Title	Prof.	First Name	Sada Nand	Last Name	Prasad	Photograph

Designation	**Professor**
Address	**Acharya Narendra Dev College, (University of Delhi) Govindpuri, Kalkaji, Delhi-110019**
Residence	**M-306, Ayush Enclave, Block - M, Pkt – C, DDA LIG Flats, Molarband, Sarita Vihar,New Delhi-110076**
Mobile	**9711969937, 7428450443**
Email	**sadanandprasad@andc.du.ac.in** **prasadsadanand@yahoo.co.in**
Web-Page	**https://sites.google.com/view/sadanandweb/ home**

Educational Qualifications

Degree	Institution	Year
Ph.D.	**Department of Mathematics, University of Delhi**	**2013**
M.Phil.	**Department of Mathematics, University of Delhi**	**2007**
PG	**Zakir Husain Delhi College, University of Delhi**	**2004**

Career Profile

November 7, 2006 to till date - Associate Professor, Dept. of Mathematics, Acharya Narendra Dev College (University of Delhi).

Administrative Assignments

1. **Worked as NSS Convener, from July 2010 to June 2014.**
2. **Worked as Nodal Officer of Anti-Tobacco Squad**
3. **Member, Proctorial Committee 2010-2012, 2014-2016**
4. **Member, Internal Assessment & Monitoring Committee 2010-2012**
5. **Member, Environment Society & Remedial Coaching 2010-2012**
6. **Member, Sports Committee 2008-2010 to 2012-2014**
7. **Member, Admission Committee & Library Committee 2016-2018**
8. **Worked as Convener of Cultural Events Management Committee from July 2014 to May 2016**

9. **Teacher in Charge of Department of Mathematics from April 2016 to March 2018**
10. **Member of Sports committee and Canteen committee from April 2018 till date**
11. **SC/ST Observer (alternate) from 01.05.2018 to 30.04.2020**
12. **SC/ST Observer from 01.05.2020 till date**
13. **Coordinator Internal Quality Assurance Cell (IQAC) from April 04, 2022 till date**
14. **Liaison officer (SC/ST) April 01, 2023 till date**

Areas of Interest / Specialization

1. Dynamical Systems
2. Space Dynamics
3. Non Linear Dynamics

Subjects Taught

1. Calculus
2. Differential Equations and Mathematical Modeling
3. Partial Differential Equation
4. Real Analysis
5. Numerical Analysis
6. Linear Programming
7. Algebra and Mechanics

Publications Profile

Chapters for Developing E-Content

- ❖ Mathematical Models **(ISSN 2349-154X)**

- ❖ Classification of Second Order Linear Equations **(ISSN 2349-154X).** Both the above for Differential Equation and Mathematical Modeling

- ❖ Reduction Formulae **(ISSN 2349-154X)**

- ❖ Concavity, Points of Inflexion, Curve Sketching **(ISSN 2349-154X)**. Both the above for Calculus

- ❖ Differential Equations of first order but not of first degree, Clairaut's Equations and singular solutions, Envelops and Orthogonal trajectories, Existence and Uniqueness of Solutions of first order differential equations(Differential Equation) **(ISSN 2349-154X)**

- ❖ Numerical Solution of Ordinary Differential Equations – Numerical Methods **(ISSN 2349-154X)**

List of Research Papers Published in the International Journals

1. Saha, L. M., **PRASAD, S**., & YUASA, M. (2012). **Measuring chaos: Topological entropy and correlation dimension in discrete maps**. *理工学総合研究所研究報告= Annual reports by Research Institute for Science and Technology*, *24*, 11-23.

2. Saha, L. M., **Prasad, S.**, & Mohanty, R. K. (2012). **Correlation dimension and topological entropy in discrete maps**. *Applied Mathematical Sciences*, *6*(84), 4197-4209.

3. Saha, L. M., **Prasad, S.**, & Erjaee, G. H. (2014). **Interesting dynamic behavior in some discrete maps**. *Iranian Journal of Science and Technology (Sciences)*, *36*(3.1), 383-389.

4. Saha, L. M., **Prasad, S.**, & Mohanty, R. K. (2013). **DYNAMIC BEHAVIOR OF GENERALIZED INVERTIBLE HÉNON MAP**. *Int. J. of Appl. Math and Mech*, *9*(18), 28-37.

