Teacher's Profile for College Website, Motilal Nehru College (Eve.) University of Delhi

Name:	Dr. SUMIT KUMAR	Photograph
Designation	Assistant Professor	
Contacts		
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Educational Qualifications

Degree	Institution	Year
10th	JNVKK Jind, Haryana	2005
12th	JNVKK Jind, Haryana	2007
B.Sc.(H) Mathematics	ARSD college (DU)	2010
MSc. Mathematics	Kirori Mal College (DU)	2012
Ph.D.	Department of Mathematics (DU)	2023
NET JRF		2016

Administrative and Students related Assignments

1. Invigilation
2. Evaluation
3. NAAC work
4. Member of Cultural societies: Fusion
5. Discipline duties

Career Profile

Papers Taught

Metric Space, Group Theory, Numerical Methods, Real Analysis, Differential Equations, Analytic Geometry, Elements of Discrete Mathematics

Areas of Interest/Specialization

Non-linear Dynamics, Celestial Mechanics, Metric Space

Research Articles

1. Bhavneet Kaur, **Sumit Kumar**, Shipra Chauhan and Dinesh Kumar (2020): **Stability Analysis of Circular Robe's R3BP with Finite Straight Segment and Viscosity**. *Appl. and Appl. maths.: An Int. J. (AAM), Vol. 15, No. 2, pp. 1072—1090.*
2. Bhavneet Kaur, **Sumit Kumar** (2021): **Stability analysis in the perturbed CRR3BP finite straight segment model under the effect of viscosity**. *Astrophys Space Sci, Vol. 366, Article no. 43. IF=1.989*

3. Bhavneet Kaur, **Sumit Kumar**, and Rajiv Aggarwal (2022): **Effects of viscosity, oblateness, and finite straight segment on the stability of the equilibrium points in the RR3BP**. *Appl. and Appl. maths.: An Int. J. (AAM), Vol. 17, No. 1, pp. 81 - 98.*

4. Bhavneet Kaur, **Sumit Kumar**, and Rajiv Aggarwal (2022): **Effects of Viscosity and Oblateness on the Perturbed Robe's Problem with Non-Spherical Primaries,** *Kinematics and Physics of Celestial Bodies, Vol. 38, No. 5, pp. 248 – 261. IF=0.389,* *https://doi.org/10.3103/S088459132205004X*

5. Bhavneet Kaur, **Sumit Kumar**, and Rajiv Aggarwal (2023): **Effect of Finite Straight Segment on the Non-linear Stability of the Equilibrium Point in the Planar Robe's Problem.** *Astronomy Reports, Vol. 67, No. 4, pp. 424-437. ISSN 1063-7729, IF 1.172*

Books

Chapters in Books

1. **A note on the Robe's Restricted three-body Problem.**
Bhavneet Kaur, Shipra Chauhan, **Sumit Kumar**
Application of Mathematical Tools in Social Sciences and Sciences
Editor: Prof. (Dr.) Masroor Ahmad beg and Dr. G.S. Tuteja
ISBN No. 978-81-950791-7-9,
Page no.: 151-158(2021)

MOOCS

Seminars, Paper Presentations

1. **Combined Effect of Viscosity and Finite Straight Segment in the Circular Robe's Restricted Three-Body Problem**: First National Conference on "Application of Mathematical Tools in Social Sciences and Sciences (Online)" organized by Zakir Husain Delhi College, University of Delhi from **October 17--18, 2020**.

2. **Effects of viscosity in the perturbed CRR3BP with a non-spherical primary**: 26th International conference of IAPS (Online) on "Advances in Differential Equations & Mathematical modelling (IC-ADE-MM-2020)" jointly organized by School of Computational and integrative science, JNU, New Delhi-110067 & International Academy of Physical Science (IAPS) from **December 18--20, 2020**.

3. **Stability Analysis of Circular Robe's R3BP with Finite Straight Segment and Viscosity:** IAU (International Astronomical Union) Symposium 364, Multi-scale (time & mass) dynamics of space objects, **October 18--22, 2021**.

4. **Finite Straight segment model of Robe's restricted three-body problem under the effect of viscosity:** 27th International conference of IAPS (Online) on "Recent Advances in Mathematics & Computational Optimization (RAMCO)" jointly organized by School of Computational and integrative science, JNU, New Delhi-110067 & International Academy of Physical Science (IAPS) from **October 26--28, 2021**.

5. **Effects of a finite straight segment on the non-linear stability of the equilibrium point in the planar Robe's problem:** the international conference CELMEC VIII taking place from **5-9 September 2022** at the Department of Mathematics at the University of Rome Tor Vergata (Poster Presentation).

Research Projects

Research Guidance

Awards and Distinctions
Chairman Scholarship for Standing 4th in UDSC in B.Sc.(H) Maths 1st year,2007-08.   **NBHM (National Board for Higher Mathematics) M.Sc. Scholarship 2011-12.**   **1st Position** in Mathematics Quiz held at Maitreyi College (DU), 2009-10.   **1st Position** in Su-doku competition held at PGDAV College (DU), 2009-10.   **1st Position** in Mathematical Tambola competition held at PGDAV College, 2009-10.   **1st Position in** B.Sc. (H) Maths 3rd year in ARSD College, 2009-10.   **Chairman Scholarship** for Standing 10th in UDSC in B.Sc. (H) Maths, 2009-10.   **2nd Position** in B.Sc.(H) Maths 1st year in ARSD College, 2007-08   'A' Certificate of NCC

Others: