



Dr. SANTOSH KUMAR SHARMA | CV

Ph.D., Mathematical Science
Magadh University, Bodh-Gaya, Bihar

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santoshmumath@gmail.com

Course	College/University	Year	Class
Ph.D.	Magadh University, Bodh-Gaya	Awarded, October 23, 2024	xx.x
M.SC	Magadh University, Bodh-Gaya	2012-2014	1st
B.SC	K.L.S College, Nawada	2009-2012	1st

ABOUT ME

- I am **Dr. Santosh Kumar Sharma**. I earned my Ph.D. in Mathematical Science from Magadh University in Bodh Gaya, Bihar, India, on October 23, 2024, and I received my M.Sc. from the same university in 2014. My research interests include the mathematical modelling of environmental and ecological systems, epidemics, and social dynamics. I have published approximately five research articles in reputable international journals and have presented papers at five national and international seminars and conferences. I serve as a regular reviewer for journals published by the Journal of Cluster Computing, Springer Nature, Wiley, Taylor & Francis, PLOS ONE (ISSN-1932-6203), Smart Science (ISSN-2308-0477), the Journal of Asian and African Studies (ISSN-0021-9096), the International Journal of Differential Equations, the Journal of Medical Internet Research, Journal of Microbes and Infectious Diseases and the Journal of the International Association of Providers of AIDS Care. Additionally, I am a life member of several professional societies, including Bharata Ganita Parisad and Bihar Mathematical Society, and I am a member of the Odisha Mathematical Society for 2023-2024. I also hold a life membership in MTTF, where I serve as an advisor (Registration No. AD220109), and I am a life member of ISFSEA. My research papers can be found on Google Scholar, Research Gate, Research ID, and the Vidawan Portal.

CAREER OBJECTIVE

- To contribute as an assistant professor, author, and researcher in the field of mathematical science, focusing on innovative solutions to environmental, ecological, and social challenges through mathematical modelling, and fostering excellence in academia.

ADDRESS

- Mother's Name:-** Smt. Gita Sharma
- Father's Name:-** Shri Umesh Sharma
- Date of Birth:-** January 26, 1992
- Marital Status:-** Unmarried
- Nationality:-** Indian
- Sex:-** Male
- Vill.+ P. O.-Babhnour, P. S.-Narhat, Dist.-Nawada, Pin.- 805111, Bihar (India)**

TITLE OF THE THESIS

- Mathematical Studies of Insight Control of Infectious Disease Modelling.**
- Thesis Supervisor:** Dr. Amar Nath Chatterjee, Assistant Professor & H.O.D., Department of Mathematics, K.L.S College, Nawada (Bihar)

SKILLS & INTERESTS

- Languages:** Reading, writing, and speaking competencies in English and Hindi.
- Tools & Libraries:** Mathematica, \LaTeX , & Matlab
- Interests:** Data Analysis, Machine Learning

COURSES TAUGHT

- **B.Sc.:-** Calculus, Numerical Analysis & Computer Programming, Real and Complex Analysis, Differential Equations, Integral Transforms, Linear Algebra, Matrices.
- **M.Sc.:-** Differential Equations, Partial Differential Equations, Complex Analysis, Mathematical Methods, Mathematical Modelling, Computational Bioinformatics.

RESEARCH INTEREST

- Mathematical Modelling of Epidemics.
- Mathematical Modelling of Social Dynamics.
- Mathematical Modeling of Environmental & Ecological Systems.

RESEARCH PROFILE

- **Scopus Id:-** 58098595400
- **Orcid Profile:-**0000-0003-1814-3889
- **Google Scholar:-** FG4CBX0AAAAJ
- **Research id:-** www.researchid.co/rid76403
- **Web of Science ResearcherID:**KEJ-1902-2024
- **Vidyan Profile:-** vidwan.inflibnet.ac.in/profile/421296
- **Research Gate:-** www.researchgate.net/profile/Santosh-Sharma-38

RESEARCH PUBLICATIONS

- **Santosh Kumar Sharma**, Sourav Rana, and Amar Nath Chatterjee, "Dynamic Analysis of Nonlinear Stochastic DENGUE Epidemic Model" Journal of Applied Nonlinear Dynamics, Vol. 14(03), 745-755. Image of Journal of Applied Nonlinear Dynamics. ISSN: 2164-6457 (print), 2164-6473 (online), DOI:10.5890/JAND.2025.09.015
- Amar Nath Chatterjee, **Santosh Kumar Sharma**, and Fahad Al Basir. "A Compartmental Approach to Modelling Measles Disease: a Fractional-Order Optimal Control Model". Fractal fractal. Vol. 8, no. 8, p. 88, 2024 |)), ISSN: 2504-3110 DOI 10.3390/fractalfract8080446
- **Santosh Kumar Sharma**, Amar Nath Chatterjee, and Fahad Al Basir. "Hopf bifurcation and optimal control of HCV/HIV co-infection dynamics within human: A theoretical study." Results in Control and Optimization 11 (2023): ISSN: 2666-7207 DOI 10.1016/j.rico.2023.100234
- **Santosh Kumar Sharma**, Amar Nath Chatterjee, and Bashir Ahmad. "Effect of Antiviral Therapy for HCV Treatment in the Presence of Hepatocyte Growth Factor." Mathematics 11.3 (2023): 751, ISSN: 2227-7390, DOI 10.3390/math11030751

PAPER COMMUNICATED (In review/revision)

- **Santosh Kumar Sharma**, Amar Nath Chatterjee, and Fahad Al Basir, "An analysis using mathematical modelling to determine the most efficient way to combat the new H1N1 influenza." (Communicated in a peer-reviewed journal).
- **Santosh Kumar Sharma**, Amar Nath Chatterjee, "The Role of Mathematical Models in Predicting and Managing New Infectious Diseases." (Communicated in a peer-reviewed journal).

