



Techno College of Engineering Agartala

An Engineering College affiliated to Tripura University (A Central University),

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Website: www.tiaedu.org

Name of the faculty: Dr. Susmita Paul

Designation: Assistant Professor

Education: PhD

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Research Interest: Bio-Mathematics

Membership of professional bodies: Member of T&P cell

Professional Experience: 10

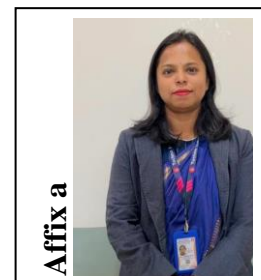
Patents:

1. “WEARABLE DISASTER EMERGENCY COMMUNICATION DEVICE” Indian Patent, March 2024, Patent Number 413045-001.
2. “NETWORK THREAT DETECTION AND PREDICTION DEVICE” Indian Patent, Patent Number 430801-001, 2024 .
3. “AI-Driven Quantum - Resistant hubfor secure communication in connected medical devices” Indian Patent, November 2024, Patent Number 2024-31083527-A .

Publications: 20

Publishes Journal/ Conference papers/ Book/ Book Chapters :

1. P.Bhattacharjee,V.Dey, U.K.Mandal, **S.Paul** (2022),“Quantitative risk assessment of submersible pump components using Interval number-based Multinomial Logistic Regression (MLR) model”, **Reliability Engineering and System Safety, SCI (IF-9.4)**,Vol. 226(C), pp.1-14.
2. **S. Paul**, D.D. Jana, S. P. Mondal, P. Bhattacharya (2017), “Optimal Harvesting of two species mutualism model with interval parameters”, **Journal of Intelligent and Fuzzy Systems, IOS IOS (IF-1.7) SCI**, Vol.33(4), pp.1991-2005.
3. **S. Paul**, S. P. Mondal, P. Bhattacharya (2016), Discussion on Proportional Harvesting Model in Fuzzy Environment: Fuzzy Differential Equation Approach, **International Journal of Applied and Computational Mathematics, Springer**, Vol. 3, pp. 3067–3090.
4. **S. Paul**, S. P. Mondal, P. Bhattacharya, K. S. Chaudhuri (2016), Some Comparison of Solutions by Different Numerical Techniques on Mathematical Biology Problem, **International Journal of Differential Equations, Hindawi Publishing Corporation(Emerging Sources Citation Index, Scopus,IF-1.4)**, Vol. 2016(1), pp.14.





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5. P. Bhattacharya, **S. Pal**, K. S. Chaudhuri (2015), "Different types of epidemic models and their Characteristic behavior by using Matlab", **Journal of Interdisciplinary Mathematics (SCOPUS Indexed, ESCI, WEB of SCIENCE, IF-1.1)**, Taylor & Francis publication, Vol. 18(5), Pp. 569-592.
6. **S. Paul**, S. P. Mondal, P. Bhattacharya (2016), "Numerical Solution of Lotka Volterra Prey Predator Model by Using Runge-Kutta-Fehlberg Method and Laplace Adomian Decomposition Method", **Alexandria Engineering Journal (Emerging Source Citation Indexed (ESCI), Thomsons Reuters, Web of Science), Elsevier Elsevier (IF-6.2) SCI**, Vol. 55(1), Pp. 613-617.
7. **S. Paul**, S. P. Mondal, P. Bhattacharya (2016), "Discussion on fuzzy quota harvesting model in fuzzy environment: fuzzy differential equation approach", **Model. Earth Syst. Environ. (SCOPUS, IF-2.7), Springer**, Vol. 2 (70), Pages.15.
8. **S. Paul**, P. Bhattacharya, K. S. Chaudhuri (2015), "Stability analysis of a two species competition model with fuzzy initial conditions: Fuzzy differential Equation Approach", **BIOMAT 2015 (ISI- Web of Science Scientific Proceedings Citation Index (ESCI)), World Scientific**, Pp. 334-344.
9. P. Bhattacharya, **S. Pal**, K. S. Chaudhuri (2014), "Analysis on Food Web Structure, Interaction, Strength, and Stability of different Mathematical models of Prey & predator", **Lecture Notes in Electrical Engineering – Springer Verlag, Germany (SCOPUS Indexed)**, Vol. 298, Pp. 207-217.
10. P. Bhattacharya, S. Pal, K. S. Chaudhuri (2015), "Mathematical Modeling of Ecological Networks, Structure and Interaction of Prey and Predator", **Palestine Journal of Mathematics**, Vol. 4(2), Pp. 335-347.
11. S. P. Mondal, **S. Paul**, A. Mahata, P. Bhattacharya, T. K. Roy (2015), "Classical Modeling of HIV Virus Infected Population in Imprecise Environments", **Turkish Journal of Fuzzy Systems**, Vol. 6(1), Pp. 017-055.
12. P. Bhattacharya, **S. Pal**, K. S. Chaudhuri (2013), "Maximum Sustainable Yield Policy in Prey-Predator System-A Study", **IJCA Proceedings on Computing Communication and Sensor Network**, CCSN, Vol. 1, Pp. 46-49.
13. P. Bhattacharya, **S. Paul**, Prantik Biswas. "Mathematical Modeling of Treatment SIR Model with respect to Variable Contact Rate", **ICMBS-2015**, Singapore (IPEDR (ISSN: 2010-4626)), pp. 25-26 Mar, 2015.
14. P. Bhattacharya, **S. Pal**, K. S. Chaudhuri, "Ecological Networks, Structure, Interaction, Strength & Stability on different Prey predator Models", **CDSA-2014**, kolkata, India, 10-12 Mar, 2014.
15. **S. Paul**, S. P. Mondal, P. Bhattacharya, "Application of Adomian Decomposition Method in Bio-mathematical problem", **MSAST – 2014**, kolkata, India, 21-23 Dec, 2014.
16. P. Bhattacharya, **S. Pal**, K. S. Chaudhuri, "Different growth models in population dynamics and its exponential regression", **ERCICA-2013 (Elsevier Science and Technology)**, 2-3 Aug, 2013.
17. P. Bhattacharya, **S. Pal** (2016), "Solution of Insect Population model by using Laplace Adomian Decomposition Method", Computational Science and Engineering, **CRC Press (Taylor & Francis)**, pp. 169-172.
18. S. Banik, **S. Paul**, S. Das, J. Chakraborty (2023), "Buckling of Re-Inforced Anisotropic Cylindrical Shell with Rings and Stringers Without Shear Load", **IJIRT**, Volume 9 (12), pp. 109- 116.
19. Dr. S. Banik, **Dr. S. Paul**, Dr. S. Das, Dr. J. Chakraborty & Dr. D. Dey, "RECENT ADVANCEMENT IN SCIENCE & ENGINEERING UNDER VARIOUS TECHNOLOGICAL ASPECT", Book Rivers, 23rd December 2023, 155 pages, ISBN-10: 935842483.



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20. Dr. P.Majumder, Dr. P.Majumder. Dr. A.Nag, Dr. S.Banik & **Dr. S.Paul**, “Comprehensive Research Methods: Framework, Techniques and Real- World Applications”, EBH Publishers, 2024, ISBN- 978-93-48106-70-4.

Achievements (if any):

Hobbies: