


Personal Profile		
Name	Dr. NARESH CHANDRA PATI	
Address with email	Office Address: <i>Department of Mathematics, Bidhan Chandra College, Asansol-713304, Paschim Burdwan, West Bengal, India</i> Email: naresh@bccollegeasansol.ac.in ncpati.math@gmail.com	
Date of Joining	15/12/2023	
Teaching Experience	1 year 4 months	
Topics Taught	PDE, Boolean Algebra, Numerical Analysis, C programming (Lab), Linear Algebra, Real Analysis, LaTeX and SciLab.	
Research Experience	10 years	
Research Area	<ul style="list-style-type: none">❖ Nonlinear Dynamics, Bifurcations, Chaos, and Organized Structures❖ Multistability in dissipative dynamical systems❖ Thermo-fluid convection❖ Mathematical Biology: Modeling and Simulation❖ Delay Differential Equations❖ Discrete dynamical models	
Award and Recognition	1) Received Best Paper Presentation Award and Prize in the International Conference on “Mathematical Analysis and Applications” & 50 th Annual Conference (Golden Jubilee) of the Odisha Mathematical Society, held in Institute of Mathematics and Applications (IMA), Bhubaneswar, Odisha during January 21-22,	

	<p>2023.</p> <ol style="list-style-type: none"> 2) Selected for Inspire Research Fellowship, Govt. of India in 2014 (not availed) 3) Qualified GATE 2014. 4) Qualified CSIR NET 2013 (Dec). 5) Received University Gold Medals for First in First Class in M.Sc. Mathematics Exam., 2013, The University of Burdwan. 6) Received Sitaram Jindal Scholarship (2011-2013) by the Sitaram Jindal Foundation, India. 7) Received Merit Cum Means scholarship by the Govt. of West Bengal.
Membership	<ol style="list-style-type: none"> 1. Life Member of Odisha Mathematical Society.
List of Publications (Research Paper)	<ol style="list-style-type: none"> 1) N. C. Pati: Spiral organization of quasi-periodic shrimp-shaped domains in a discrete predator-prey system (Accepted, Doi: 10.1063/5.0208457), Chaos: An Interdisciplinary Journal of Nonlinear Science (AIP) (2024) 2) N. C. Pati, B. Ghosh: Impacts of time delay in a bistable predator-prey system, Nonlinear Dynamics (Springer), 111: 22707 (2023). 3) N. C. Pati: Bifurcations and multistability in a physically extended Lorenz system for rotating convection, The European Physical Journal B (Springer), 96: 119 (2023) 4) N. C. Pati, B. Ghosh: Stability scenarios and period-doubling onset of chaos in a population model with delayed harvesting, Mathematical Methods in the Applied Sciences (Wiley), 46: 12930-12945 (2023) 5) N. C. Pati, B. Ghosh: Delayed carrying capacity induced subcritical and supercritical Hopf bifurcations in a predator-prey system, Mathematics and Computers in Simulation (Elsevier), 195: 171-196 (2022). 6) S Garai, N. C. Pati, N Pal, G. C. Layek: Organized periodic structures and coexistence of triple attractors in a predator-prey model with fear and refuge, Chaos, Soliton and Fractals (Elsevier) 165: 112833 (2022). 7) A da Silva, N. C. Pati, P. C. Rech: Multistability and

	<p>period-adding in a logarithmic Lorenz system, International Journal of Modern Physics C (World Scientific), 33(05): 2250062 (2022) .</p> <p>8) M Hossain, N. C. Pati, S Pal, S Rana, N Pal, G. C. Layek: Bifurcations and multistability in a food chain model with nanoparticles, Mathematics and Computers in Simulation (Elsevier), 190: 808-825 (2021).</p> <p>9) N. C. Pati, P. C. Rech, G. C. Layek: Multistability for nonlinear acoustic-gravity waves in rotating atmosphere, Chaos: An Interdisciplinary Journal of Nonlinear Science (AIP), 31:023108 (2021)</p> <p>10) N. C. Pati, S Garai, M Hossain, GC Layek, N Pal: Fear Induced Multistability in a Predator-Prey Model, International Journal of Bifurcation and Chaos (World Scientific), 31 (10), 2150150 (2021)</p> <p>11) N. C. Pati, G.C. Layek, N. Pal: Bifurcations and organized structures in a predator-prey model with hunting cooperation, Chaos, Solitons & Fractals (Elsevier), 140: 110184 (2020)</p> <p>12) N. C. Pati, P. C. Rech: Dynamics of a High-Order Generalized Lorenz Model for Magnetoconvection, International Journal of Bifurcation and Chaos (World Scientific), 30: 2050187 (2020)</p> <p>13) S Pal, M Hossain, P Pandey, N. C. Pati, N Pal, J Chattopadhyay: Cooperation delay induced chaos in an ecological system, Chaos: An Interdisciplinary Journal of Nonlinear Science (AIP), 30: 083124 (2020)</p> <p>14) G. C. Layek, N. C. Pati: Period-bubbling transition to chaos in thermo-viscoelastic fluid systems, International Journal of Bifurcation and Chaos (World Scientific), 30 (06): 2030013 (2020) .</p> <p>15) P. C. Rech, S. Dhua, N. C. Pati: Multistability and bubbling route to chaos in a deterministic model for geomagnetic field reversals, International Journal of Bifurcation and Chaos (World Scientific), 29 (12): 1930034 (2019)</p> <p>16) G. C. Layek, N. C. Pati: Organized structures of two bidirectionally coupled maps, Chaos: An Interdisciplinary Journal of Nonlinear Science (AIP) 29: 093104 (2019)</p>
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	<p>17) G. C. Layek, N. C. Pati: Bifurcations and hyperchaos in magnetoconvection of non-Newtonian fluids, International Journal of Bifurcation and Chaos (World Scientific) 28 (10): 1830034 (2018)</p> <p>18) G. C. Layek, N. C. Pati: Chaotic thermal convection of couple-stress fluid layer, Nonlinear Dynamics (Springer) 91: 837-852 (2018)</p> <p>19) G. C. Layek, N. C. Pati: Bifurcations and chaos in convection taking non-Fourier heat-flux, Physics Letters A (Elsevier) 381 (41): 3568-3575 (2017).</p>
List of Publications (Book Chapter)	<p>1. N. C. Pati, G. C. Layek: Multiple Coexisting Attractors in Magnetoconvection, Accepted for publication in the Book "Advanced Analytical and Numerical Methods with their Applications to Industrial Problem". (2024)</p>
Reviewer	<p><u>@Elsevier:</u></p> <ul style="list-style-type: none"> ➤ Chaos, Solitons and Fractals ➤ Journal of the Franklin Institute ➤ International Journal of Heat and Mass Transfer ➤ Chinese Journal of Physics <p><u>@Springer:</u></p> <ul style="list-style-type: none"> ✓ Nonlinear Dynamics ✓ The European Physical Journal Plus <p><u>@De Gruyter:</u></p> <ul style="list-style-type: none"> ❖ Zeitschrift für Naturforschung A (ZNA) ❖ Open Mathematics <p><u>@AIMS:</u></p> <ul style="list-style-type: none"> • Mathematics <p><u>@World Scientific:</u></p> <ul style="list-style-type: none"> ⇒ International Journal of Bifurcation and Chaos ⇒ International Journal of Modern Physics C
Conference/Seminar	<p>1) Presented a paper at the International Conference on Frontiers in Mathematics (ICTM-2015) organized by Gauhati University, Assam.</p> <p>2) Presented a paper in the National Seminar on Recent Advances in Computational Mathematics (RACM-2016) organized by Department of Applied</p>

	<p>Mathematics, University of Calcutta, West Bengal.</p> <p>3) Presented a paper in the National Seminar on Advanced Level of Mathematical Science (ALMS-2017) organized by Raja N. L. Khan Womens' College and Chandrakona Vidyasagar Mahavidyalaya, Paschim Midnapore, West Bengal.</p> <p>4) Presented a paper at the National Conference on Futuristic Trends in Applied and Computational Mathematics (NCFTACM-2017) organized by Department of Applied Mathematics with Oceanology and Computer Programming, Vidyasagar University, Midnapore, West Bengal.</p> <p>5) International Conference on Mathematics and its Applications (ICMA-2018) organized by Department of Mathematics, The University of Burdwan, West Bengal.</p> <p>6) National Seminar on Recent Trends in Mathematical Science (RTMS-2019) organized by Department of Mathematics, The University of Burdwan.</p> <p>7) Presented a paper at the 2nd International Conference on Frontiers in Biological, Environmental, and Medical Sciences organized by The University of Burdwan, West Bengal, 2019.