CONFERENCE PROCEEDINGS

- **National Conference on "Preserving and Promoting Indian Intellectual Heritage"** organized by Internal Quality Assurance Cell (IQAC) at K.L.S College, Nawada, on 17th May 2025, and presented a talk on "Preserving the Soul of a Civilization: India's Intellectual Heritage in the 21st Century.",
- **71st ANNUAL CONFERENCE OF BGP on 'RECENT ADVANCES IN MATHEMATICS AND APPLICATIONS-An International Meet'** Jointly organized by Bharata Ganita Parisad and Department of Mathematics and Astronomy, University of Lucknow, Lucknow on (ACBRAMA 16th to 17th November 2024), and presented a talk on "A fractional order differential equation model of measles infection.",

- **70th ANNUAL CONFERENCE OF BGP** on 'RECENT ADVANCES IN MATHEMATICS AND APPLICATIONS-An International Meet' Jointly organized by Bharata Ganita Parisad and Department of Mathematics and Astronomy, University of Lucknow, Lucknow on (NCRAMA 2nd to 3rd December 2023), and presented a talk on "A Mathematical Model for Zika Virus Transmission With Optimal Control",
- International Conference on "Exploring Excellence in Mathematical Sciences" (ICEEMS-2023) held at Nalanda Open University, Nalanda, Bihar, India, and Bihar Mathematical Society (BMS), on 04th to 5th Nov 2023, and presented a talk on "Dynamic Analysis of Nonlinear Stochastic DENGUE Epidemic Model."
- International Conference on "Mathematical Analysis and Applications" and **50th Annual Conference of Odisha Mathematical Society (OMS)**, on 21st and 22nd January 2023 at Institute of Mathematics and Applications, Andharua, Bhubaneswar, and presented a talk on "A theoretical study of the HCV/HIV co-infection model with optimal control."
- **69th ANNUAL CONFERENCE OF BGP** on 'RECENT ADVANCES IN MATHEMATICS AND APPLICATIONS' Jointly organized by Bharata Ganita Parisad and the Department of Mathematics and Astronomy, University of Lucknow, Lucknow, on 24th to 25th September 2022 and presented a talk on "Effect of Antiviral Therapy for HCV Treatment in the presence of hepatocyte growth factor."

SEMINAR / WORKSHOP / FDP

- One week National Level Faculty Development Programme (FDP) on "**Recent Development in Pure & Applied Mathematics**" organized by the Department of Engineering Sciences & humanities, IIST, Indore in association with **Indian Mathematical Society**, from 23-28 Dec., 2024.
- Participated in the National Seminar on "**Introducing some Recently Emerged Research Areas of Mathematics**" organized by the Departments of Mathematics In Collaboration with IQAC College of Commerce, Arts & Science, Patna, from December 2, 2024
- 5-Day Online International FDP on "**Mathematical and Physical Foundations of AI: Bridging Academia & Industry**" (MP-FAI 2024), jointly organized by the Departments of Mathematics, Physics, and CSE AI at Techno India University, West Bengal, from November 4-8, 2024.

EDITORIAL BOARD MEMBER

- **Journal of Mathematical Modelling and Applications**: - May, 2025 - Current
(ISSN Online: 2575-1794, ISSN Print: 2575-1786)

REVIEWER IN NATIONAL/ INTERNATIONAL JOURNALS

- Journal of PLOS ONE, ISSN 1932-6203
- Journal of Medical Internet Research
- **Journal of Smart Science**, ISSN 2308-0477
- Journal of Microbes and Infectious Diseases
- **Wiley, International Journal of Differential Equations**
- Journal of Asian and African Studies, ISSN 0021-9096
- **Journal of Computational Mathematica**, ISSN 2456-8686
- Journal of the International Association of Providers of AIDS Care
- **Journal of Cluster Computing**, Springer Nature, ISSN 2045-2322 (online)
- **International Journal of Creative Research Thoughts (IJCRT)**, ISSN: 2320-2882, Member ID: 119500
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MEMBER OF PROFESSIONAL SOCIETIES

- **ISFSEA**, Life-Membership.
- **Bharata Ganita Parisad**, life-Membership.
- **Bihar Mathematical Society**, Life-Membership.
- **Odisha Mathematical Society**, Member, 2023 – 24
- **MTTF**, Life-Membership & Advisor, Reg. No.-AD220109.
- **Asian Council of Science Editors**, Member, Jan-Dec 2025

NAMES AND ADDRESSES OF REFEREES

- **Dr. Amar Nath Chatterjee**
Assistant Professor & H.O.D
Dept. of Mathematics, K.L.S College, Nawada
Cont.:+91-7980114681
- **Professor (Dr.) Priti Kumar Roy**
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Jadavpur, Kolkata, West Bengal - 700032 (IND)
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- **Professor (Dr.) Nawin Kumar Agrawal**
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Academic Advisor, Bihar State Higher Education Council, Education Department, Bihar Government
Director, IQAC and PIO & PRO, L.N. Mithila University, Darbhanga.
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