

GUWAHATI COLLEGE

FACULTY PROFILE



01.NAME : Dr. Manoj Kumar Sarma
02.QUALIFICATION : M.Phil, Ph. D.
03.DESIGNATION :Assistant Professor
04.DEPARTMENT :Mathematics
05.SPECIALIZATION :Applied Mathematics
06.EMAIL ID :mksgy3009@gmail.com
07.PHONE NO :9864025453
08.WHATSAPP NO :8638518263
09.DATE OF BIRTH :30/09/1973
10. DATE OF JOINING : 01/08/2003

11. ACADEMIC RECORD

DEGREE	INSTITUTION	YEAR OF AWARD
B.A./B.SC./B.COM.	Gauhati University, Guwahati	1995
M.A./M.SC./M.COM.	Gauhati University, Guwahati	1998
M.PHIL	Madurai Kamaraj University, Madurai	2008
PhD	Assam downtown University	2022

12. TEACHING EXPERIENCE :17 Years

13. SUBJECT / TOPIC TAUGHT :Mathematics (Calculus, Differential Equation, Optimization theory, Number Theory)

14. RESEARCH ACTIVITIES :1. One year and six month at IASST (April 1999 to September 2000). During this period one research paper published in Physics of Plasmas.
2. Presently completed PhD in Fluid Mechanics under Dr. S. Sinha, Deptt. of Mathematics, Assam Down Town University.

15. RESEARCH PAPER PUBLICATIONS:

- i. Das G.C, Sarma Manoj Kr.: Evolution of ion-acoustic solitary waves in an inhomogeneous discharge plasma 7, 3964 (2000) Oct 2000, *Physics Of Plasmas*, 1070-664X (print) 1089-7674 (web). <https://doi.org/10.1063/1.1286987>
- ii. Sujan Sinha, Manoj Kr. Sarma: Effect of radiation on an oscillatory MHD mixed convective mass transfer flow past an infinite vertical porous plate with variable suction : Page No. 215-225 Vol. VIII Part II, *AJANTA* ,ISSN 2277-5730. (UGC approved Journal)
- iii. Sujan Sinha, Manoj Kr. Sarma: Effect of radiation and Hall current on an transient heat and mass transfer flow in presence of rotation: Page No. 2501-2504 Vol. 9 Issue-1, *International Journal of Innovative Technology and Exploring Engineering* ,ISSN 2278-3075. (UGC Care & Scopus Indexed Journal)
[DOI: 10.35940/ijitee.A4674.119119](https://doi.org/10.35940/ijitee.A4674.119119)
- iv. Sujan Sinha, Manoj Kr. Sarma: Chemical impact on heat and mass transfer flow in presence of radiation and rotation with variable temperature and concentration: Page No. 1966-1970 Vol. 8 Issue-4, *International Journal of Recent Technology and Engineering*, ISSN 2277-3878. (Scopus Indexed Journal)
[DOI:10.35940/ijrte.C6717.118419](https://doi.org/10.35940/ijrte.C6717.118419)
- v.. Sujan Sinha, Manoj Kr. Sarma: Effect of Stretching Parameter in a Non-linear MHD Flow Close to Stagnation Point, Published in Journal of Mathematical and Computational Science. ISSN 1927-5307, vol.10, No 6, pp 2249-2260. (UGC Care & Scopus Indexed Journal)
<https://doi.org/10.28919/jmcs/4859>
- vi. Sujan Sinha, Manoj Kr. Sarma, Bandita Das: Homotopy Perturbation Method for MHD Boundary Layer Flow over a Moving Vertical Plate in Presence of Heat and Mass Transfer. (Accepted for possible publication in “*South East Asian Journal of Mathematics and Mathematical Sciences (SEAJMMS)*”, published by the Ramanujan Society of Mathematics and Mathematical Sciences. **ISSN 0972-7752**)
<http://rsmams.org/journals/articleinfo.php?articleid=500&tag=seajmams>
- vii. Manoj Kr. Sarma, Sujan Sinha: Homotopy Perturbation Analysis in an energy transit problem closed to a Stretching Surface. Page No. 289-295 Vol. 12 Issue-6, (2021), *Turkish Journal of Computer and Mathematics Education* ,ISSN 1309-4653. (Scopus Indexed Journal)
<https://doi.org/10.17762/turcomat.v12i6.1368>

viii. **Maushumi Mahanta**, Sujan Sinha, Manoj Kr. Sarma: ‘Homotopy perturbation method over a non-linear stretching sheet on the Solution of mhd flow problem’ Vol. 6 No. 3(December, 2021) ISSN: 0974-5823 Page No. 3762-3765 *International Journal of Mechanical Engineering*. (Scopus Indexed Journal) https://kalaharijournals.com/resources/DEC_558.pdf

ix. Kumud Borgohain, Sujan Sinha And Manoj Kumar Sarma:

Analysis Of Stretching And Magnetic Parameter In A Non-Linear MHD Flow Close To A Stagnation Point *Published in ‘Stochastic Modeling & Applications’ Vol. 26 No. 3 (January - June, Special Issue 2022 Part - 2) Page No. 1237 – 1243 ISSN: 0972-3641.*

x. *Pulak Sabhapandit , Kuljit Pathak and Manoj Kumar Sarma*

ON CLOSED FILTERS IN CI-ALGEBRAS

Published in ‘Jnanabha’ Vol. 52(2), December (2022) Page No. 224-227 ISSN: 0304-9892 (Print), 2455-7463 (Online),
<http://www.vijnanaparishadofindia.org/jnanabha>

DOI: <https://doi.org/10.58250/jnanabha.2022.52226>

16. BOOKS PUBLISHED:

1. Refresher Course in Mathematics, class IX, Publisher-Book land (Assam), 2004.
2. New Trends in Advanced Mathematics, class IX, Publisher-Book land (Assam), 2005.
3. A Complete Handbook of AIEEE Mathematics, Publisher-Absolute (Assam), 2008.
4. Complete Mathematics, Kalyani Publishers, Class 12, 2015, ISBN 978-93-2724182-2.
5. A guide book for Assam Engineering Entrance Examination (CEE), by ABD, 2015-16
5. Environment: Emerging Problems & Management page : 189-195, *Bio-resources of North East India, HRDC, Gauhati University* ISBN 978-93-88593-27-4.
6. Text book by SCERT Class VI, VII, VIII, by SCERT, Assam (Text book development group)
7. New Complete Mathematics, Assam Book Hive, ISBN 978-93-80247-45-8, Year of publication 2020.
7. Articles ‘Effect of Radiation on Convective Mass Transfer Flow Past An Infinite Vertical Porous Plate’
Paper Published in **CREDENCE (Volume-III : Part-I) : Research Papers & Articles- A Collection of Research Papers.** ISBN : 978-81-956183-0-9. March 2022. Published By : Kaziranga Printing House, Chandmari, Guwahati, Assam.
8. A Handbook on Quantitative Aptitude, Published by IQAC Guwahati College, June 2022. ISBN: 978-81-956183-4-7

17. SEMINARS/ CONFERENCES/ PRESENTED:

1. "Oscillatory Soliton Propagation in Plasmas" [Published in Plasma' 99 Conference, Amritsar, Pg. 122]
2. "Dynamics of Dust Charged Grains in a Sheath formed in Astrophysical Plasmas"[Published in Plasma '99 Conference, Amritsar, Pg. 173]

3. *'Homotopy Perturbation Method for MHD Boundary Layer Flow Over a Moving Vertical Plate In Presence of Heat and Mass Transfer'*

International Conference on Recent Advances in Engineering & Science (ICRAES 2020) Date: 11-12 January 2020. Faculty of Engineering & Technology Aligarh Muslim University, Aligarh 2020 U.P India. (Also received Best presentation award in ICRAES 2020)

4. *"Homotopy Perturbation Method for MHD Boundary Layer Flow Over a Moving Vertical Plate In Presence of Heat and Mass Transfer"*

National Conference on Emerging Trends in Science and Technology (NCETST-20) Organised by Assam down town University, 6th & 7th March, 2020. (Certificate Enclosed)

5. *'Effect of chemical reaction on heat and mass transfer flow in presence of radiation and rotation with variable temperature and concentration'*

International Conference of Mathematical Modelling in Applied Sciences (ICMMAS 2020) (28-30 June, 2020) by Dibrugarh University.

6. *'Effect of Radiation and Hall Current on an MHD Transient Heat and Mass Transfer Flow in Presence of Rotation'*

3rd International Conference on Mathematical Modelling, Applied Analysis And Computation (ICMMAAC-2020) AUG 07-09, 2020, Department of Mathematics (Faculty of Science) JECRC University, Jaipur (Raj).

7. *'Homotopy Perturbation Analysis in an energy transit problem closed to a Stretching Surface'*

4th International Conference on Mathematical Modelling, Applied Analysis And Computation (ICMMAAC-2021) AUG 05-07, 2021, Department of Mathematics (Faculty of Science) JECRC University, Jaipur (Raj).

19. COURSE COMPLETED:

1. “A Course on Infinite Permutation Groups” at IIT Guwahati from 6th August to 19th September 1996.
2. FDP on E-Content Development with GAD TLC MHRD, 27 July to 2nd August 2020
3. Electronic FDP on ‘Research Methodology-Resilience for good Research’ organized by faculty of science, Assam down town University, 22-28 July 2020,.
4. One month course on Programming in Mathematica From 20th August 2020 Conducted by Udmey.
5. FDP on E-Content Development with GAD TLC MHRD, 27 July to 2nd August 2020
6. Electronic FDP on ‘Research Methodology-Resilience for good Research’ organized by faculty of science, Assam down town University, 22-28 July 2020,.
7. Two-week Refresher Course in ‘MATHEMATICAL SCIENCES’ from 14-18 June, 2021 Conducted by Ramanujan College, University of Delhi, under MOE P MMMNMTT and received A⁺ Grade
8. Short Term Course on ‘How to Develop e-Content for Online Teaching’ From 6 November 2021 to 12 November 2021 Organized by UGC HRDC Aligarh Muslim University, Aligarh.
9. 7 days FDP on ‘Statistical Methods in Biological Sciences’ From 29th June to 5th July, 2021 Organized by Assam down town University.
10. UGC Sponsored One-week Short Term Course in ‘Computational Techniques & Research Methodology’ from 7-12 March, 2022 Conducted by UGC HRDC Jawarhalal Nehru University(JNU)
11. Workshop on ‘NEP2020: Changing Roll of Teachers’ on the occasion of ‘Shikshak Perv(5-9 September 2022) Conducted by UGC HRDC Jawarhalal Nehru University(JNU)
12. Completed a Innovation Ambassador (IA) training’ Foundation Level (15 sessions 30 hours) Conducted by Ministry of Education (MoE), Govt. of India, innovation Cell & AICTE. Date of issue of certificate 30/09/2022.

19. Invited Talk/ Chairperson/ Judge / Resource Person in various Institute/ Organization

1. Invited as a Subject Expert to Develop E-Text book by Board of Secondary Education, Assam. Dated 16th March 2020, 17 June 2020, 28 September 2020.
2. Invitational seminar lecture delivered in the Deptt. of Mathematics (GU) on “NONLINEAR WAVES IN PLASMA” in 2020
3. Development of E-Content at SCERT 4th May 2020 to 26th May 2020 which has been published in DIKSHA Portal Govt. of India.
4. Invited as resource person for Teachers Training Programme conducted by RMSA, SCERT, Novodaya Training Institute etc.
5. Invited to Record Classes as a part of Digital Learning Initiative. Dated 14 July 2021, at SCERT, Govt. of Assam.
6. Development of E-Content at SCERT by Team DIKSHA on 10 & 11 July 2021 which has been published in DIKSHA Portal Govt. of India.
7. Invited as resource person for preparation of Position Paper on Mathematics Education & Computational Thinking for the development of state Curriculum Framework as per NEP-2022 at SCERT Assam on 1st and 2nd April 2022
8. Invited as Judge for State Level Science, Mathematics and Environment Exhibition, 2022 on 10-11 May 2022 at SCERT Assam.
9. Invited as Judge to select Model for Jawaharlal Nehru National Science, Mathematics and Environment Exhibition-2022 on 23-24 August 2022 to be organized by Government of Assam in collaboration with NCERT, New Delhi.
10. Named as Chairperson of the portal of National Curriculum Framework in the Focus Group Area ‘Mathematics Education & Computational Thinking’ by SCERT, Assam Notified on 29 April 2022.
11. Appointed as a Resource person for State Level Orientation Programme for Development of Master Trainer for District level Programme. Conducted by AHSEC, Bamunimaidam, on 19 and 20 July 2022.
12. Invited as a resource person for a Workshop on ‘Item Development in the line of New Education Policy 2020 in collaboration with Azim Premji University, Bangalore’, from 2^{8th} November 2022 to 1st December, 2022. The workshop was conducted by Board of Secondary Education, Assam.
13. Deputed as Resource person in ‘3 day Residential Training Programme for Graduate Teacher of Adarsha Vidyalaya of Assam’ organized at Assam Administrative Staff College, Khanapara w.e.f. 20th to 22nd December, 2022.

20. MEMBERSHIP:

1. **Annual member of "Ramanujan Society of Mathematics and Mathematical Sciences (RSMAMS)"**, (from the Date 30 December i.e. from the date of publication of the paper in Ramanujan Mathematical Society)
2. Life Member of Assam Academy of Mathematics
3. Annual Member Vijnan Parishad of India

21. SEMINAR ATTENDED:

- i. International webinar on “ Nanomaterials and Robotics” conducted by IQAC, Department of Physics Electronics, Raja Lakhamagouda Science Institute, Belagavi, on June 16th, 2020.
- ii. Webinar on “ Yoga-The backbone of physical and mental peace” Organised by IQAC, Sankardeva Mahavidyalaya, Pathalipahar, on 21st June, 2020.
- iii. Webinar on “ Awareness Programme on use of Online E-resources” conducted by ICT Cell, Mazbat College, on 1st July, 2020.
- iv. Webinar on “ Awareness Programme for accessing online digital learning resources” conducted by IQAC, Guwahati College, on 16th June, 2020.
- v. Webinar on “ Revival of Buddhism in India” conducted by Central Institute of Buddhist Studies (Deemed to be University), Ladakh (U.T.), on 13th June, 2020.
- vi. Webinar on “ Numerical and Scientific Computing” conducted by Department of Mathematics, Manipal University, Jaipur on 1st July, 2020.
- vii. Webinar on “ Electronic resources and E-learning tools” conducted by Saint Claret College, Arunachal Pradesh, on 29th June, 2020.
- viii. Webinar on “ Basics of Graph Theory and Number Theory” conducted by IQAC, Guwahati College, on 30th June, 2020.
- ix. Webinar on “ The Congruent Number Problem and Elliptic Curves” by Prof. Anupam Saikia, IIT-G, conducted by IQAC, Lakhimpur Girls’ College and Gonit Sora, on 12th July, 2020.
- x. Webinar on “ Mathematics Education” conducted by Centre for Mathematical Education and Management, Faculty of Science, Assam down town University held on 10th July, 2020.
- xi. International Webinar ‘Population, pandemicGlobal perspectives’ Conducted by IQAC Cotton University, held on 30th and 31st July, 2020.

- x. Two days National Webinar on Recent Trends in Mathematics conducted by Department of Mathematics, Cotton University on 18 and 19th August 2021.
- xi. Two days International Webinar on Mathematics: Needs & its Scope in Sciences conducted by Department of Mathematics and IQAC, Patharkandi College on 18 and 19th September 2021.

22. COMPUTER KNOWLEDGE: One year course at Harvard Micro Computer [MS-OFFICE, LINUX, FORTRAN, C++ & INTERNET in 1999. One Year working experience at PPD. Knowledge of Mathematical package like LATEX, VTEX, and MATHEMATICA.

23. ANY OTHERS:

1. Many topics published in “Ganit Bikash” from Assam Academy of Mathematics in 1999-2000.
2. Conducted Quiz competition in Maths, Model & Chart Competition as an active member of ABACUS, a mathematical association.
3. Popular Lecture delivered in AXOM JATIYA VIDYALAYA [High School] in February 8th, 2003.
4. Lectures delivered in many in-service training programme conducted by NEC at DBI, Kharghuli, Maharishi Vidya Mandir, Silpukhuri etc.

24. INSTITUTE VISITED: Indian Institute of Science (Bangalore); Indian Institute of Astrophysics (Bangalore) for collaborative research work with Dr. C. Uberoi (IISc) & Dr. P.K. Das (IIA) and for literature survey at IISc.

25. PROFESSIONAL TEACHING EXPERIENCE:

5 years’ experience as Faculty [Part Time] of the Guwahati Centre of Cancer Launcher [New Delhi].