



Dr. SIMRAN KAUR

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Key Skills

MATLAB, Mathematica

Latex

Python, R, Maple

Data Analysis

**C, C++ and
Dot Net Programming**

Personal Details

Date of Birth: 10th July 1994

Languages Known: Hindi, English

Address: 413-D, second Floor, Sushant Lok phase 2, Sector 57, gurugram - 122001

Profile Summary

Assistant Professor with a PhD in Mathematics with approximately six years of experience in teaching and research. My goal is to empower the next generation of mathematical thinkers with a spirit to contribute to the academic mission and institutional goals.

Education

- **Ph.D. (Mathematics)**
(Delhi Technological University – 2023)

Thesis Title: A Study on Cosmological Models in General Relativity and Modified Gravity Theories

- **M.Sc. Mathematics**
KiroriMal College, University of Delhi - 2016
- **B.Sc. (H) Mathematics**
Miranda House, University of Delhi – 2014

Work Experience

- **Presently working in Maitreyi College, Delhi University as an Assistant Professor.**

Past Experience:

Previously taught as an Ad-hoc Assistant Professor in SGTB Khalsa College, University of Delhi and as a guest lecturer in Sri Venkateswara College and Zakir Husain College, University of Delhi

Publications

- C.P. Singh and **Simran Kaur**, *Matter creation cosmology in Brans-Dicke Theory: Observational tests and thermodynamic analysis*, Physical Review D , **100** , (2019) 084057. (SCI Journal, Impact Factor: 5.407) <https://doi.org/10.1103/PhysRevD.100.084057>
- C.P. Singh and **Simran Kaur**, *Probing bulk viscous matter-dominated model in Brans-Dicke Theory*, Astrophysics and Space Science, **365**, (2020) 2. (SCI Journal, Impact Factor: 1.909) <https://doi.org/10.1007/s10509-019-3713-y>
- **Simran Kaur** and C.P. Singh, *Holographic dark energy model with matter creation in Brans-Dicke theory*, Physics of Dark Universe, **33**, (2021) 100869. (SCI Journal, Impact Factor: 5.09) <https://doi.org/10.1016/j.dark.2021.100869>
- **Simran Kaur** and C.P. Singh, *Evolution of holographic dark energy model with adiabatic matter creation*, Modern Physics Letters A, **37**, 2250161(2022). (SCI Journal, Impact Factor: 1.594) <https://doi.org/10.1142/S0217732322501619>
- **Simran Kaur** and C.P. Singh, *Viscous cosmology in holographic dark energy with Granda-Oliveros cut-off*, Communication in Theoretical Physics, **75**, 025401 (2023). (SCI Journal, Impact Factor: 2.877) <https://doi.org/10.1088/1572-9494/aca651>

Conferences and Workshops

- Participated in Capacity Building Program on **Mathematical Data Science & Applications** organized by Miranda House, University of Delhi - February 2024.
- Successfully completed the **Faculty Development Program on Recent Trends in Mathematical Sciences** organized by Dyal Singh College & Hansraj College, University of Delhi – September 2023.
- Participated in Capacity Building Program on **Mathematical Computing in Python** organized by Miranda House, University of Delhi - July 2023.
- Presented an article in **International Conference on Applied and Industrial Mathematics** held at Sharda University – March 2023.
- Attended a four days online workshop on **Data Analysis Using R** by Meerashpa Learning Solutions – February 2023.
- Presented an article in **Asia-Pacific School and Workshop on Gravitation and Cosmology 2022** conducted by Soochow University, Taipei, Taiwan- March 2022.
- Attended the **Second Chennai Symposium on Gravitation and Cosmology** – February 2022.
- Presented an article in **26th International Conference of International Academy of Physical Sciences** held at S.L.I.E.T. Longowal-December-2020.
- Successfully participated in **Faculty Development Program on 'Python Programming Language'** conducted by Jamia Milia Islamia and spoken Tutorial IIT Bombay – September 2020.
- Presented a paper in **International Conference on Differential Geometry and Relativity** held at Deen Dayal Upadhyaya Gorakhpur University- November 2019.
- Participated in one day **National Seminar cum Workshop on e-Content, MOOCs (SWAYAM) and ARPIT** organized by AICTE and MHRD at SGTB Khalsa college, University of Delhi- August 2019.
- Presented a paper in **International Conference on Gravitation, Cosmology and Mathematical Physics** organized by GLA University, Mathura - April, 2019.
- Presented a paper in **30th Indian Association of General Relativity and Gravitation** held at BITS-Pilani (Hyderabad Campus) - January, 2019.
- Attended the **International Conference on Recent Advances in Pure and Applied Mathematics** Organized by Delhi Technological University – October 2018.

Academic Achievements

- Honored with **Research Excellence Award** four times in recognition of the research in the years 2018-2023 by Delhi Technological University.
- Got awarded with the title '**Young Relativist**' for presenting a paper at International Conference on Gravitation, Cosmology and Mathematical Physics in 2019.
- Certified in 'Programming for everybody' in python language from Coursera.
- Qualified GATE-2018, CSIR-UGC NET with JRF with AIR-52 - June 2017.
- Foreign Language Certificate Course in French from DU, New Delhi .
- Participant of the 'Write Up' competition, orchestrated by Gandhi Bhawan, DU at annual festival, Antardhvani 2013.
- Facilitated with a 3rd place award at 'Absurd Theory', conducted by Origin, Annual Mathematics Fest of Miranda House -2012.
- Runner up among 10 teams at the event 'Best from Waste', organized by Miranda House College, DU - 2013.
- Decorated on no. 2 podium in the Sports Festival, Miranda House -2012.

Key Responsibilities

- Event Organizer of the 'National Mathematics week' celebrated by Maitreyi College, University of Delhi in December 2023.
- Resource Person for the Short-term Course on 'Building Mathematical Skills: Logic, Reasoning & Aptitude 2.0' organized by Maitreyi College, University of Delhi in November 2023.
- Organizing Member of One week Short term Training Program on 'Graph Theory and It's Applications' by Delhi Technological University in November 2019.
- Organizing Member of International Conference on Recent Advances in Pure and Applied Mathematics, held at Delhi Technological University in October, 2018.
- Active member of NSS (National Service Scheme) during graduation 2011-14.
- Event Head - Mathematics Department Fest- Origin; Member- Core Committee, annual Department Fest, Origin & Annual college Fest, Tempest – 2013 -14.
- Member – Quiz Society, Placement cell, Miranda House College - 2012- 13.
- Trained – Self Defense Program organized by DUSA -2012 -13.