

# Ritali Ghosh

# Curriculum Vitae

## Graduate Student, Indian Institute of Science

✉ [ritalighosh@iisc.ac.in](mailto:ritalighosh@iisc.ac.in)

🌐 <https://www.ritalighosh.com/>

🔄 Last Updated: July 02<sup>nd</sup> 2024

I am a Graduate Student at the Indian Institute of Science (IISc), Bengaluru, India. My research interests are in astrophysical fluid dynamics using computational techniques and cosmological simulations of galaxy formation. I am presently working on idealized simulations to understand the environmental influences on various components of the galaxy undergoing ram-pressure stripping.

## Experience

|                   |  |
|-------------------|--|
| 2021-08 - Present | <b>Senior Research Fellow</b><br>Indian Institute of Science, Bengaluru, India |
| 2019-08 - 2021-07 | <b>Junior Research Fellow</b><br>Indian Institute of Science, Bengaluru, India |

## Education

|                   |   |
|-------------------|---|
| 2015-06 - 2017-05 | <b>Master of Science, Physics</b><br>University of Calcutta, Kolkata, India |
| 2012-06 - 2015-05 | <b>Bachelor of Science, Physics</b><br>Bethune College, Kolkata, India      |

## Publications

**Ram pressure stripping in clusters: Gravity can bind the ISM but not the CGM, 2024**  
*Monthly Notices of the Royal Astronomical Society*, Volume 531, Issue 3, July 2024,  
Pages 3445–3467 ([doi:10.1093/mnras/stae1345](https://doi.org/10.1093/mnras/stae1345))  
**Ritali Ghosh**, Alankar Dutta, Prateek Sharma

**Beyond profiles: Using log-normal distributions to model the multiphase circumgalactic medium, 2024**  
*Monthly Notices of the Royal Astronomical Society*, Volume 531, Issue 4, July 2024,  
Pages 5117–5139 ([doi:10.1093/mnras/stae977](https://doi.org/10.1093/mnras/stae977))  
Alankar Dutta, Mukesh Singh Bisht, Prateek Sharma, **Ritali Ghosh**, Manami Roy and Biman B. Nath

## Talks and Research Visits

**Conference Talk, 7th ICM Theory & Computation Workshop, 2024 (online presentation)**  
24 – 28 June 2024  
organized by University of Michigan in Ann Arbor, USA

**Conference Talk, Observe Local Think Global: What Solar Observations can teach us about Multiphase Plasmas across Astrophysical Scales, 2024**  
13 – 17 May 2024  
organized at the International Space Science Institute at Bern, Switzerland

**Conference Talk, Astronomical Society of India Meeting, ASI 2024**  
01 – 04 February 2024  
organized by the Astronomical Society of India (ASI) at IISc Bangalore, India

## Contact

📍 Room D2-04, Department of Physical Science, Indian Institute of Science, Bengaluru, India – 560012

☎ (+91) 7278335730

✉ [ritsg11@gmail.com](mailto:ritsg11@gmail.com)

🆔 0000-0001-8643-7104

🐦 [@RRitali](https://twitter.com/RRitali)

🌐 [RitaliG](https://www.ritalighosh.com/)

## Technical Profile

- Proficient in C/C++, Python, Fortran, LATEX
- Tools/Codes used: PLUTO, ParaView, Cloudy, yt
- Ability to Work in a Team
- Critical thinking and problem solving

## Languages

English (proficient)

Hindi (native speaker)

Bengali

German (A1 level)

#### **Seminar Talk, Universitäts-Sternwarte München, Germany**

November 2023

at Weekly CAST Meeting, USM, München, Germany

#### **Seminar Talk, European Southern Observatory, Garching, Germany**

November 2023

at CGM Meeting, ESO, Garching, Germany

#### **Seminar Talk, In-house Symposium, Department of Physics, IISc, India**

November 2023

At the Department of Physical Science, Indian Institute of Science, Bengaluru, India

