CURRICULUM VITAE

SUMIT MANDAL

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Brief biodata:

I started my research career at National Institute of Oceanography, CSIR after completing my M.Sc. in Marine Biology from Kartanak University in 2004. In 2006, I received Monbugakusho Fellowship by Japanese Government to undertake Ph.D. at Nagasaki University Japan under the guidance of renowned benthic ecologist Prof. Akio Tamaki. During my doctorate research I participated several cruises at Japanese waters for sampling. In 2010, I had been awarded with doctorate degree from Nagasaki University in Marine Science and Technology. After PhD I returned back to India and joined NIO initially as Project Associate under Global Ballast Water Management project and subsequently as Principal Investigator for my DST Fast Track awarded project. In late 2012, I joined Presidency University as Assistant Professor at erstwhile Zoology department. After joining the department I have established Marine Ecology Laboratory and started working as independent researcher. In 2015, I received Australian Government Endeavour Research Fellowship and worked at The University of Adelaide. There I was trained with ocean acidification manipulative mesocosm experiment protocols under the mentorship of Prof. Sean Connell and Prof. Bayden. After return back to India, I got DST extramural grant and able to set up Ocean Acidification mesocosm laboratory for manipulative climate change studies on marine benthic animals. I have participated Southern Ocean

and Arctic Ocean expedition in 2020 and 2023 respectively to work on polar benthic and pelagic components.

I am a marine biologist and have a broad interest in marine ecology but primarily interested in the interaction between ecosystem processes and community structure of marine benthic animals. My laboratory is working on benthic-pelagic linking approach to delineate the nearshore benthic population. The relative importance of pre- versus post-settlement events in soft-bottom communities, integrating both pelagic and benthic phases of animal life cycles has been the highlight of our research work. We are also interested in biology and ecology of marine invertebrates, and the impact of global climate change and/or anthropogenic inputs on marine biotic community.

My laboratory has published more than 38 research publications and two book chapters in peer reviewed national and international Q1 journals like Science of the Total Environment, Ecological Indicators, Environmental Toxicology and Pharmacology, Marine Pollution Bulletin, Ecotoxicology and Environmental Safety, Marine Environmental Research, Deep Sea Research: Part I, Continental Shelf Research, Chemosphere, Environmental Science and Pollution Research, Oceanologia, Comparative Biochemistry and Physiology, Part B, C, Frontiers in Marine Science etc. with more than 100 Impact factor and over 527 citations with h index 12 and *i*10 index 16. We have reported three new polychaete species from coastal waters of Goa and Sundarbans. Presently 4 Ph.D. students are working under my guidance and 3 have obtained their doctorate degree. A total of 30 M.Sc. students did their dissertation work under my guidance. More than 24 student internship program for undergraduate students have been done. I have handled 4 extramural projects from several funding agencies like MoES, SERB DST, NCPOR and WBDST.

Education:

Ph.D. Marine science and Technology from Graduate School of Science and Technology, Nagasaki University, Japan in March, 2010.
Thesis title: Aspects of the early life history processes in two intertidal macrobenthic species with contrasting mode of larval development in coastal waters of western Kyushu, Japan: the callianassid shrimp, *Nihonotrypaea harmandi* (Bouvier, 1901), and the trochid gastropod, *Umbonium moniliferum* (Lamarck, 1822).

M.Sc. Karnatak University, Karnataka, India with Distinction and **Gold Medal** in 2001-2003. Major: Marine Biology.
Thesis title: Biodiversity of Prosobranchs along the rocky shore of Majali coast in Uttara Kannada district, Karwar, India.

Professional Experience and appointments:

- Scientific member of the Indian Arctic Expedition, 2023.
- Participant of 11th Indian Expedition to Southern Ocean/ Antarctic Ocean from January 2020 to March 2020.
- Associate Professor at Department of Life Sciences from November 2024 to till date.
- Assistant Professor at Department of Life Sciences (Erstwhile department of Zoology and Molecular Biology & Genetics), Presidency University, Kolkata, West Bengal from November, 2012 to November 2024.

