and Astrophysics (IIA) in Kodailkanal Solar Observatory (KSO), Kodaikanal.
2. Young Astronomers Meet (YAM) 2022, Organised by ARIES, Nainital, where poster was presented on Timing and Spectral analysis of Black hole X-ray binary source XTE J1859+226.
3. Attended "International Workshop on Coarse Geometry" at St Xaviers College, Kolkata.

4. Attended a ‘Camps for Hands on Expirience in Radio Astronomy (CHERA)’ organised by Raman Research Institute (RRI) and Indian Institute of Astronomy and Astrophysics (IIA) in Bangalore.
5. Attended “Radio Astronomy Workshop (RAWA)”in St Xaviers college, Kolkata.
6. Participated in “Precision 2018” physics fest in Presidency University and gave a talk on the project that was done in NCRA under Dr. Bhaswati Bhattacharyya.
7. Attended a pre masters workshop at Bangabasi College, Kolkata in 2017 after passing Bachelors Degree in physics.

COMPUTER SKILLS

Operating System

1. Windows
2. Linux

Programming Language

1. Python
2. Matlab
3. C++, C
4. Octave
5. Linux Shell scripting

Plotting Software

1. Gnuplot

Analysis Software

1. PSRCHIVE, PRESTO
2. HEASOFT, XSELECT,XIMAGE
3. SALSA J

Others:

1. Latex
2. Lyx
3. Microsoft Office(Word, Powerpoint, Excel)
4. Libre Office(Writer, Presentation, Excel)
5. HTML
6. XML
7. SQL

REWARDS AND RECOGNITION

1. Recieved prestigious Prime Minister Research Fellowship (PMRF) in July 2021, in Direct Entry channel in Cycle 7.
2. Cleared National Eligibility Test (NET), Lecturership (LS) with All India Rank 57 in 2021.
3. Presented Msc project in“National Seminar on Applications of statistics in Natural Sciences”,organised by IUCAA Centre for Astronomy Development,Kolkata and St Xaviers College,Kolkata in December 2019 and got **First prize**.
4. 1st position in District Student Youth Science Fair 2012, poster competetion, HS level
5. 2nd position in West Bengal State Level Student Youth Science fair 2012, H.S group, poster competetion.

REFERRENCES

1. Prof. Santabrata Das (email: sbdas@iitg.ac.in)
2. Dr. Anuj Nandi (email: anuj@ursc.gov.in)
3. Dr. Suparna Roychowchury (email: suparna.roychowdhury@gmail.com)
4. Dr. Bhaswati Bhattacharyya (email: bhaswati@ncra.tifr.res.in)

Declaration

I hereby declare that all the statements made by me are correct and true at the best of my knowledge.