Dr. Chinmay Das

Born on January 2nd, 1991

Lego, Kotulpur, Bankura, West Bengal, Pin-722141, India

+91 8016379664

chinmaydas.mtmh@gmail.com

0000-0003-4746-6142

Scientific interests

- Plasma physics
- Magneto hydrodynamics
- Nonlinear dynamics
- Simulations

Academic History

Ph. D. Jadavpur University

Kolkata, 700032, India

Year: 2022

B. Ed. (Bachelor of Education)

College: Katwa College

University: The University of Burdwan

Year of passing: 2015

M.Sc. in Mathematics (applied)

University: The University of Burdwan

Year of passing: 2013

B.Sc. in Mathematics (Honours)

College: Aghorekamini Prakashchandra Mahavidyalaya

University: The University of Burdwan

Year of passing: 2011

H.S. (10+2 standard)

Institution: Lego R. B. R. K. High School

Board: W.B.C.H.S.E

Year of passing: 2008

S.E. (10 standard)

Institution: Lego R. B. R. K. High School

Board: W.B.B.S.E.

Year of passing: 2006

Employment

[1] **Position:** Assistant Professor (W.B.E.S.)

Department: Mathematics

Institution: Kabi Jagadram Roy Government General Degree College

Mejia, Bankura, West Bengal, 722143, India

Period: 25^{th} February 2022 – till to date.

[2] **Position:** Assistant Professor (W.B.E.S.)

Department: Mathematics

Institution: Government General Degree College at Kushmandi,

Kushmandi, Mohagram, P.O. : Kalikamora, Dakshin Dinajpur, West Bengal, 733121, India

Period: 1^{st} February 2016 – 24^{th} February 2022

Publications

[1] Chandra, S., Goswami, J., Sarkar, J. and Das, C., "Analytical and simulation studies of forced kdv solitary structures in a two-component plasma." *Journal of the Korean Physical Society*, **(2020)**, 76(6), pp.469-478. doi: 10.3938/jkps.76.469

[2] Das, C., Chandra, S., and Ghosh, B. "Amplitude modulation and soliton formation of an intense laser beam interacting with dense quantum plasma: Symbolic simulation analysis." *Contributions to Plasma Physics*, **(2020)**, 60(8), e202000028. doi: 10.1002/ctpp.202000028

[3] Das, C., Chandra, S. and Ghosh, B., "Nonlinear interaction of intense laser beam with dense plasma." *Plasma Physics and Controlled Fusion*, **(2020)**, 63(1), p.015011. doi: 10.1088/1361-6587/abc732

[4] Chandra, S., Das, C. and Sarkar, J., "Evolution of nonlinear stationary formations in a quantum plasma at finite temperature." *Zeitschrift für Naturforschung A*, **(2021)**, 76(4), pp.329-347. doi: 10.1515/zna-2020-0328

[5] Das, C., Chandra, S. and Ghosh, B., "Effects of exchange symmetry and quantum diffraction on amplitude-modulated electrostatic waves in quantum magnetoplasma." *Pramana*, **(2021)**, 95(2), pp.1-16. doi: 10.1007/s12043-021-02108-x

[6] Chandra, S., Sarkar, J., Das, C. and Ghosh, B., "Self-interacting stationary formations in plasmas under externally controlled fields." *Plasma Physics Reports*, **(2021)**, 47(3), pp.306-317. doi: 10.1134/S1063780X21030041

[7] Sarkar, J., Chandra, S., Goswami, J., Das, C. and Ghosh, B., "Growth of RT instability at the accreting magnetospheric boundary of neutron stars." *AIP Conference Proceedings*, **(2021)**, 2319(1) p. 030006. doi: 10.1063/5.0037017

[8] Ghosh, A., Goswami, J., Chandra, S., Das, C., Arya, Y. and Chhibber, H., "Resonant interactions and chaotic excitation in nonlinear surface waves in dense plasma." *IEEE Transactions on Plasma Science*, **(2021)**, 50(6), pp. 1524 - 1535, doi: 10.1109/TPS.2021.3109297

