



Guru Ghasidas Vishwavidyalaya

(A Central University)

Centre/School: Mathematical & Computational Science

Department: Mathematics

Phone: +91 9733207160

Email: kankan.math@gmail.com

Personal Webpage: kankansarkar.wordpress.com

Name: **Dr. Kankan Sarkar**

Designation: Associate Professor

Qualifications: M.Sc., Ph.D.

Area of Interest/Specialization: Mathematical Biology and Mathematical Modeling

Experience:

- Associate Professor of Mathematics (Guru Ghasidas Vishwavidyalaya, Bilaspur) October, 2023 – till date.
- Assistant Professor of Mathematics (Malda College, Malda) February, 2015 – October, 2023.
- CSIR Senior Research Fellow (CSIR – National Institute of Oceanography, Dona Paula, Goa), 2013 – 2015.
- CSIR Junior Research Fellow (CSIR – National Institute of Oceanography, Dona Paula, Goa), 2011 – 2013.
- UGC Junior Research Fellow (School of Oceanographic Studies, Jadavpur University, Kolkata), 2010 – 2011.

Educational Details:

- Ph.D. in Mathematics, Jadavpur University, Kolkata
- M.Sc. in Mathematics, Jadavpur University, Kolkata
- B.Sc. in Mathematics (Honours), University of North Bengal, Darjeeling

Awards and Honors:

- CSIR-UGC NET, June 2010 with CSIR Fellowship
- CSIR-UGC NET, December 2009 with UGC Fellowship
- Qualified GATE 2010 in Mathematics

Best Peer Reviewed Publication:

[\(Click Here to View Latest Publications\)](#)

1. **Kankan Sarkar**, Subhas Khajanchi (2023): Spatiotemporal dynamics of a predator-prey system with fear effect, Journal of the Franklin Institute, 360(11):7380-7414. *(I.F. 4.1, Q1)*
2. **Kankan Sarkar**, Jayanta Mandal, Subhas Khajanchi (2022): How do the contaminated environment influence the transmission dynamics of COVID-19 pandemic?, Eur Phys J Spec Top, 231:3697-3716. *(I.F. 2.6, Q2)*
3. **Kankan Sarkar**, Subhas Khajanchi (2022): An eco-epidemiological model with the impact of fear, Chaos, 32:083126. *(I.F. 3.0, Q1)*

4. **Kankan Sarkar**, Subhas Khajanchi, Prakash Chandra Mali (2022): A delayed eco-epidemiological model with weak Allee effect and disease in prey, *International Journal of Bifurcation and Chaos*, 32(8):2250122. [\(I.F. 2.2, Q1\)](#)
5. Subhas Khajanchi, **Kankan Sarkar***, Sandip Banerjee (2022): Modeling the dynamics of COVID-19 pandemic with implementation of intervention strategies, *Eur. Phys. J. Plus* 137, 129. [\(I.F. 3.2, Q2\)](#)
6. Subhas Khajanchi, **Kankan Sarkar***, Jayanta Mandal, K. S. Nisar and S. F. Abdelwahab (2021): Mathematical modeling of the COVID-19 outbreak with intervention strategies, *Results in Physics*, 25:104285. [\(I.F. 5.3, Q2\)](#)
7. **Kankan Sarkar**, Subhas Khajanchi, Prakash Chandra Mali and Juan J. Nieto (2020): Rich Dynamics of a Predator-Prey System with Different Kinds of Functional Responses, *Complexity*, 2020. [\(I.F. 2.3, Q2\)](#)
8. Subhas Khajanchi and **Kankan Sarkar*** (2020): Forecasting the daily and cumulative number of cases for the COVID-19 pandemic in India, *Chaos*, 30(7):071101. [\(I.F. 3.0, Q1\)](#)
9. **Kankan Sarkar**, Subhas Khajanchi, Juan J. Nieto (2020): Modeling and forecasting the COVID-19 pandemic in India, *Chaos, Solitons & Fractals*, 139:110049. [\(I.F. 7.8, Q1\)](#)
10. **Kankan Sarkar** and Subhas Khajanchi (2020): Impact of fear effect on the growth of prey in a predator-prey interaction model, *Ecological Complexity*, 42:100826. [\(I.F. 3.5, Q2\)](#)
11. **Kankan Sarkar**, S. G. Aparna, Shrikant Dora, D. Shankar (2019): Seasonal variability of sea-surface-temperature fronts associated with large marine ecosystems in the north Indian Ocean, *J. Earth Syst. Sci.* 128: 20. [\(I.F. 2.0, Q2\)](#)
12. **Kankan Sarkar** (2018): A survey on the use of ICT in Teaching Learning Practices in College Level Mathematics; *RESEARCH REVIEW International Journal of Multidisciplinary*, 3(5), pp. 228-232.
13. **Kankan Sarkar** (2017): Statistical Analysis of Long Term Surface Temperature: A Case Study of Malda District, West Bengal, India; *International Journal of Research and Analytical Reviews*, 4(3), pp. 349-352.
14. P. Vipin, **Kankan Sarkar**, S. G. Aparna, D. Shankar, V. V. S. S. Sarma, D. G. Gracias, M. S. Krishna, G. Srikanth, R. Mandal, E. P. Rama Rao, N. Srinivasa Rao (2015): Evolution and sub-surface characteristics of a sea-surface temperature filament and front in the northeastern Arabian Sea during November-December 2012, *Journal of Marine Systems*, 150, 1-11. [\(I.F. 2.8, Q1\)](#)
15. M. Chatterjee, D. Shankar, G. K. Sen, P. Sanyal, D. Sundar, G. S. Michael, A. Chatterjee, P. Amol, D. Mukherjee, K. Suprit, A. Mukherjee, V. Vijith, S. Chatterjee, A. Basu, M. Das, S. Chakraborti, A. Kalla, S. K. Misra, S. Mukhopadhyay, G. Mandal, **Kankan Sarkar** (2013): Tidal variations in the sundarbans Estuarine System, India ; *J. Earth Syst. Sci.* 122(4), pp. 899-933. [\(I.F. 2.0, Q2\)](#)

*Corresponding author

Paper Presented in National/International Conferences:

1. **Sarkar, K.**, Khajanchi, S., Mali, P. C., Chaos in a delayed predator-prey system with weak Allee effect and disease in prey, International Conference on Applied Mathematics (ICAM-2022) organized by Department of Applied Mathematics with Oceanology and Computer Programming, Vidyasagar University, 8th & 9th June, 2022.
2. **Sarkar, K.**, Khajanchi, S., Understanding the dynamics of the COVID-19 outbreak in India: A mathematical perspective, Two-day National Webinar on Mathematical Perspective of COVID-19 Outbreak: Predictions, Precautions & Preventive Measures (MPCOPPPM-2020) organized by Department of Mathematics in association with IQAC, Sidho-Kanho-Birsha University, 11th & 12th June, 2020.
3. **Sarkar, K.**, Khajanchi, S., Stability and Bifurcation Analysis of a Predator-Prey Model with Holling Type – II Functional Response, 26th West Bengal State Science & Technology Congress, 2019 organized by Department of Science and Technology and Biotechnology, Govt. of West Bengal, 28th February & 1st March, 2019.
4. **Sarkar, K.**, Khajanchi, S., Stability and Bifurcation Analysis of a Predator-Prey Model with Holling Type – II Functional Response, 3rd Regional Science & Technology Congress – 2018, West Bengal (Northern Region) jointly organized by Jalpaiguri Govt. Engineering College and Department of Science and Technology and Biotechnology, Govt. of West Bengal, 12th-13th December, 2018.
5. **Sarkar, K.**, Shankar, D., Aparna, S. G., Sea Surface Temperature Fronts in the North Indian Ocean, National Conference on Exploring Advances in Mathematics, 16th-17th December, 2015 organized by Department of Mathematics, University of Gour Banga.

Attended Training Program/Workshop:

1. One week FDP on “Higher Education: Road Ahead Developing Next Generation Academic Leaders”, from 25th November - 1st December, 2020. Organized by Venkateswara College and Ramanujan College, Delhi.
2. International Workshop on Recent Trends in Mathematical Biology, on 14th-15th January, 2020. Organized by Bangladesh Mathematical Biology Research Group and Department of Mathematics, Jahangirnagar University, Bangladesh.
3. AICTE approved Four-week FDP on “Use of ICT in Education for Online and Blended Learning”, from 2nd May - 10th July, 2016. Organized by MHRD and IIT Bombay.
4. Short Term Course on Computer Application, from 15th February - 21st February, 2016. Organized by UGC HRDC, Aligarh Muslim University, Murshidabad Centre.
5. Workshop on Oceanographic Processes and its Modeling of Weather and Climate, from 5th July - 16th July, 2010. Organized by the Department of Ocean Engineering & Naval Architecture and Centre for Oceans, Rivers, Atmosphere & Land Sciences, Indian Institute of Technology (IIT), Kharagpur.

Date: 27/10/2023
Place: Bilaspur (C.G.)

Dr. Kankan Sarkar