

Faculty Profile Format

1. Personal Details:

- a. Name of the Faculty: ANINDYA GHOSE CHOUDHURY
- b. Academic Degrees: Ph. D
- c. Department: PHYSICS
- d. Designation: Professor
- e. Email id: aghosechoudhury@gmail.com
- f. Courses Taught: Classical Mechanics, Mathematical Methods, Electrodynamics, Nuclear Physics
- g. Area of Research Interests: Nonlinear systems, Nonlinear ordinary and PDEs
- h. Teaching Experience [substantive post only]: 26years
- i. Administrative Experience:



2. Research Publications [Last 5 Years]:

Serial No.	Title of the Research Paper	Level [international / national/state]	ISBN/ISSN	Name of the Publishing Agency	Year of Publication
1	Isochronicity conditions and Lagrangian Formulations of the Hirota type Oscillator Equations	Qualitative Theory of Dynamical Systems (International)	1575-5460	Springer/Birkhauser	2022
2	Solitary wave characteristics in nonlinear dispersive media: a conformable fractional derivative approach	Nonlinear Dynamics (International)	0924-090X	Springer	2022
3	Lax representation and quadratic rational first integral for second-order differential equations with cubic nonlinearity	Communications in Nonlinear Science and Numerical Simulation. (International)	1007-5704	Elsevier	2022
4	Some exact wave solutions of nonlinear partial differential equations by means of comparison with certain standard ordinary differential equations	Mathematical Methods in the Applied Sciences. (International)	1099-1476	Wiley	2022
5	Pressure wave characteristics in a bubble-liquid mixture via Kudryashov-Sinelshchikov equation	Waves in Random and Complex Media. (International)	1745-5030	Taylor and Francis	2021
6	Solitary wave solutions of nonlinear PDEs using Kudryashov's R function method	Journal of Modern Optics. (International)	0950-0340	Taylor and Francis	2021

7	Solitary waves solutions for the KdV-type equations in plasma: a new approach with the Kudryashov function	Eur.Phys.J.Plus. (International)	2190-5444	Springer	2021
8	Variable coefficient higher-order nonlinear Schrodinger type equations and their solutions.	Optik (International)	0030-4026	Elsevier	2021
9	Solutions of the variable coefficient Radhakrishnan-Kundu-Lakshmanan equation using the method of similarity reduction	Optik (International)	0030-4026	Elsevier	2021
10	On the solution of the generalized Radhakrishnan-Kundu-Lakshmanan equation	Optik (International)	0030-4026	Elsevier	2021
11	On the solution of certain higher-order local and nonlocal nonlinear equations in optical fibers using Kudryashov's approach.	Optik (International)	0030-4026	Elsevier	2020
12	Application of the Kudryashov function for finding solitary wave solutions of a class of NLS type equations.	Optik (International)	0030-4026	Elsevier	2020
13	On coupled delayed Van der Pol-Duffing Oscillators	J. Applied. Nonlinear Dynamics. (International)	2164-6457	L&H Scientific Publishing	2020
14	Lax pairs and First Integrals for Autonomous and Non-Autonomous Differential Equations Belonging to the Painleve-Gambier List	Russian Journal of Nonlinear Dynamics (International)	2658-5324	Institute of Computer Science	2020
15	A note on generalization of the Ermakov-Lewis invariant and its demystification	Modern Physics Letters A (International)	0217-7323	World Scientific	2019
16	Nonlocal transformations of the generalized Lienard type equations and dissipative Ermakov-Milne-Pinney systems	Int. J Geom. Methods in Mod. Phys. (International)	02198878	World Scientific	2019
17	Hamiltonian description of nonlinear curl forces from cofactor systems	Acta Mechanica (International)	16196937	Springer	2019
18	Generalized conformal Hamiltonian dynamics and the pattern formation equations	Journal of Geometry and Physics (International)	3930440	Elsevier	2018

19	On purely nonlinear oscillators generalizing an isotonic potential	International Journal of Non-Linear Mechanics (International)	20746 2	Elsevier	2018
20	Backlund transformation and quasi-integrable deformation of mixed Fermi-Pasta-Ulam and Frenkel-Kontorova models.	Discontinuity, Nonlinearity and Complexity, (International)	2164- 6376	L&H Scientific Publishing	2018
21	Jacobi-Maupertuis metric of Lienard type equations and Jacobi last multiplier	<i>Electronic. J. Differential Equations</i> , Vol. 2018 (2018), No. 120, pp. 1-9 (International)	1072- 6691	University of Texas	2018

2. Research papers presented in conferences/seminars [Last 5 years]: NIL

Serial No	Title of the Paper Presented	Title of the seminar/conference	Level [international/national/state]	Name of the organiser	Date

4. Research Projects: NIL

Serial No.	Title of the Research Project(s)	Funding Agency	Date of Award	Duration of the Project	Research Grants Amount	Status of the Project

5. E-learning material, if any:

Course Details	Name of the Institution	Date/year of uploading	Quadrant I, II, III, IV	Link

6. Research Supervision (Ph.D./M.Phil.)

Serial No.	Name of the student	Research Topic	Name of the institution	Date of Registration	Year of Award of the Degree
1	Jayita Dan	Nonlinear Partial Differential Equations: Characterization of their Solutions and possible applications in Fiber Optics	DHWU	22.10.2019	Ongoing
2	Shreya Mitra	Nonlinear dynamics	DHWU	9.12.2022	

7. Programmes Conducted / Organised as Convenor / Organising Secretary at DHWU [Last Five Years]

Serial No.	Date	Name of the Programme	Sponsored By	
1	31.01.2020 & 01.02.2020	Workshop on "Astrophysics and Astronomy for Women in India" in collaboration with ICARD, North Bengal University	IUCAA, Pune	

8. Other Relevant Information, if any:

Serial No.	Achievements / Awards	Assignment Details [Membership of Professional Bodies/Editorial Board/BOS/BORS etc.]
	NIL	Member of BOS & BORS (DHWU)

Date: 06.04.2023