Curriculum Vitae

Dr. Susmita Halder

Contact Information

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Teaching Interests

* Numerical Analysis
* Differential Equation
* Linear Algebra
* Abstract Algebra
* Complex Analysis
* Real Analysis

Educational Qualifications

Academic Degree	Board/University/Institute	Year	Marks (%)
Ph.D. (Mathematics)	University of Kalyani	2022	88.50
M.Sc. (Mathematics)	Narasinha Dutt College (University of Calcutta)	2014	67.90
B.Sc. (Mathematics)	Dhrubachand Halder College (University of Calcutta)	2012	46.38
Higher Secondary	Debnagar M.D. Higher Secondary School (W.B.C.H.S.E.)	2009	71.80
Secondary	Nimpith Ashram S. Vidyamandir for Girls (W.B.B.S.E.)	2007	76.25

Programming Languages

MATLAB, Mathematica, LaTeX, XPPAUT

Thesis Details

Thesis Title	:	Dynamical Complexities of a Class of Prey-predator Mathematical Model as Consequences of the Fear Effect on Prey
Thesis Supervisor	:	Prof. Samares Pal
Thesis Co-supervisor	:	Dr. Joydeb Bhattacharyya
Date of Submission	:	May 17, 2022
Date of Defense	:	September 14, 2022

Research Interest

Mathematical Modelling, Ecology, Eco-epidemiology, Evolution, Population Genetics

Work Experiences

- **Postdoctoral Research Scholar** (November 6, 2023 – Till date)
  Biodesign Center for Mechanisms of Evolution,
  Arizona State University, Tempe, USA.
  PI: Prof. Michael Lynch

Publications

Journal

3. S. Halder, J. Bhattacharyya & S. Pal : Optimal harvesting on a modified Leslie-Gower predator-prey model under fear and Allee effects on prey; Differential Equations and Dynamical Systems, Accepted (2022).
2. S. Halder, J. Bhattacharyya & S. Pal : Predator-prey interactions under fear effect and multiple foraging strategies; Discrete and Continuous Dynamical Systems - B, 27(7), 3779–3810 (2022).
1. S. Halder, J.Bhattacharyya & S. Pal : Comparative studies on a predator-prey model subjected to fear and Allee effect with type I and type II foraging; Journal of Applied Mathematics and Computing, 62(1-2), 93–118 (2020).

Book Chapter

- S. Halder, S. Pal & J. Bhattacharyya : Mathematical modelling of macroalgae borne pathogen transmission in corals; Trends in Biomathematics: Chaos and Control in Epidemics, Ecosystems and Cells, Springer 1–15 (2021).

Conferences

1. Presented a paper entitled **A modified Leslie-Gower predator-prey mathematical model with fear effect on prey** in the International E-Conference on Mathematical and Statistical Sciences: A Selcuk Meeting organized by Selcuk University, Turkey during October 20–22, 2022.
2. Presented a paper entitled **Impact of fear effect on a modified Leslie-Gower predator-prey mathematical model with multiple foraging strategies** in International conference on Mathematical Techniques in Application of Science and Technology organized by Dr. C.V. Raman University, Chhattisgarh during December 22–23, 2021.
3. Presented a paper entitled **A predator-prey system under fear and Allee effect with multiple foraging strategies** in the National Symposium on Mathematics and its Applications organized by IIT Madras on December 22, 2021.
4. Presented a paper entitled **Mathematical modelling on a predator-prey system in presence of fear and Allee effect with type I and type II functional response** in the International Conference on Mathematical Sciences and Applications organized by University of Kalyani during February 26–28, 2020.

Workshops & Schools

(i) Attended an International Workshop on Mathematical Computations Using Softwares organized by Akal University, Punjab during April 26–28, 2023.

(ii) Attended a two-day Training-cum-Workshop on Mathematical Biology organized by University of Kalyani during September 19–20, 2022.

(iii) Attended a five-day international online workshop on Advanced Numerical Techniques for Differential Equations organized by Malaviya National Institute of Technology, Jaipur during June 6–10, 2022.

(iv) Attended 2nd one week short-term course on Computational Software (MATLAB & MATHEMATICA) organized by Sardar Vallabhbhai National Institute of Technology, Surat during May 17–21, 2021.

(v) Attended a Refresher Course in Mathematics organized by Department of Mathematics, Ramanujan College in collaboration with Teaching Learning Centre, Ramanujan College during March 16–30, 2021.

(vi) Participated in one-week online Faculty Development Programme on Recent Trends in PDEs: Theory & Computations organized by National Institute of Technology Andhra Pradesh during November 2–6, 2020.

(vii) Attended a One Week Workshop on Scientific Writting organized by University of Kalyani during April 22–26, 2019.

(viii) Attended AIS Mathematical Biology held at The Institute of Mathematical Sciences, Chennai during December 3–15, 2018.

Award & Recognition

- Qualified for JRF and Lectureship in CSIR-UGC NET with all India rank 180 in June 2016.

Membership

- Biomathematical Society of India.

Academic Identities

Google Scholar Mathematical Reviews Scopus Orcid Linkedin Web of Science ResearchGate

Extra Curricular Activities

- Served as Library Assistant of Lilabati Bhawan (R.S. Women's Hall) from July 2018 to June 2019.
- Passed NCC with grade 'B' under the Ministry of Defence, Government of India in 2006.

Personal Details

Gender	:	Female
Nationality	:	Indian
Date of Birth	:	June 14, 1991
Marital Status	:	Married
Spouse's Name	:	Dr. Debasis Haldar
Languages Known	:	Bengali, English & Hindi

Academic References

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Declaration I do hereby declare that the particulars of facts and information stated above are correct to the best of my belief and knowledge.

March 11, 2024