[9] Thakur,S., Das, C. and Chandra, S., "Stationary Structures in a Four Component Dense Magnetoplasma with Lateral Perturbations." *IEEE Transactions on Plasma Science*, **(2021)**, 50(6), pp. 1545-1556, doi: 10.1109/TPS.2021.3133082

[10] Sahoo, H., Das, C., Chandra, S., Ghosh, B., and Mondal, K.K., "Quantum and Relativistic Effects on the KdV and Envelope Solitons in Ion-Plasma Waves." *IEEE Transactions on Plasma Science*, **(2021)**, 50(6), pp. 1610-1623, doi: 10.1109/TPS.2021.3120077

[11] Goswami, J., Chandra, S., Das, C. and Sarkar, J., "Nonlinear Wave-Wave Interaction in Semiconductor Junction Diode." *IEEE Transactions on Plasma Science*, **(2021)**, 50(6), pp. 1508-1517, doi: 10.1109/TPS.2021.3124454

[12] Dey, A., Chandra, S., Das, C., Mandal, S., and Das, T., "Rogue Wave Generation Through Nonlinear Self-Interaction of Electrostatic Waves in Dense Plasma." *IEEE Transactions on Plasma Science*, **(2022)**, 50(6), pp. 1557-1564, doi: 10.1109/TPS.2022.3143001

[13] Sarkar, S., Sett, A., Pramanick, S., Ghosh, T., Das, C. and Chandra, S., "Homotopy Study of Spherical Ion-Acoustic Waves in Relativistic Degenerate Galactic Plasma." *IEEE Transactions on Plasma Science*, **(2022)**, 50(6), pp. 1477-1487, doi: 10.1109/TPS.2022.3146441

[14] Sarkar, J., Chandra, S., Dey, A., Das, C., Marick, A. and Chatterjee, P., "Forced KdV and Envelope Soliton in Magnetoplasma With Kappa Distributed Ions." *IEEE Transactions on Plasma Science*, **(2022)**, 50(6), pp. 1565-1578, doi: 10.1109/TPS.2022.3140318

[15] Chandra, S., Goswami, J., Sarkar, J., Das, C., Nandi, D., and Ghosh, B., "Formation of electron acoustic shock wave in inner magnetospheric plasma." *Indian Journal of Physics*, **(2022)**, 96, pp. 3413â3427, doi: 10.1007/s12648-021-02276-x

[16] Ghosh, M. K., Chandraker, S. K., Sikdar, S., Das, C., and Ghorai, T. K., "Molecular recognition, characterization and biological importance of tetrabutylammonium hexanitrate cerium (III) complex." *Chemical Papers*, **(2022)**, 76, pp. 3259â3273, doi: 10.1007/s11696-022-02091-6

[17] Das, C., Chandra, S., Kapoor, S., Chatterjee, P., "Semi–Lagrangian Method to Study Nonlinear Electrostatic Waves in Quantum Plasma." *IEEE Transactions on Plasma Science*, **(2022)**, 50(6), pp. 1579-1584, doi: 10.1109/TPS.2022.3158965

[18] Shilpi, Sharry, Das, C., and Chandra, S., "Study of Quantum-Electron Acoustic Solitary Structures in Fermi Plasma with Two Temperature Electrons.", **(2022)**, *In: Banerjee, S., Saha, A. (eds) Nonlinear Dynamics and Applications. Springer Proceedings in Complexity. Springer, Cham.*, pp. 63-83, doi: 10.1007/978-3-030-99792-2_6

[19] Chandra, S., Banerjee, R., Sarkar, J., Zaman, S., Das, C., Samanta, S., DEEBA, F., and Dasgupta, B., "Multistability studies on electron acoustic wave in a magnetized plasma with supra-thermal ions." *Journal of Astrophysics and Astronomy* , **(2022)**, 43(2), pp. 1-17, doi: 10.1007/s12036-022-09835-6

[20] Chandra, S., Kapoor, S.,Nandi, D., Das, C. and Bhattacharjee, D.,, "Bifurcation Analysis of EAWs in Degenerate Astrophysical Plasma: Chaos and Multistability." *IEEE Transactions on Plasma Science*, **(2022)**, 50(6), pp. 1495-1507, doi: 10.1109/TPS.2022.3166694

