Dr. Sinchan Ghosh (he/him/his)

Date of Birth: 25/07/1995; Email: gsinchanpostdoc@gmail.com; ghoshs@iiasa.ac.at; Phone: (+91) 8240931624; (+43) 68181170044 Languages: English, Bengali, Hindi, German

Current Affiliation: Researcher (Postdoc), Agriculture, Forestry, and Ecosystems Services Group, Biodiversity and Natural Resources Programme, International Institute for Applied Systems Analysis, Laxenburg, Austria

Analytical expertise: Exploratory and Inferential statistics, Machine Learning, Markov process, Model HybridizationSorry if I haven't been keeping myself up to speed with the habitat suitability modeling, Simulation Experiments, Integrative framework

Software/programming skill: Python, R, MATLAB, Stella, QGIS, ArcGIS, LATEX, MS-office products

Academic Membership: International Society for Behavioral Ecology, Calcutta Mathematical Society

Past Affiliations

Scientist (Postdoctoral)	Agricultural and Ecological Unit, Indian Statistical Institute, Kolkata, India	January 2023- June 2023
Visiting faculty	Department of Life Sciences, Guru Nanak Institute of Pharmaceutical Sciences and Technology	September 2022-January 2023
Senior Research Fellow	Agricultural and Ecological Unit, Indian Statistical Institute, Kolkata, India	August 2020- August 2022
Junior Research Fellow	Agricultural and Ecological Unit, Indian Statistical Institute, Kolkata, India	August 2018- August, 2020
Intern	Division of molecular medicine, Jagadish Chandra Bose Institute, Kolkata, India	June 2017-July 2017
Trainee	Indian Council of Agricultural Research-Central Institute of Fisheries Education, Kolkata, India	July 2015

Academic Qualification

Ph.D.	2022	Zoology (Ecological Modelling)	Visva-Bharati University
Thesis "The migratory pattern and identification of habitat patches with nesting success of *Merops philippinus*."			
M.Sc.	2018	Zoology (Ecological Modelling)	Visva-Bharati University
B.Sc.	2016	Zoology (Honours/Major) Botany, Chemistry (Minor)	University of Calcutta

Extra-Curricular course: Probability and Data with R by Duke University (Coursera, sponsored by DBT, West Bengal, India); The Data Scientist's Toolbox by John Hopkins University (Coursera, sponsored by DBT, West Bengal, India

Teaching experience:

Data structure, spatial analysis, and data visualization	Statistical and research methodologies with R for social scientists (Workshop), 2022, Indian Statistical Institute and North Eastern Hill University
GIS in species distribution model/spatial ecology	Winter School (Level 1) in Geospatial Science and Technology 2023, Indian Statistical Institute & Department of Science & Technology, Government of India
Community Ecology (for UG and PG of Microbiology and Genetics); Biostatistics (for UG and PG of Microbiology, Biotechnology); Epidemiology (UG and PG of Microbiology); eco-physiology (UG and PG of Genetics and Biotechnology)	(Adjunct Faculty) Department of Life Sciences, Guru Nanak Institute of Pharmaceutical Sciences and Technology, Sodepur, India, September 2022-January 2023
Statistical Ecology (for MSc Statistics special paper, 2 dissertations)	(Teaching assistantship to Dr. Soumalya Mukhopadhyay, 2021-2022), Department of Statistics, Visva-Bharati
Statistical Ecology (For MStat students, 3 dissertations)	(Teaching assistantship to Prof. Sabyasachi Bhattacharya, 2019-2022), Indian Statistical Institute
Ecological Modelling (MSc Zoology Special Paper, 3 dissertations)	(Teaching assistantship to Prof. Santanu Ray, 2018-2019- 2021), Department of Zoology, Visva-Bharati
Nature Study Instructor (for birds)	Kolkata Prakriti Paribrajak Samiti (2019-2022)

Volunteer positions: Editorial office: NDC-Bios (Since 2023), Bulletins of Calcutta Mathematical Society (2018-2023), Regular Reviewer: Ecological Modelling, Ecological Indicators, Scientific Reports (Since 2023)

Recognition/Awards:

Competitive grant for workshop	Advanced school on Multispecies modelling Approaches for ecosystem based marine REsource management in the Mediterranean Sea (AMARE-Med)	2024

1st position for research on the impact of climate change on migratory birds	Acharya Satyendranath Bose Science and Technology Fair by Paschim Banga Bijnyan Macha, Government of West Bengal, India	2021
1st position, Students' paper contest for article processing charge funding	India Biodiversity Meet 2019b Indian Statistical Institute	2019
Junior Research Fellowship	National Eligibility Test, Council of Scientific and Industrial Research	2017
3rd position Zooquest – competition and Conference for Zoology students in India	Zoological Society of Kolkata, University of Calcutta	2016
3rd position Zooquest– competition and Conference for Zoology students in India	Zoological Society of Kolkata, University of Calcutta	2015

Conferences:

