

Dr. Geetanjali Sethi

DEAN RESEARCH
PROFESSOR, PHYSICS,
ST.STEPHEN'S COLLEGE, UNIVERSITY OF DELHI

ADDITIONAL RESPONSIBILITY

DEAN RESEARCH, ST.
STEPHEN'S COLLEGE (16th
April, 2025 till date)

DIRECTOR, ST. STEPHEN'S
CENTRE FOR ADVANCED
LEARNING (SCAL) (2021-
2023)

Associate, IUCAA, PUNE,
INDIA

AWARDS

Awarded by Indian Council
for UN Relations (ICUNR) for
Excellence in Academia on
Women's Day March-2024

Women In Science
Fellowship Scheme by DST,
GOI -Selected for leadership
training programme held at
Coventry University, UK

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EXPERIENCE

TEACHING UNDERGRADUATE PHYSICS FOR ALMOST 23 YEARS.

1ST JUNE,2010–PRESENT

ASSOCIATE PROFESSOR • PERMANENT • ST. STEPHEN'S COLLEGE

8TH AUGUST,2007–1ST JUNE,2010

ASSISTANT PROFESSOR • AD-HOC • ST. STEPHEN'S COLLEGE

19TH OCTOBER 2006–31ST MARCH,2007

ASSISTANT PROFESSOR • TEMPORARY • MIRANDA HOUSE COLLEGE

19TH JULY, 2004–30TH APRIL, 2006

ASSISTANT PROFESSOR • AD-HOC • KIRORI MAL COLLEGE

16TH OCTOBER,2003–27TH FEBRUARY,2004

ASSISTANT PROFESSOR • AD-HOC • SGTB KHALSA COLLEGE

18TH AUGUST,2003–17TH SEPTEMBER,2003

ASSISTANT PROFESSOR • AD-HOC • KIRORI MAL COLLEGE

23RD OCTOBER,2002–30TH APRIL,2003

ASSISTANT PROFESSOR • AD-HOC • ST. STEPHEN'S COLLEGE

EDUCATION

Ph.D. Physics (Theoretical Cosmology), University of Delhi, Delhi (2010)

MSc. Physics, St. Stephen's College, University of Delhi, Delhi (2002)

BSc. (H) Physics, St. Stephen's College, University of Delhi, Delhi (2000)

RESEARCH INTEREST

Radio Astronomy and theoretical cosmology. Working on Pulsar distribution in our galaxy and constraining dark energy models using various cosmological probes.

Building an affordable Horn Antenna and setting up an array for radio astronomy measurements. Setting up an array which is part of Nation -wide Interferometer.

VOLUNTEER EXPERIENCE OR LEADERSHIP:

1. Reviewer for the **International Science Partnership Fund** offered by BCI
2. Research Mentor with **SARSTEM**.
3. Research Mentor with **RESEARCH DISCOVERY**.
4. Associated with **New York Academy of Sciences** as a mentor since July, 2018
5. Associated with **The Supernova Foundation** as a mentor since 2019
6. Life Time Member of IAPT, IAGRG.
7. Tutor for Admission-2021
8. Co-opted member of the Committee of Courses, Department of Physics, University of Delhi.
9. Internal Assessment Coordinator 2017-2019.
10. Staff Advisor College Physics Society (2013-17)
11. Staff Advisor College Debating Society (2017 -2019)
12. Staff Advisor College Web Team
13. Served as a member of the college Governing Body
14. Served on Admission Committee
15. Served as deputy superintendent of college exams.

DETAILS OF INVITED TALKS AND LECTURES:

1. Invited speaker at "Astroparticle Physics, Gravitation, and Cosmology 2026 (APGC-2026)" organised by the GLA University, Mathura, 26th- 28th June, 2026.
2. Invited speaker at "First Regional Networking Meeting of Women in Cosmology, Astroparticle Physics, Astronomy and Astrophysics" in celebration of the International Women's Day 2026 on 09 March 2026. Title of the talk: Variable Chaplygin Gas, a viable alternative.
3. Four Lectures on Cosmology during a pedagogy workshop organised by ACE, IUCAA, Pune, India, for teachers titled "Teaching a First Course in Astronomy and Astrophysics"
4. Lecture on Collecting and Analysing data using Affordable telescopes in Radio Astronomy during Summer Research and Innovation Programme-2025 at St. Stephen's College.
5. Two lectures on Basic Cosmology during Astronomy Boot Camp at Nehru Planetarium, 23rd and 25th June, 2024.
6. Online lecture on Introduction to Cosmology and its development for the Physics for Students, 30th June, 2024. It's a dedicated channel for Physics teaching.
<https://www.youtube.com/live/9CL6DvfZmYw?si=9LyFICwCEvjQjB-M>
7. Lecture on Hands-on techniques for analysing Astrophysical and Cosmological data for teachers during Pedagogic Workshop for Astronomy, Astrophysics and Cosmology held at St. Stephen's College, 6th-10th November, 2023
8. Invited podcast on Dark Energy Models and Cosmology | Back to the Stone Age #3 conducted by Mr. Fancisco Cavina. Now available: <https://youtu.be/Gbf6qB2Fj2Y?si=P4IG2qHpafqa0zCQ>
9. Three lectures on Fluid Dynamics for undergraduate students, August 2020.
https://www.youtube.com/live/TxA5utbAF-4?si=d0TX1_GnbTzHgA7M

BOOKS:

1. SI metrication of *Berkley Physics Course Vol. 3, Waves*, F.S. Crawford, Tata McGraw-Hill Education Private Limited.
2. Edited chapters of *Electronics: Digital and Analog*, Cambridge University Press, 2022.