[21] Chandra, S., Das, C., Sarkar, J and Chaudhuri, C., "Degeneracy affected stability in ionospheric plasma waves." *Pramana*, **(2024)**, 98(1), pp. 0973-7111, doi: 10.1007/s12043-023-02687-x

[22] Das, C., Chandra, S., Saha, A.,Nandi, D., and Chatterjee, P.,, "Field Modulations of Ion Acoustic Waves in Plasma With VasyliunasâSchamel Distributed Electrons." *IEEE Transactions on Plasma Science*, **(2024)**,pp. 1-9, doi: 10.1109/TPS.2024.3388319

[23] Chandra, S., Das, C., Batani, D., Aliverdiev, Abutrab A., Myrzakulov, R., Majumdar, A., Mallick, S., Ghosal, R., Panda, B., and Sen, A., "Evolutionary Stages of Envelope Soliton During LaserâPlasma Interaction." *IEEE Transactions on Plasma Science*, **(2024)**, pp. 1-10, doi: 10.1109/TPS.2024.3388317

[24] Mandi, L., Ghosh, U. N., Chandra, S., Das, C., and Chatterjee, P., "Damping Effects on the Spectrum of Solitary Structures in Cylindrical and Spherical Geometry." *IEEE Transactions on Plasma Science*, **(2024)**, pp. 1-10, doi: 10.1109/TPS.2024.3438559

[25] Chandra, S., Mahanta, D., Batani, D., Aliverdiev, A.A., Das, C., Paul, S., "Nonlinear Evolutionary Stages of a Dispersive Kappa Distributed Magnetized Plasma." *Proceedings of the 2nd International Conference on Nonlinear Dynamics and Applications (ICNDA 2024),* **Springer Nature Switzerland**, **(2024) (1)**, pp. 318-334, doi: 10.1007/978-3-031-66874-$6_2$6

[26] Chandra, S., Kapoor, S., Chaudhuri, C., Pooja, Arief Abdaly, S., Das, C., Maji, P. S., Paul, A., Bulchandani, K., Kaur, B., et al., "Interaction and Decomposition of Magnetoacoustic Stationary Structures in Magnetospheric Plasma" Transactions on Plasma Science, **(2025), 53(1),** , pp. 184-198, doi: 10.1109/TPS.2024.3486988

Conferences

[1] **International Conference on Plasma Science and Application (ICPSA 2019)**

Role: Poster presentation

Title: Homotopy Perturbative Analysis for Modulational Instability of Electrostatic Waves in Weakly Relativistic Plasma

[2] 14^{th} **Asia-Pcific Physics conference 2019 (APPC14)**

Role: Poster presentation

Title: Computational Fluid Dynamic Modeling Of Plasma Gasification Of Municipal Solid Waste

Reviewer of the Journals

- Physica scripta
- Plasma physics and controlled fusion
- Journal of optics

Membership

- **Editorial Board Member:** Edwin Group of Journals

Awards

- **Young Achiever Award:** INSO AWARDS

  International Research Awards On Science, Technology and Management, Dec-2022

Computational Skills

Operating System: Linux, Windows

Programming Languages: FORTRAN, C, Matlab,HTML, VB.Net, python

Software Packages: Maple, MATLAB, LaTeX.

Languages

Bengali ●●●●

Hindi ●●●○

English ●●●○

Personal Details

Father's name: *Madan Das*

Mother's name: *Ararti Das*

Marital status: *Single*

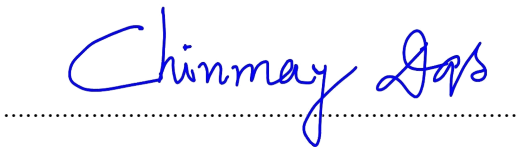
Gender: *Male*

Religion: *Hinduism*

Nationality: *Indian*

☑ Every information given here is true according to the best of my knowledge.

With regards



Place: Lego, Kotulpur

Date: 24/03/2025