- Principal Investigator under the DST Fast Track project at NIO, Goa from August, 2011 to November, 2012.
- Project Associate under Ballast Water Management Program of India from October 2010 and 17th January to August 2011.
- Teaching Assistant and Research Scholar at Faculty of Fisheries, Nagasaki University, Japan, 2006- 2010.
- Research Assistant in the Project titled "Murmagao Port Baseline Survey under the Global ballast water management program" at National Institute of Oceanography (NIO), Goa, India, 2004-2006.

Achievements:

- Scientific member of the **Indian Arctic Expedition**, 2023.
- **Fellow of The Linnean Society of London**, 2021.
- Participated in **11th Indian Expedition to Southern Ocean**/ Antarctic Ocean 2020.
- Awarded **Australian Government Endeavour Research Fellowship** in 2015.
- Recipient of DST Fast Track Project for Young Scientists in 2011.
- Awarded Japanese Govt. **Monbukagakusho Scholarship** in 2006.
- Successfully completed Diploma in Japanese Language at Nagasaki University, Japan, 2006.
- Participated in the 100th cruise at Coastal Research vessel, Sagar Sukti, NIO, India, 2005.
- Awarded with **Gold Medal** by Karnatak University, India, 2004 **for 1st rank in M.Sc.**

Experiences:

- Worked at Kings Bay Marine Laboratory, Ny-Ålesund Research Station Svalbard, Norway from 26th June to 24th July 2023.
- Worked at Southern Seas Ecology Laboratory of The University of Adelaide with Dr. Bayden Russell and Prof. Sean Connell from April to September 2016 on impact of elevated CO_2 and temperature on physiological responses of intertidal trochid gastropod *Bembicium nanum*.
- Have onboard scientific cruise experience (CRV Sagar Sukti, NIO and CRV Kakuyo Maru, Nagasaki University) in Arabian sea around off Goa, India and Tachibana Bay, Japan respectively for collection of benthic and plankton samples.
- Have experience in operating and data interpretation of MOCNESS (Multiple Opening/Closing Net Environmental Sensing System), ADCP, CTD and other benthic and plankton samplers.
- Expertise in identifying and quantifying Thalassinidean crustacean larvae, postlarvae and Molluscan veliger, trochophore larval stages in preserved plankton and trap samples.
- Expert in maintaining fish, crustacean and molluscan larval culture.
- Specialization in marine benthic species identification and analysis of physicochemical and environmental parameters.
- Proficient in polychaete identification and described **three new species** from coastal waters of Goa and Sundarbans India.

Publications: (Peer reviewed):

Under review

1. Shahir, A., **Mandal, S.*** (2025). Nanoparticles in the Anthropocene Ocean: Unveiling the trends in marine nanoparticle research through bibliometric analysis. Anthropocene Science.

2. Bhaumik, S., Baishnab, S., Shahir, A., **Mandal, S.***, Tripathy, S. C. (2025). Influence of environmental parameters in modulating benthic and pelagic life cycle stages of macrobenthic population in high Arctic fjords: A modelling approach. Regional Studies in Marine Science.

3. Baishnab, S., **Mandal, S.*** (2025). Hitchhicking with benthic basibionts: Epibiotic assemblages of suctoria and peritrichia on nematode and harpacticoid from Arctic fjords. Symbiosis.
4. Mahapatra, S., Maity, J., Ahammed, N., De, S., **Mandal, S.*** (2025). A Double-Edged Sword: Toxic synergies of zinc oxide nanoparticles and thermal stress on the eco-physiological responses of *Mystus gulio*. Marine Pollution Research.
5. Mahapatra, S., **Mandal, S.*** (2025). Caught in the crossfire: Dual stressors impair bioenergetics and antioxidant defenses in *Etroplus suratensis*.
6. Snigdha Bhaumik, Ahmed Shahir, **Sumit Mandal***, Sarat Chandra Tripathy (2025). From Conservatism to Lability: Phylogenetic Signal and evolutionary models decode macrobenthos functional trait evolution from high Arctic fjords.