#### **Seminar Talk, Max Planck Institute for Astrophysics, Garching, Germany**

June 2023

MPA Galaxy Group Meeting, Garching, Germany

#### **Conference Talk, Modelling of Multiphase Astrophysical Media, Aspenstein Castle at Lake Kochel, Bavaria**

30 May - 02 June 2023

organized by Max Planck Institute for Astrophysics, Garching, Germany

#### **Conference Talk, GALFLOWS 2023: A National Workshop on Galactic inflows and outflows on all Scales**

02 - 05 February 2023

organized by Inter University Campus of Astronomy and Astrophysics (IUCAA), Pune

#### **Poster Presentation, In-house Symposium, Department of Physics, IISc, India**

February 2023

At the Department of Physical Science, Indian Institute of Science, Bengaluru, India

#### **Seminar Talk, Max Planck Institute for Astrophysics, Garching, Germany**

September 2022

MPA Cosmology Seminar, Garching, Germany

#### **Seminar Talk, Dipartimento di Fisica e Astronomia, INAF, Italy**

September 2022

at INAF, the Italian National Institute for Astrophysics, Padua, Italy

#### **Conference Talk, What matter(s) around galaxies 2022: Connecting the dots between the CGM and the larger-scale environment**

12 - 16 September 2022

organized by Università Milano-Bicocca at Champoluc, Aosta Valley, Italy

#### **Poster Presentation, Astronomical Society of India Meeting, ASI 2022**

March 2022

organized by the Astronomical Society of India (ASI) at IIT Roorkee, India

#### **KITP Program: Fundamentals of Gaseous Halos (*online* attendee)**

January 2022

organized by Kavli Institute for Theoretical Physics, Santa Barbara, California, USA



## **Academic Awards**

---

#### **National Level Qualified Examinations**

- Qualified GATE Fellowship 2019
- Qualified UGC-JRF NET December 2018
- Qualified JEST 2019

#### **Academic Achievements and Scholarships**

- Ranked 5th in University of Calcutta, M.Sc. Batch 2015-17
- DST-INSPIRE Scholarship 2012-2017
- Mamraj Agarwal Rashtriya Puraskar, 2012 (*felicitated for scoring 96.6% in CBSE Class XII Exams, 2012 by the then Governor of West Bengal, India*)
- Certificate of Merit in Mathematics 2012 (*for being in top 0.1% of All India Senior School Certificate Exam, 2012 in Mathematics (Score: 100%)*)



## Teaching Experience

---

Teaching Assistantship, PH 365, Galaxies and the Interstellar Medium, Joint Astronomy and Astrophysics Program (JAP), IISc  
January 2023 — May 2023

Teaching Assistantship, PH 363, Introduction to Fluid Mechanics and Plasma Physics, Joint Astronomy and Astrophysics Program (JAP), IISc  
August 2021 — December 2021



## Professional activities and outreach

---

Referee, *New Astronomy* (ongoing)

Hands-on Sessions, Computational MHD with PLUTO (May 2023)

Organized hands-on sessions on basics of MPI parallel computation for about 60 beginning Ph.D. and advanced master's students in the Workshop on Computational MHD with the PLUTO code at IISc, Bangalore, India

Coordinator, Weekly arXiv Meetings (2021-22; 2022-23)

Coordinated the weekly arXiv meetings for the Astrophysics Group at the Department of Physics, IISc from 2021 to 2023

Volunteer, IISc Open Day (Feb 2020, Mar 2023, Feb 2024)

Actively participated in popular science lectures and hands-on demonstrations to around 50,000 people at the annual Open Day event at the IISc, Bangalore, India

Astronomy Outreach Volunteer, International Astronomical Union (2019)

Engaged with approximately 600 primary and high school students at Kendriya Vidyalaya IISc, Bangalore, India as a part of the International Astronomical Union (IAU) global project 'Astronomy Day in school'



## Professional References

---

Prof. Prateek Sharma, Indian Institute of Science, Bangalore, India

 [prateek@iisc.ac.in](mailto:prateek@iisc.ac.in)

Dr. Max Gronke, Max Planck Institute for Astrophysics, Garching, Germany

 [maxbg@mpa-garching.mpg.de](mailto:maxbg@mpa-garching.mpg.de)