UME/BIODATA

EDUCATION

EDUCATIONAL QUALIFICATIONS

Academic Degree	Subject	Marks obtained (%)	University	Year
PhD	Zoology	-	Visva-Bharati University	2016-2022
MSc	Zoology	60	Visva-Bharati University	2014-2016
BSc	Zoology (Hons.)	76.8	The University of Burdwan	2011-2014

DETAILS OF THE PHD THESIS

Title: Guanotrophication by aquatic avifauna on the dynamics of freshwater ecosystem of Ballavpur, India
Supervisor: Prof. Santanu Ray
Lab: Systems Ecology and Ecological Modelling Laboratory, Department of Zoology, Visva-Bharati University

RESEARCH AREA

Systems Ecology, Biodiversity, Economic Ecology

ACADEMIC ACHIEVENTS

1. **2nd Prize** in **7th biennial Best Early Career Researcher Award** by **International Society of Ecological Modelling** for the paper titled *Simulating the effects of aquatic avifauna on the Phosphorus dynamics of aquatic systems* [To be awarded in ISEM 2023].
2. Secured **First rank** in the oral presentation for research fellows in **National Conference in Mathematical Biology 2018** held at **National Institute of Technology, Patna** from 7-8 July 2018.
3. **Qualified GATE-2016 (Ecology & Evolution)** with 859 GATE score and 80.33% marks. **Secured All India Rank 8.**
4. **Qualified the Joint CSIR-UGC** test for Junior Research Fellowship and Eligibility for Lecturership, National Eligibility Test (NET) examination held on 21st June 2015 and secured **All India Rank 63**.

AWARD

1. **7th Biennial Best Early Carrier Research Award** by **International Society of Ecological Modelling** for the *publication Simulating the effects of aquatic avifauna on the Phosphorus dynamics of aquatic systems* to be awarded in ISEM Global Conference 2023.
2. **CSIR Travel Grant:** Awarded CSIR Travel grant (TG/10910/19-HRD) to present research work at the International Society for Ecological Modelling Global Conference 2019 at Salzburg, Austria.
3. **UGC Junior Research Fellowship:** Awarded UGC Junior Research Fellowship (Sl no. 2061530673) for securing 63 All India Rank in joint CSIR-UGC Test for Junior Research Fellowship and Eligibility for Lectureship, National Eligibility Test (**CSIR-UGC NET**) held on 21 June 2015.

EDITORIAL BOARD MEMBER

1. Review editor, Frontiers in Applied Mathematics and Statistics (Section: Dynamical systems) [9 January 2022 to Present]

JOURNAL ARTICLE REVIEWED

Ecological Modelling (5 articles); Journal of Threatened Taxa (2 articles)