Published (Citation 527, *h*-index-12, i_{10}-16)

1. Shahir, A., Bhaumik, S., Karmakar, B., **Mandal, S.*** (2025). Trait-based modelling approach to disentangle the intricate dynamics of environmental factors in shaping mesozooplankton community from river Thakuran, Sundarbans estuarine system. Marine Environmental Research. 212: 107567. https://doi.org/10.1016/j.marenvres.2025.107567 **(IF 3.2)**
2. Mahapatra, S., Maity, J., **Mandal, S.*** (2025). Assessing the physiological and oxidative stress status of *Etroplus suratensis* under elevated temperature and ocean acidification. Science of The Total Environment. 998: 180294. https://doi.org/10.1016/j.scitotenv.2025.180294 **(IF 8.0)**
3. Mahapatra, S., De, B., Baag, S., **Mandal, S.*** (2025). The influence of chlorpyrifos contamination on oxidative stress status of *Lamellidens marginalis*: A multibiomarker approach. Environmental Toxicology and Pharmacology 116: 104723. https://doi.org/10.1016/j.etap.2025.104723 **(IF 4.2)**
4. Baishnab, S., Dey, D., Shahir, A., **Mandal, S.*** (2025). Assessing the combined effects of elevated temperature and chlorpyrifos on meiobenthic community structure in intertidal and mangrove estuarine ecosystems. Marine Pollution Bulletin 218: 118157. https://doi.org/10.1016/j.marpolbul.2025.118157 **(IF 4.9)**

5. Bhaumik, S., Baishnab, S., Shahir, A., Mahapatra, S., **Mandal, S.*** (2025). Unveiling the effects of polyethylene microplastic on the physiological responses across different size classes of *Telescopium telescopium*. Marine Pollution Bulletin 217: 118112. https://doi.org/10.1016/j.marpolbul.2025.118112 **(IF 4.9)**

6. Bhaumik, S., Shahir, A., **Mandal, S.*** (2025). Application of functional diversity and hierarchical modelling to evaluate the macrobenthic community dynamics from river Thakuran, Sundarbans estuarine system. Estuarine Coastal and Shelf Science 319: 109295. https://doi.org/10.1016/j.ecss.2025.109295 **(IF 2.6)**

7. Sikdar, D., Shahir, A., **Mandal, S.*** (2025). Evaluating the global sea snake diversity and distribution under climate change scenario. Marine Environmental Research 207: 107055. https://doi.org/10.1016/j.marenvres.2025.107055 **(IF 3.2)**