Invited representative of geospatial ecological research at Biological Science Division, Indian Statistical Institute	Acharya Satyendranath Bose Science and Technology Fair by Paschim Banga Bijnyan Mancha, Government of West Bengal, India	2023
Invited Plenary Speaker	Ecology Epidemiology, and Beyond: A walk through the Students Corridor- symposium in memory of Prof. Ratanlal Brahmachary, by RLB foundation and Indian Statistical Institute	2023
Oral presentation- contributory talk (Migration), received travel award on a competitive basis	International Society for Behavioral Ecology, Congress 2022	2022
Poster presentation (Cooperative breeding system)	13th Conference on Dynamical Systems Applied to Biology and Natural Sciences, Basque, Spain	2022
Poster presentation (Cooperative breeding mechanism)	Advances in Biology in 21st Century- DST sponsored Conference on research methodology, Visva-Bharati	2020
Oral presentation	India Biodiversity Meet, 2019a, 2019b, Indian Statistical Institute	2019

Workshops

Advanced school on Multispecies modelling Approaches for ecosystem based marine REsource management in the Mediterranean Sea	28/07/2024-03/08/2024
The wealth of ecosystem: How autonomy, biodiversity and connectivity optimize fitness of the biosphere,Department of Zoology, University of Calcutta, India	12/12/2020-20/12/2020
Python in Biology, Department of Biotechnology, Government of India, & Jhargram Raj College, India	07/09/2020-01/12/2020
Statistical Methods for Behavioral Sciences with R – Software, Agricultural and Ecological Research Unit, Indian Statistical Institute and Assam Agricultural University, India	19/09/2019-21/09/2019
The joy of computing using Python, Bhairav Ganguly College, Kolkata, India	19/08/2019-20/08/2019
Growth Curve Models in Population Dynamics Using R for Biologists, Agricultural and Ecological Research Unit, Indian Statistical Institute, India	12/02/2019-13/02/2019
Species Distribution modeling with Maxent and R, Agricultural and Ecological Research Unit, Indian Statistical Institute, India	03/12/2018-04/12/2018
Drug Sensitization (November 2017), Department of Social work, Visva–Bharati, West Bengal, India	1/11/2017-30/11/2017
Ornamental fish breeding programme, Indian Council of Agricultural Research-Central Institute of Fisheries Education, Kolkata, India	1/07/2015-31/07/2015

List of publication:

Mandal, S., Mondal, C., Ghosh, S., Saha, S., Ray, M. S., & Lyndem, L. M. (2024). Efficacy of Lactobacillus taiwanensis S29 and Lactiplantibacillus plantarum S27 against tapeworm infection in Swiss Albino rats. Experimental Parasitology, 259, 108715.

Rana S, Basu A, Ghosh S, Bhattacharya S, (2023). Moths exhibit strong memory among cooperative species of other taxonomic groups: An empirical study. Ecological Modelling, 476, 110235. https://doi.org/10.1016/j.ecolmodel.2022.110235

Mandal, S., Mondal, C., Mukherjee, T., Saha, S., Kundu, A., Ghosh, S. and Lyndem, L.M., 2022. Hymenolepis diminuta Reduce Lactic Acid Bacterial Load and Induce Dysbiosis in the Early Infection of the Probiotic Colonization of Swiss Albino Rat. Microorganisms, 10(12), p.2328.

Ghosh, S. (2022) Variation in prey community determines nesting rates of Merops philippinus. (report)NDC E-BIOS, 2, p. 49-55

Ghosh, S., Banerjee, A., Mukhopadhyay, S., Bhattacharya, S., & Ray, S. (2022). Predicting the probability of avian reproductive success and its components at a nesting site. Ecological Informatics, 72, 101841. https://doi.org/10.1016/j.ecoinf.2022.101841

Banerjee, A., Rakshit, N., Chakrabarty, M., Sinha, S., Ghosh, S., & Ray, S. (2022). Zooplankton community of Bakreswar reservoir: Assessment and visualization of distribution pattern using self-organizing maps. Ecological Informatics, 72, 101837.

Roy, T., Ghosh, S., Saha, B. and Bhattacharya S, A noble extended stochastic logistic model for cell proliferation with density-dependent parameters. Sci Rep 12, 8998 (2022). https://doi.org/10.1038/s41598-022-12719-y

Reja, S., Ghosh, S., Ghosh, I. Paul, A, Bhattacharya, S. Investigation and control strategy for canine distemper disease on endangered wild dog species: a model-based approach. SN Appl. Sci. 4, 176 (2022). https://doi.org/10.1007/s42452-022-05053-5

Roy, T., Ghosh, S. and Bhattacharya, S., 2022. A new growth curve model portraying the stress response regulation of fish: Illustration through particle motion and real data. Ecological Modelling, 470, p.109999.

Ghosh, S., Al Basir, F., Chowdhury, G., Bhattacharya, S. and Ray, S., 2021. Is the primary helper always a key group for the dynamics of cooperative birds? A mathematical study on cooperative breeding birds. Ecological Modelling, 459, p.109728.

Roy, T., Ghosh, S., Kundu, S. and Bhattacharya, S., 2021. On developing a mathematical model for self-inducing proliferation and its regulation: illustrations through scratch assay and stem cell data. Bull. Cal. Math. Soc, 113(4), pp.271-308.