ARTICLES PUBLISHED

Ecological Modelling	1. **Sagar Adhurya,** Fahad Al Basir, Santanu Ray. 2022. Stage-structure model for the dynamics of whitefly transmitted plant viral disease: an optimal control approach. *Computational and Applied Mathematics*. 41:154. https://doi.org/10.1007/s40314-022-01864-9 2. **Sagar Adhurya**, Suvendu Das, Santanu Ray. 2021. Simulating the effects of aquatic avifauna on the Phosphorus dynamics of aquatic systems. *Ecological Modelling*. 445: 109495 https://doi.org/10.1016/j.ecolmodel.2021.109495 3. Fahad Al Basir, **Sagar Adhurya,** Malay Banerjee, Ezio Venturino, Santanu Ray. 2020. Modelling the effect of incubation and latent periods on the dynamics of vector-borne plant viral diseases. *Bulletin of Mathematical Biology.* 82: 94. https://doi.org/10.1007/s11538-020-00767-2
Guanotrophy & Nutrient loading	4. **Sagar Adhurya**, Suvendu Das, Santanu Ray. 2022. Nitrogen and phosphorous loading by aquatic avifauna in a shallow eutrophic freshwater lake. *Energy, Ecology and Environment*. https://doi.org/10.1007/s40974-021-00228-z 5. **Sagar Adhurya**, Suvendu Das, Santanu Ray. 2020.Guanotrophication by Waterbirds in Freshwater Lakes: A Review on Ecosystem Perspective. In: Priti Kumar Roy, Xianbing Cao, Xue- Zhi Li, Pratulananda Das, Satya Deo (eds) *Mathematical Analysis and Applications in Modeling. ICMAAM 2018.* Springer Proceedings in Mathematics & Statistics, vol 302. Springer, Singapore. https://doi.org/10.1007/978-981-15-0422-8_22
Ecological Economics	6. Suvendu Das, **Sagar Adhurya**, Santanu Ray. 2020. Overview of Ecological Economics and Ecosystem Services Consequences from Shrimp Culture. In: Priti Kumar Roy, Xianbing Cao, Xue-Zhi Li, Pratulananda Das, Satya Deo (eds) *Mathematical Analysis and Applications in Modeling. ICMAAM 2018.* Springer Proceedings in Mathematics & Statistics, vol 302. Springer, Singapore. https://doi.org/10.1007/978-981-15-0422-8_20
Avian diversity	7. **Sagar Adhurya,** Shantanu Bhandary. 2019. Report of five interesting avian species from Durgapur ecoregion, West Bengal, India by citizen science effort. *Journal of Threatened Taxa.* 11(12): 14496-14502. https://doi.org/10.11609/jott.3980.11.12.14496-14502 8. **Sagar Adhurya,** Saikat Adhurya, Utpal Singha Roy. 2019. Rapid degradation of wetlands and its impact on avifauna: A case study from Ambuja Wetland, West Bengal, India. *Indian BIRDS* 15(2): 43-48. 9. Rajib Maulick, **Sagar Adhurya**. 2017. A report of the Dollarbird *Eurystomus orientalis* from southern West Bengal. *Indian BIRDS* 13(3): 84. 10. **Sagar Adhurya,** Moitreyee Banerjee, Achintya Kumar Pal, Utpal Singha Roy. 2016. Early winter avifaunal diversity from Buxa Tiger Reserve and Rasikbeel Wetland Complex of northern part of West Bengal, India. *Our Nature* 14(1): 39-46. DOI: 10.3126/on.v14i1.16439

ACCEPTED FOR PUBLICATION

Title	Role	Journal	Date of acceptance
A study on avian diversity of Durgapur Government College campus, West Bengal, India.	First author	The Holistic Approach to Environment	15/3/2022
Study of winter avifaunal diversity from a man-made reservoir in the West Bengal, India	Co-author	Journal of Animal Diversity	1/3/2022
Diversity and population trends of waterbirds at Lake-2, the Ballavpur Wildlife Sanctuary, West Bengal State, India	First Author	Journal of Animal Diversity	11/1/2022

ARTICLES IN COMMUNICATION

Title	Role	Journal	Date of communication
Scenarios of changing land use pattern by ever expansion of shrimp farming from the perspective of traditional agroecosystem	Co-author	Environmental Development	24 October 2021

CORPORATE PROJECT HANDLED

1. **Preparation of Wildlife Management Plan of Raniganj Coalfield area** given by **Eastern Coalfield Limited (a subsidiary of Coal India)** with duration **90 days**.
2. **Preparation of Wildlife Management Plan of Durgapur Steel Plant** given by **Steel Authority of India Limited** with duration **30 days**.

SOFTWARE/TECHNIQES KNOWN

Process-based modelling (including automatic parameter calibration, sensitivity analysis, numerical analysis, scenario analysis, budget analysis) with R and STELLA, static modelling (basic level) with Ecopath with Ecosim, GIS & spatial analysis (basic level) with R, ANN (basic level) with R, basic statistical techniques (linear & non-linear regression, correlation (Pearson, Mantel), hypothesis testing, ordination techniques etc.) with R, biodiversity analysis with the help of PAST.