8. Baag, S., **Mandal, S.*** (2025). Integrative biomarker approach to decode seasonal variation in biomarker responses of *Scylla serrata* and *Penaeus monodon* from Sundarbans estuarine system. Oceanologia 67(1): 67108 https://doi.org/10.5697/IVQW7412 **(IF 2.3)**
9. Bhaumik, S., **Mandal, S.*** (2024). Integrative taxonomy of *Hermundura annandalei* Fauvel, 1932 (Phyllodocida: Pilargidae) from Sundarbans estuarine system, India. Cahiers de Biologie Marine 65: 43-55. DOI: 10.21411/CBM.A.9E109033 **(IF 0.17)**
10. Baag, S., Ahammed, N., De, S., **Mandal, S.*** (2024). Combined impact of elevated temperature and zinc oxide nanoparticles on physiological stress and recovery responses of *Scylla serrata*. Comparative Biochemistry and Physiology, Part C 275. 109764. https://doi.org/10.1016/j.cbpc.2023.109764 **(IF 4.3)**
11. Baishnab, S., Shahir, A., **Mandal, S.***, Tripathy, S. C. (2023). Unveiling the meiobenthic community structure of Prydz Bay, Antarctica during austral summer. Deep Sea Research Part 1. 199: 104109 https://doi.org/10.1016/j.dsr.2023.104109 **(IF 2.1)**
12. Bhaumik, S., **Mandal, S.***, Tripathy, S. C. (2023). Unravelling the functional diversity of macrobenthic community from Prydz Bay, Indian Sector of the Southern Ocean. Continental Shelf Research 263: 105043. https://doi.org/10.1016/j.csr.2023.105043 **(IF 2.2)**
13. Baag, S., **Mandal, S.*** (2023). The influence of ocean acidification and warming on responses of *Scylla serrata* to oil pollution: An integrated biomarker approach. Comparative Biochemistry and Physiology, Part B 266, 110847. https://doi.org/10.1016/j.cbpb.2023.110847 **(IF 1.8)**
14. Baag, S., **Mandal, S.*** (2023). Do predator (*Mystus gulio*) and prey (*Penaeus monodon*) have differential response against heatwaves? Unveiling through oxidative stress biomarkers and thermal tolerance estimation. Marine Environmental Research 184.105850. https://doi.org/10.1016/j.marenvres.2022.105850 **(IF 3.2)**
15. **Baag, S.,** Mandal, S.* (2022). Do global environmental drivers' ocean acidification and warming exacerbate the effects of oil pollution on the physiological energetics of *Scylla serrata*? Environmental Science and Pollution Research 30. 23213-23224. https://doi.org/10.1007/s11356-022-23849-1 **(IF 5.25)**
16. **Baag, S., Mandal, S.*** (2022). Combined effects of ocean warming and acidification on marine fish and shellfish: A molecule to ecosystem perspective. Science of The Total Environment 802: 149807. https://doi.org/10.1016/j.scitotenv.2021.149807 **(IF 8.00)**
17. Siddique, A., Purushothaman, J., Bhowal, A., **Mandal, S.*** (2021). Distribution and diversity of Polychaeta (Phylum: Annelida) in the Northern coastal waters of Bay of Bengal. Records of the Zoological Survey of India 121(4): 453–463. https://doi.org/10.26515/rzsi/v121/i4/2021/148098
18. Nandy, T., Saha, A., **Mandal, S.***, Chatterjee, M. (2021). Diel and tidal variations of larvae and juveniles of *Metapenaeus dobsoni* from Sundarbans Estuarine System, India. Thalassas: An International Journal of Marine Sciences 38. 255-266. https://doi.org/10.1007/s41208-021-00337-w **(IF 0.70)**
19. Ghosh, M., **Mandal, S.*** (2021). Disentangling the effect of seasonal dynamics on meiobenthic community structure from river Matla of Sundarbans Estuarine System, India. Frontiers in Marine Science 8. 671372. https://doi.org/10.3389/fmars.2021.671372 **(IF 3.00)**