PUBLICATIONS:

1. **Cosmological constraints on a Power Law Universe.** Geetanjali Sethi, Abha Dev, Deepak Jain; *Physics Letters B* 624, (2005), 135-140 .
2. **A Concordant "Freely Coasting Cosmology"**, Savita Gahlaut, Geetanjali Sethi, Pranav Kumar, Daksh Lohiya, *J. Astrophys. Astr.* (2026) 47:8 <https://doi.org/10.1007/s12036-025-10127-y>
3. **A case of nucleosynthesis in slowly evolving models.** Geetanjali Sethi, Pranav Kumar, Sanjay Pandey, Daksh Lohiya; *Spacetime & Substance*: Volume 6, No.1(26), 31-38,2005.
4. **Variable Chaplygin Gas: Constraints from CMBR and SNe Ia.** Geetanjali Sethi, Sushil Kumar Singh, Pranav Kumar, Deepak Jain, Abha Dev, *International Journal of Modern Physics D*, vol 15 (7) , 1089-1098, 0218-2718, 2006.
5. **Studying habitability of Kepler-504 b, Kepler-315-b and Kepler-315 c.** Sattik Bhaumik, Geetanjali Sethi, *Journal of Emerging Investigators*. Vol 5, November 7th 2022.
6. **Variable Chaplygin Gas: Constraints from Supernovae, GRB and Gravitational Wave Merger Events.** Ashley Chraya, Yuvraj Muralichandaran, Geetanjali Sethi. *Astrophysics and Space Science* (2023) 368:54 <https://doi.org/10.1007/s10509-023-04211-4>.
7. **Affordable Astronomy using Horn Antenna**, Nadia Makhijani, Udish Sharma, Geetanjali Sethi accepted for publication in *Resonance Journal, Indian Academy of Sciences, Volume 29, pages 935–951, (2024)*
8. **Variable Chaplygin Gas: Constraining Parameters using FRBs,** Geetanjali Sethi, Udish Sharma, Nadia Makhijani, *Astrophysics and Space Science, Volume 369, article number 42, (2024)*
9. **Bioinspired designer surface nanostructures for structural color**, Ekta Kundra Arora, Vibha Sharma, Geetanjali Sethi, Mariet Sibi Puthanagady, Anjali Meena, , review article, *Nanotechnology for Environmental Engineering* (2024), Vol.9(2), 2365-2379
10. **Multifunctional composite materials for electromagnetic interference shielding** , Geetanjali Sethi, Annu Malhotra, Sangeeta Sachdeva, Payal Mehrotra, Yoshit Bargla, Shweta Jagtap, Arindam Adhikari, Pawan Kumar, Jatis Kumar Dash and Rajkumar Patel, *a review article, published in Polymer-Plastics Technology and Materials* (2024), DOI: [10.1080/25740881.2024.2326129](https://doi.org/10.1080/25740881.2024.2326129)
11. **Poyaniline based Electromagnetic Interference Shielding Materials**, Sangeeta Sachdeva, Annu Malhotra, Geetanjali Sethi, Payal Mehrotra, Yoshit Bargla, Shweta Jagtap, Arindam Adhikari, Pawan Kumar, Jatis Kumar Dash and Rajkumar Patel, *a review article, Polymer-Plastics Technology and Materials* , Volume 63, 2024 - Issue 18 <https://doi.org/10.1080/25740881.2024.2378379>.

12. ***Affordable Astronomy for Regenerative Scientific Ecosystems***, Geetanjali Sethi, Shruti Thakur, Sangeeta Sachdeva. Accepted for publication in the proceedings at ***the 4th International Conference on Regenerative Ecosystems (ICRE 2025)***, 3rd- 6th December 2025.
13. ***Linear Coasting: A Review***, Geetanjali Sethi, Savita Gahlaut, Book Chapter accepted for publication in ***Recent Advances in Astrophysics and Cosmology towards the Mega Telescope Era***, proceedings of International Symposium of Space Science, Astrophysics and Cosmology (ISSAC-2024), 21st 23rd November, 2025
14. ***Variable Chaplygin Gas and $F(R)$ Gravity: Cosmological Constraints***, Shruti Thakur, Geetanjali Sethi, Book Chapter accepted for publication in ***Recent Advances in Astrophysics and Cosmology towards the Mega Telescope Era***, proceedings of International Symposium of Space Science, Astrophysics and Cosmology (ISSAC-2024), 20st to 22nd November, 2025
15. ***Variable Chaplygin Gas: constraints from Look Back Time and SNeIa (Union 2.1 compilation)***. Bhuvan Agrawal, Geetanjali Sethi, Shruti Thakur, [arXiv:1409.8521](https://arxiv.org/abs/1409.8521).
16. Presented a poster titled ***“Variable Chaplygin Gas: Cosmological Constraints”***, at the Astronomical Society of India Annual Meeting 2026 at IIT Guwahati, India.
17. Presented a paper titled ***“Building Distributed Access to Empirical Astronomy in Resource Constrained Institutions”*** at **APRIM 2026** at Hong Kong.