5. Saha, L. M., & **Prasad, S**. (2012). **Chaos Measure in Some Discrete Map.,** Rev. Bull. Cal. Math. Soc. **20** (2): 113-120.

6. Ansari, A. A., Alhussain, Z. A., & **Prasad, S. N.** (2018). **Circular restricted three-body problem when both the primaries are heterogeneous spheroid of three layers and infinitesimal body varies its mass**. *Journal of Astrophysics and Astronomy*, *39*, 1-20.

7. Saha, L. M., & **Prasad, S**. (2018). **Complexity Dynamics of Invertible Henon Map.,** Indian Journal of Industrial and Applied Mathematics, 9(1), 54-59

8. Kumar, S., Singh, C., **Prasad, S. N.**, Shekhar, C., & Aggarwal, R. (2019). **Synchronization of fractional order Rabinovich-Fabrikant systems using sliding mode control techniques**. *Archives of Control Sciences*, *29*.

9. Ansari, A. A., **Prasad, S. N.**, & Alam, M. (2020). **Variable mass of a test particle in Copenhagen problem with Manev-type potential**. *Research and review journal for Physics*, *9*(1), 17-27.

10. **Prasad, S. N.**, Meena, K. R., & Ansari, A. A. (2020). **Complexity Dynamics of Gumowski-Mira Map**. *Applications and Applied Mathematics: An International Journal (AAM)*, *15*(1), 15.

11. **Prasad, S. N.**, Saha, L. M., & Ansari, A. A., (2020). **CHAOS MEASURE IN AUTONOMOUS LPA MODEL**., Gedrag & Organisatie Review, 33(02), 2687 – 2694.

12. Ansari, A. A., Narain, L. & **Prasad, S**., (2020). **The motion properties of the variable mass planetoid in the elliptical Sitnikov problem**. *Gedrag & Organisatie Review*, *33*, 398-405.

13. Ansari, A.A., **Prasad, S.N**. **Generalized Elliptic Restricted Four-Body Problem with Variable Mass**. *Astron. Lett.* **46**, 275–288 (2020). https://doi.org/10.1134/S1063773720040015

14. Ansari, A. A., Meena, K. R., & **Prasad, S. N.** (2020). **Perturbed six-body configuration with variable mass**. *Romanian Astronomical Journal*, *30*(2), 135-152.

15. Ansari, A. A., **Prasad, S. N.**, & Singh, C. (2020). **Vertical Motion of the Variable Infinitesimal Mass In the Circular Sitnikov Problem**. *Applications and Applied Mathematics: An International Journal (AAM)*, *15*(2), 41.

16. Ansari, A. A., Narain, L., **Prasad, S. N.**, & Alam, M. **Behaviour of motion of infinitesimal variable mass oblate body in the generalized perturbed circular restricted three-body problem**., Italian journal of pure and applied Mathematics, 45(1), pg. 221-239.

17. **Prasad, S. N.**, Saha, L. M., & Ansari, A. A., (2023), **Measuring Complexity and Chaos in Three - Species Food Chain system with the Beddington-DeAngelis Functional Response,** Bulletin of The Allahabad Mathematical Society (BAMS), 37(1), 53-69.

18. **Prasad, S. N.**, Shalini, K., & Ansari, A. A. (2021). (R1513) **The Dynamical Study of Variable Mass Test Particle in Nonlinear Sense of Restricted 3-body Problem with Heterogeneous Primaries.** *Applications and Applied Mathematics: An International Journal (AAM)*, *16*(2), 28.

19. K. Jain, V. Bhatnagar, **S. Prasad** and S. Kaur, "**Coupling Fear and Contagion for Modeling Epidemic Dynamics**," in IEEE Transactions on Network Science and Engineering, vol. 10, no. 1, pp. 20-34, 1 Jan.-Feb. 2023, doi: 10.1109/TNSE.2022.3187775.

20. Ansari, A. A., Sahdev, S. K., Kellil, R., & **Prasad, S. N.** (2022). **PERTURBED ROBE'S PROBLEM WITH CHARGED BODIES**. *Romanian Astronomical Journal*, *32*(2), 83-94.

21. Singh, B., Shalini, K., **Prasad, S. N.**, & Ansari, A. A. (2022). (R1985) **Study the Effect of Modified Newtonian Force on the Restricted 3-body Configuration in Non-Linear Sense**. *Applications and Applied Mathematics: An International Journal (AAM)*, *17*(2), 10.