20. Nandy, T., Baag, S., **Mandal, S.*** (2021). Impact of elevated temperature on physiological energetics of *Penaeus monodon* post larvae: A mesocosm study. Journal of Thermal Biology 97: 102829. https://doi.org/10.1016/j.jtherbio.2020.102829 **(IF 2.90)**
21. Bhowmik, M., Ghoshal, P., Salazar-Vallejo, S. I., **Mandal, S.*** (2021). Si*gambra sundarbanensis* sp. nov. (Annelida, Pilargidae) from the Indian sector of Sundarbans Estuarine System, with remarks on parapodial glands. European Journal of Taxonomy 744: 49–66. https://doi.org/10.5852/ejt.2021.744.1301 **(IF 1.30)**
22. Ghosh, M., **Mandal, S.*** (2021). Deciphering the synergistic impact of elevated temperature and oil pollution on meiobenthic community structure: A benthocosm study. Ecotoxicology and Environmental Safety 207: 111549. https://doi.org/10.1016/j.ecoenv.2020.111549 **(IF 6.10)**
23. Bhowmik, M., **Mandal, S.*** (2021). Do seasonal dynamics influence traits and composition of macrobenthic assemblages of Sundarbans Estuarine System, India? Oceanologia 63 (1): 80-98. https://doi.org/10.1016/j.oceano.2020.10.002 **(IF 2.3)**
24. Baag, S., Mahapatra, S., **Mandal, S.*** (2021). An Integrated and Multibiomarker approach to delineate oxidative stress status of *Bellamya bengalensis* under the interactions of elevated temperature and chlorpyrifos contamination.Chemosphere 264. (2): 128512. https://doi.org/10.1016/j.chemosphere.2020.128512 **(IF 8.10)**
25. **Mandal, S.*** (2020). COVID-19 imposed lockdown might be a boon for aquatic ecosystem. Current Science 118 (11): 1641. **(IF 1.1)**
26. Nandy, T., **Mandal, S.*** (2020). Unravelling the spatio-temporal variation of zooplankton community from river Matla in the Sundarbans Estuarine System, India. Oceanologia 62(3): 326-346. https://doi.org/10.1016/j.oceano.2020.03.005 **(IF 2.3)**
27. Baag, S., Mahapatra, S., **Mandal, S.*** (2020). Unravelling the effects of elevated temperature on the physiological energetics of *Bellamya bengalensis*. Journal of Thermal Biology 88:102494. https://doi.org/10.1016/j.jtherbio.2019.102494 **(IF 2.90)**
28. Ghosh, M., **Mandal, S.*** (2019). Does vertical distribution of meiobenthic community structure differ among various mangrove habitats of Sundarban Estuarine System? Regional Studies in Marine Science 31: 100778. https://doi.org/10.1016/j.rsma.2019.1007782. **(IF 2.4)**
29. Ghosh, M., **Mandal, S.*** (2019). Living with nematode: an epibiont *Trematosoma rotunda* associated with basibiont *Desmodora scaldensis* from Matla estuary, Sundarbans, India. Thalassas: An International Journal of Marine Sciences 35, 619–624. https://doi.org/10.1007/s41208-019-00129-3 **(IF 7.00)**
30. **Mandal, S.***, Deb, S. (2018). *Ancistrosyllis matlaensis* n. sp. (Polychaeta: Pilargidae) from the Sundarban Estuarine System, India. Zootaxa 4531 (3): 419–429. https://doi.org/10.11646/zootaxa.4531.3.6 **(IF 0.90)**
31. Nandy, T., **Mandal, S.***, Chatterjee, M. (2018). Intra-monsoonal variation of zooplankton population in the Sundarbans Estuarine System, India. Environmental Monitoring and Assessment 190 (10): 603. https://doi.org/10.1007/s10661-018-6969-8 **(IF 3.00)**
32. Ghosh, M., **Mandal, S.***, Chatterjee, M. (2018). Impact of unusual monsoonal rainfall in structuring meiobenthic assemblages at Sundarban estuarine system. India. Ecological Indicators 94 (1):139-150. https://doi.org/10.1016/j.ecolind.2018.06.067 **(IF 7.40)**
33. Nandy, T., **Mandal, S.***, Deb, S., Ghosh, M., Nath, T., Chatterjee, M. (2018). Short-term variations in surface water properties in the Sundarban Estuarine System, India. Sustainable

Water Resource Management 4(3) 4:559–566. https://doi.org/10.1007/s40899-017-0139-y **(IF 2.10)**

34. Ghosh, M., **Mandal, S.*** (2018). Free-living marine nematode diversity from the Indian coasts. Marine Biodiversity 48: 179-194. https://doi.org/10.1007/s12526-016-0551-9. **(IF 1.50)**
35. **Mandal, S.*,** Harkantra, S. N. (2013). Changes in the softbottom macrobenthic diversity and community structure from the ports of Mumbai, India. Environmental Monitoring and Assessment 185: 653–672. https://doi.org/10.1007/s10661-012-2582-4 **(IF 3.00)**
36. **Mandal, S.**, Tamaki, A., Takeuchi, S., Agata, Y., Takahara, Y, Harada, K., Ohashi, S., Yamada, F. (2010). How newly-recruited cohorts are formed in the trochid gastropod population (*Umbonium moniliferum*), on an intertidal sandflat in western Kyushu, Japan. Journal of Experimental Marine Biology and Ecology 389: 18-37. https://doi.org/10.1016/j.jembe.2010.04.001 **(IF 1.80)**
37. Tamaki, A., **Mandal, S.**, Agata, Y., Aoki, I., Suzuki, T., kanehara, H., Aoshima, T., Fukuda, Y., Tsukamoto, H., Yanagi, T. (2010). Complex vertical migration of larvae of the ghost shrimp, *Nihonotrypaea harmandi*, in the inner shelf waters of western Kyushu, Japan. Estuarine, Coastal and Shelf Science 86:125-136. https://doi.org/10.1016/j.ecss.2009.11.005 **(IF 2.60)**
38. Tamaki, A., Manda, A., Ohashi, S., Mandal, S., Hamaguchi, M. (2009). Larval Transport of the Callianassid shrimp, *Nihonotrypaea harmandi*, and Trochid gastropod, *Umbonium moniliferum*, inhabitiing intertidal sand flats in Tachibana Bay and the outer most Ariake sound. Bulletin on Coastal Oceanography Vol. 46, (2) 119-126.
39. Mandal, S.*, Harkantra, S. N., Salazar-Vallejo, S. I. (2007). *Cabira rangarajani* n. sp. (Polychaeta: Pilargidae) from the Goa coast, Central west coast of India. Zootaxa 1446: 21-29. https://doi.org/10.5281/zenodo.176137 **(IF 0.90)**