</p> <p>8) Attended an online Faculty Development Programme (FDP) on "Recent Trends in PDEs: Theory and Computations", organized by Department of Mathematics, NIT Andhra Pradesh during November 2-6, 2020.</p> <p>9) Participated in the International Workshop on "Fractional Derivatives: Theory and Computations with Applications (FDTCA 2021)" organized by IIT BHU during November 12-14, 2021 in online mode.</p> <p>10) Participated in the "National Symposium on Mathematics and Applications (NSMA 2021)" held on 22 December 2021 at Department of Mathematics IIT Madras.</p> <p>11) Participated in the Beginner to Advanced MATLAB workshop, jointly conducted by the MathWorks team and IEEE student Branch IIT Indore on May 5, 2022.</p>
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	<p>12) Participated in a two-day workshop on “Mathematical Ecology and Epidemiology” organized by Department of Mathematics, IIT Indore during June 17-18, 2022.</p> <p>13) Participated in International Symposium on “Recent Advances in Computational Analysis and Modelling” organized by Department of Mathematics, IIT Roorkee during June 20-24, 2022.</p> <p>14) Participated in “International Conference on Mathematical Analysis and Applications (ICOMAA-2022)” organized by Department of Mathematics, University of Kalyani, West Bengal during June 28-29, 2022.</p> <p>15) Presented a contributory talk entitled “Effects of time delay in a bistable predator-prey system” at the “International Conference on Dynamical Systems, Control Theory & their Applications (ICDSCA-2022)” organized by Department of Mathematics, IIT Roorkee during 1-3 July 2022.</p> <p>16) Presented a paper entitled "Dynamics of a predator-prey model with delay harvesting" at the International Conference on "Mathematical Modelling and Computational Intelligence" organized by the Department of Engineering Mathematics, Lakshmi Narain College of Technology and Science, Bhopal (M.P.) India in association with Rajiv Gandhi Prodyodiki Vishwavidyalaya, Bhopal (M.P.), India during 15th-16th July 2022.</p> <p>17) Presented a paper "Delayed carrying capacity induced stability scenarios in a predator-prey system" at the "5th International Conference on Mathematical Modelling, Applied Analysis and Computation-2022 (ICMMAAC-22)" organized by the Department of Mathematics, JECRC University, Jaipur (Raj.), India during 4-6 August 2022.</p> <p>18) Delivered a Technical Session in Techno-Sangbad-2022 organized by the Academic Council, IIT Indore during 22-24 August 2022.</p> <p>19) Delivered the 1st Seminar on the topic "Some</p>
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	<p>Discussions on Delay Differential Equations" organized by Department Student Seminar Committee held in the Department of Mathematics, IIT Indore on 11th February 2022.</p> <p>20) Actively participated and contributed in organizing the workshop "Hands-on Training using MATLAB" at the Bhaskaracharya Mathematics Laboratory (funded by DST-FIST), Department of Mathematics, IIT Indore on October 6, 2022.</p> <p>21) Attended the ICTP-ICTS Winter School on Quantitative Systems Biology organized by ICTP-Strada Costiera, Italy from December 05, 2022 to December 16, 2022.</p> <p>22) Presented a paper and received the best paper presentation award at the International Conference on 'Mathematical Analysis and Applications & 50th Annual Conference (Golden Jubilee) of the Odisha Mathematical Society, held in Institute of Mathematics and Applications, Bhubaneswar, Odisha during 21-22th January 2023.</p> <p>23) Participated in the online Lecture Series on "Nonlinear Dynamics and Applications" organized by Department of Mathematics, IIT Indore, India during 13-16th February 2023.</p> <p>24) Participated in and Contributed to One-day Workshop on "Enriching the Quality of Teaching-Learning Process in the Present Scenario" organized by BIT Mesra during May 4-11, 2023.</p>
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