22. Singh, B., Shalini, K., **Prasad, S. N.**, & Ansari, A. A. (2023). **Study the Non-Linear Stability of Non-Collinear Libration Point in the Restricted Three-Body Configuration When the Shapes of the Primaries are Taken as Heterogeneous and Finite-Straight Segment**. *Solar System Research*, *57*(3), 261-277.

Conference Organization/ Presentations and Workshops Organization/ Presentations

(1) National Seminar on "Changing Face of Higher Education in India" organized by Desh Bandhu college on **March 04, 2009.**

(2) International conference on "Recent trends in Mathematics and its application **(ICRTMA - 09)"** organized by Department of Mathematics, Jamia Milia Islamia, New Delhi From **March 30, 2009 to March 31, 2009**.

(3) Workshop cum Training Programme on "Modern Trends in Celestial Mechanics and Astronomy" organized by Desh Bandhu college From **March 17, 2010 to March 19, 2010.**

(4) Workshop on application of Free/Open-Source Software in Science Teaching and Research organized by Acharya Narendra Dev College from **April 14, 2010 to April 15, 2010.**

(5) 3rd National Seminar on "Recent trends in Advancement of Mathematical and Physical Sciences" organized by D.N. College Meerut From **Feb.05, 2011 to Feb. 06, 2011.**

(6) Workshop on Scilab and its applications organized by Acharya Narendra Dev College from **March 10, 2011 to March 11, 2011.**

(7) International Satellite Seminar on "Role of Mathematics in Science and Engineering **(ISSRMSE-11)"** organized by Graphic Era University, Dehradun From **May 13, 2011 to May 14, 2011.**

(8) National Seminar on "**Recent trends in Advancement of Mathematical and Physical Sciences**" organized by D. N. College Meerut From **March.17, 2012 to March 18, 2012** and **presented** a paper entitled **Dynamic Behaviour in Some Discrete Maps.**

(9) Workshop on "**Free / Open-Source Software Maxima**" organized by Acharya Narendra Dev College on **August 17, 2012.**

(10) Delivered an *invited talk and conducted hands on session* in the workshop on Software "**Mathematica**" organized by Acharya Narendra Dev College on **March 01, 2013.**

(11) National Seminar on "**Modelling and its applications in Science and Technology**" organized by IIMT Engineering College, Meerut From **March 22, 2013 to March 23, 2013** and **presented** a paper entitled **Dynamic Behaviour in Certain Discrete Maps.**

(12) Participated in the seminar on "Recent Trends in Technical Terminology in Science" organized by Commission for Scientific and Technical Terminology at Sri Aurobindo College, University of Delhi From February16,2016 to February 17,2016.

(13) National conference on "**Advances in Operations Research and Mathematical Science (AORMS-2018)**" organized by Department of Research & Post Graduate Studies in Mathematics & Department of Statistics, Vardhaman College, Bijnor, U.P. in association with Operational Research Society of India (ORSI), Meerut Chapter from **Feb. 24, 2018 to Feb. 25, 2018**and **presented** a paper entitled **Manufacturer based Supply Chain Inventory Model with Ramp Type Demand under Inflation.**

(14) National Workshop on "Advanced Numerical techniques and its applications" organized by Graphic Era Hill University, Dehradun From May 06, 2019 to May 11, 2019.

(15) National Conference on "Emerging Trends in Mathematical Sciences for Industry and Environment: Use of Technical Hindi Terminology" organized by **Commission for Scientific and Technical Terminology at Shaheed Bhagat Singh College**, University of Delhi From **January27, 2020 to January29, 2020**and **presented** a paper entitled **Complexity Measure in Modified Henon Map.**

(16) Webinar-03: ICT Enabled Higher Education in India: Challenges and Opportunities" organized by GAD Teaching Learning Center and PMMMNMTT Scheme of MHRD on 15 April 2020.

(17) International e- conference on "**Recent trends in Advancement of Mathematical and Physical Sciences**" organized by D. N. College Meerut From **May.22, 2020 to May 23, 2020.**

(18) Webinar on "Occupied Territories of Ladakh." organised by the Academic Affairs Committee, Shaheed Bhagat Singh Evening College on 18th May, 2020.