Book Chapters:

1. Bhowmik, M., **Mandal, S.***, Tripathy, S. C. (2022). Benthic biome of the Southern Ocean: Present state of knowledge and future perspective. In: Aninda Mazumdar and Wriddhiman Ghosh (Eds.) Systems Biogeochemistry of Major Marine Biomes. Wiley Books. Chapter 10, pp 189-209. Print ISBN:9781119554387, Online ISBN:9781119554356, https://doi.org/10.1002/9781119554356.ch10

2. Biswas, A., Ghosh, M., **Mandal, S.*** (2016). Marine Harpacticoid Copepod from Indian Coasts: a Review. In: Nithar Ranjan Madhu (Ed.), Environment and Sustainable Development: Strategies and Initiatives (pp. 76-86). NECTAR, Kolkata. ISBN: 978-93-84241-45-2

Presentations:

- Sumit Mandal*, Ahmed Shahir, Soumya Subhra Baishnab, Sarat Chandra Tripathy (2023) The blue carbon potential of meiobenthic nematodes in the Prydz Bay, Antarctica- A pilot study at National conference on Polar Sciences organized by National Centre for Polar and Ocean Research on May 16-19, 2023 at Goa.
- Sumit Mandal*, Sritama Baag (2023) Unveiling the interactions of elevated temperature and chlorpyrifos contamination on *Bellamya bengalensis* through an integrated biomarker approach at International conference Biomolecules to Biomes held on 24-25 August 2023 at Presidency University.

- Sumit Mandal and Arti Tomer (2018) Benthic-pelagic linking: an approach to assess *Donax faba* population at a tropical sandflat, India. Oral presentation at National Conference on "Recent Trends in Biological Research and Future Prospects" Department of Zoology, School of Life Sciences Sikkim University, Gangtok, 28 to 29 May, 2018.
- Tanmoy Nandy, Sumit Mandal, Soumya Deb (2016) Diurnal variation of shrimp larval abundance in the Sundarban Estuarine System, West Bengal, India - A Time Series Analysis. Paper presented at UGC sponsored National Seminar On "Biodiversity: Exploration, Exploitation, Conservation & Management – Vision & Mission" Post Graduate Department of Zoology Barasat Government College, West Bengal, 19-20 November, 2016.
- Moumita Ghosh, Sumit Mandal (2016) Intra-monsoonal impact on soft-bottom meiobenthic community structure from Sundarban Estuarine System. Poster presentation at UGC sponsored National Seminar On "Biodiversity: Exploration, Exploitation, Conservation & Management – Vision & Mission" Post Graduate Department of Zoology Barasat Government College, West Bengal, 19-20 November, 2016.
- Soumya Deb, Tanmoy Nandy, Moumita Ghosh, Shalini Sarkar, Sumit Mandal (2016) Do gods pollute aquatic system?: A study on water quality parameters and phytoplankton community at river Ganges, kolkata. Poster presentation at UGC sponsored National Seminar On "Biodiversity: Exploration, Exploitation, Conservation & Management – Vision & Mission" Post Graduate Department of Zoology Barasat Government College, West Bengal, 19-20 November, 2016.
- Moumita Ghosh, Sumit Mandal (2015) Ecology of soft bottom meiobenthic community from estuarine habitat of Indian Sundarbans: A case study. International Symposium on the Indian Ocean: "Dynamics of the Indian Ocean: Perspective and Retrospective". CSIR-National Institute of Oceanography, Goa, India. 30 November-4 December 2015.
- Moumita Ghosh, Sumit Mandal (2015) Meiobenthic biodiversity from softbottom estuarine habitat of Indian Sundarbans: A pilot study. Paper presented at National Conference on Applied Zoology in Sustainable Development: An Update. North Bengal University, West Bengal, India, 30 January-2 February, 2015.
- Sumit Mandal*, Tirthankar Nath (2015) Diversity and Community Structure of sand dwelling macrobenthos of Siridao Sand flat, Goa, India. Paper presented at National Conference on Applied Zoology in Sustainable Development: An Update. North Bengal University, West Bengal, India, 30 January-2 February, 2015.
- Moumita Ghosh, Shubhrajyoti Chattoraj, Bibrita Bhar, Ritisri Mondal, Tanmoy Nandy, Tirthankar Nath, Sumit Mandal* (2015) Structure and diversity of meiofuanal community from sediments of different mangrove habitats at Sundarbans. Poster presentation in a DBT-Builder sponsored National Symposium on "Environmental Impact on Biodiversity, and Plant Development' at Presidency University, Kolkata, 19-20 February, 2015.
- Sumit Mandal, Lalita V. Baragi, Anil A. C. (2013) Synergistic impact of ocean acidification and elevated temperature on by byssogenesis of tropical fouling bivalve *Branchiodontes striatulus* (Henley, 1843), International Workshop on Ocean Acidification: Consequences for Marine Ecosystems, Indian Institute of Science Education and Research-Kolkata (IISER-K), India, 20-21 September, 2013.
- Sumit Mandal, Sadanand N Harkantra and X N Verlencar. Macrobenthic community structure analysis to detect environmental stress in Mandovi estuary. *Workshop on Science-*

Policy interactions on the river basins and coastal zone management, National Institute of Oceanography, Dona-Paula, Goa-403004, India 7 -8 March 2006.

Invited talks:

1. Invited talk "The anthropocene Ocean: Present state of knowledge and future challenges" at Two-Day National Conference on Addressing Challenges and Showing Resilience Against Climate Change in the Eastern Region of India" (sponsored by MoEF & CC, Govt. of India, New Delhi) in collaboration with Department of Economics, KU, Department of Zoology, KU, ZSI EIACP RP, Kolkata, BSI EIACP RP Kolkata and TERI EIACP RP, New Delhi, at University of Kalyani on 29th May 2025.
2. Invited talk "The anthropocene Ocean: Present state of knowledge and future challenges: at Sister Nivedita University on 30th August 2023
3. At Sea explorer institute Kolkata on topic "importance of mangroves as hotbed of marine life on the occasion of World Environment day 5th June 2023.
4. At NSS cell Presidency University on topic "ways to enjoy summer in an eco-friendly manner" on 24-26th April 2023
5. At National workshop entitled "Chances to fly: Project funding opportunities at Serampore College on 31st January, 2023
6. Invited talk "Effect of health on climate change" at NSS special summer camp from 28th January to 3rd February 2023.
7. Invited talk "The anthropocene Ocean: Present state of knowledge and future challenges: at the student's meet organized by Milieu 22 and Presidency University Science Society on 10th May 2022.
8. Invited talk in a session entitled "The emerging trend of Mask Pollution on 11th April, 2022 organized by DLS research Scholar's association on 11th April 2022.
9. Chief Guest and Invited speaker at "Chotoder Borodin" program organized by Nanhasaa on 25 December 2021.
9. Invited speaker at Department of Marine Science, University of Calcutta in seminar entitled "Emerging areas of Marine and Estuarine Research' held on 26th March, 2019.

Field of Interest:

1. Larval dispersal and source sink relationship to assess population connectivity for marine benthic population.
2. Synergistic impact of ocean acidification and elevated temperature on physiological responses of some benthic animals.
3. Sundarban Estuarine ecosystem.
3. Aquaculture and larval ecology of marine and fresh water economical important fishes and shell fishes.
4. EIA (Environmental Impact Assessment) studies using benthic species as a tool.
5. Impact of marine bioinvasion on native ecosystem.
6. Polar Biology

Extramural project handled:

1.Macrobenthic Community Structure & Climate Change Mediated Stresses On Their Physiological Performances From The Indian Section Of Southern Ocean During Austral Summer.
Funding Agency- National Centre For Polar & Ocean Research (NCPOR), Goa

2.Synergistic effect of climate change mediated ocean acidification and warming on physiological responses in some economically important shellfishes of West Bengal
Funding Agency- SERB, Government of India.