(19) One Day International Webinar on "MATLAB Applications in Sciences and Engineering", organized by Baba Farid College, Bathinda, Punjab on 29th May, 2020.

(20) National Webinar on the topic "Application of Mathematical Modeling and Statistical Learning on COVID-19 and its Related Problems", organized by the Department of Mathematics and Department of Statistics, Bareilly College, Bareilly on **June 07, 2020 (Sunday)**

(21) National Webinar on the topic "Financial Mathematics: Pedagogy and Career Perspectives", organized by the Department of Mathematics Lady Shri Ram College For Women, from **July 27, 2020 to July 31, 2020**

(22) International e-conference on "*Mitigating Contemporary Environmental issues by sustainable approaches*" (ICMCESA-2022) organized by **Acharya Narendra Dev College**, University of Delhi From **February 22, 2022 to February 28, 2022**and **presented** a paper entitled **Measuring Complexity and Chaos in Three - species Food Chain System with mixed selection of Functional Response**

(23) Organized National Workshop on Career Enhancement for Non-teaching staff at **Acharya Narendra Dev College**, University of Delhi From **September 15, 2022 to September 21, 2022**

(24) Attended Two – Day Workshop on MATLAB organized by **Acharya Narendra Dev College** October 12, 2022 and October 17, 2022.

(25) Organized One day national conference One Earth, One Family, One Future at **Acharya Narendra Dev College**, University of Delhi on **April 03, 2023.**

Research Guidance and Research Projects (Major Grants/Research Collaboration):

Ph.D. student

1. **Bhawna Singh, Core Area: Non-linear stability in the restricted three-body problem with various perturbation (Registered 2021, University of Delhi)**
2. **Itender Kumar: Dynamical Systems (Registered 2021, University of Delhi)**
3. **Sonia Aneja: Dynamical Systems (Registered 2022, University of Delhi)**
4. **Preeti Yadav: Non Linear : Dynamics (Registered 2022, University of Delhi)**
5. **Pooja Khoda: Dynamical Systems (Registered 2023, University of Delhi)**

M. Phil. Student

1. **Pooja Khoda,** successfully defended her dissertation entitled **Dynamical Behaviour of Tuberculosis Model with Different Fractional Derivatives** on 13.12.2022

   ➢ Co-supervisor of Ms. Gunjan Goyal in M.Sc. Applied Mathematics, Amity University. She has submitted her dissertation entitled "**CHAOS MEASURE IN ECOLOGICAL MODELS**" on 30 May 2016.
   ➢ Guiding the ELITE project on "**Detection and measuring chaos in non-linear dynamical systems**" at Acharya Narendra Dev College, University of Delhi.

Research Project:

Development of portable Electronic Nose prototype with autonomous & stand-alone operation for quantified Ambient Air Pollution (AAP) measurement using wireless data transfer protocol on Android® enabled mobile phones (DU INNOVATION PROJECT ANDC 304)

Association with Professional Bodies
Life time member of Operational Research Society of India.

Other Activities

1. Worked as an Observer in UGC-NET Examination December 2012 conducted by UGC.
2. Observer in IGNOU term end examination in June 2019.
3. Summer Institutes, refresher or orientation courses attended

  ➢ Orientation Programme **(OR-60)** organized by **CPDHE** University of Delhi From **June 09, 2009 to July 06, 2009.**

  ➢ Refresher Course **(RC-238)** Mathematics and statistics organized by **ASC H.P. University** Shimla from **July 18, 2011 to August 6, 2011.**

  ➢ Refresher Course (SRC) Mathematics /Operational Research /Statistics and Computer Science organized by **CPDHE** University of Delhi From May 31, 2019 to June14, 2019.
  ➢ FDP on Recent Trends in Research Methodology, E-content, Mathematical and Statistical Methods in Open Education World organized by **Kalindi College, University of Delhi in collaboration with Mahatma Hansraj Faculty Development Centr**e from **Dec 17,2019 to Dec 23,2019.**

  ➢ FDP on "Managing Online Classes and Co-Creating MOOCs" organized by **Ramanujan College, University of Delhi** from **April 20,2020 to May 06,2020.**

  ➢ Coordinator for the Syllabus of B.A/B.Sc. (Prog.) 3-Core, 2-Core Courses and GE, Sem-VI, DSE : Discrete Dynamical Systems (3L + 1P)

Date: 29.01.2024

Place: New Delhi