3. Effects of Global Warming on Physiological Responsesof some commercially important aquatic shellfishes of West Bengal
Funding Agency- WBHESTB

4.Benthic-Pelagic linking: An approach to delineate economically important macrobenthic population of Sundarban Estuarine System
Funding Agency-Ministry of Earth Sciences, India

Students and Research scholars Guidance:

Doctorate students:

1. Moumita Ghosh (Awarded)
2. Tanmoy Nandy (Awarded)
3. Sritama Baag (Awarded)
4. Snigdha Bhaumik (ongoing)
5. Soumya Subhra Baishnab (ongoing)
6. Sayantan Mahapatra (ongoing)
7. Shahir Ahmed (ongoing)

M.Sc. dissertation students:

A total of 30 M.Sc. students did their dissertation work under my guidance. More than 24student internship program for undergraduate students have been done.

Other details:

1. Successfully completed Two weeks refresher course in "Yoga, meditation and Sports (IDC) from 14th February to 27th February 2023 conducted by CPDHE (UGC-HRDC) University of Delhi.
2. Successfully completed Two weeks Faculty Development Programme on "Managing online classes and co-creating MOOCS:2.0" conducted by Teaching Learning Centre Ramanujan College, University of Delhi sponsored by Ministry of Human Resource Development under Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching from 18th May to 3rd June 2020.

3. Attended a special interactive session organized by Goa Science Centre and Indian National Young Academy of Sciences in connection with World Environment Day held on 5th June, 2020

4. Attended three days long INYAS-CUPB Virtual Workshop #BluePlanet encompassing 7 lectures organized by Indian National Young Academy of Sciences and Department of Geology, Central University of Punjab, Bathinda, India in connection with World Oceans Day held between 7th June to 9th June, 2020 with a passing score 80%.

5. Participated in the four day online Faculty Development Programme on "E-Content Development" from organized by IQAC of Academy of Maritime Education and Training, Chennai from 12th June to 15th June 2020.

6. Attended National webinar on "An incredible journey to Antarctica: The white continent" organized by Department of Geography in association with IQAC, Haringhata Mahavidyalaya, West Bengal on 14th June, 2020.

7. Successfully completed online certificate course on "Remote Sensing & GIS Technology and Applications for University Teachers & Government Officials" conducted by Indian Institute of Remote Sensing (IIRS), ISRO Dehradun, during 13th June to 1st July 2020.

8. Attended three days long DAVCB-CUPB-INYAS Lecture Workshop '#ZeroWaste' encompassing 9 lectures organized by DAV College, Bathinda, Central University of Punjab, Bathinda and Indian National Young Academy of Sciences, New Delhi from 16th June and 18th June, 2020 with a passing score 100%.

9. Attended Science Leadership Workshop organized by the Central University of Punjab, Bathinda, India in association with Indian Science Academies' from 22nd June to 28th June 2020. The program included 26 talks by academy fellows and leading science leaders and covered topics such as mentoring, collective leadership, problem-solving, conflict resolution, time management, women in science, active listening, cross-cultural communication, lab culture and so on.

10. Successfully completed Online Faculty Development Program on "Earth & Environment Responses during COVID-19" organized by Faculty Development Centre, Savitribai Phule Pune University from 11th July to 17th July 2020.

11. Attended one day national webinar on "Impact of Climate Change on Biodiversity in India" organized by STLLES India, New Delhi and EcoR Foundation, Kochi on 15th July 2020.

12. Successfully organized two days International Webinar by Marine Ecology Laboratory in association with Aquaphile emcompassing of six lectures from eminent speakers in the field of aquatic biology between 18th and 19th July 2020.

13. Attended national webinar on "Marine Biotechnology: A Sustainable Source for Future of Mankind" organized by organized by Department of Botany and IQAC, The New College, Kolhapur on 7th August, 2020.

14. Successfully completed online international summer school on "The Coastal Ocean Environment" organized by University of Ghana and University of Michigan from 3rd to 8th August 2020.

15. Successfully completed Online Faculty Development Program on "Towards a Digital Era of Teaching and Learning" organized by IQAC, Kumbalathu Sankupillai Memorial Devaswom Board College, Sasthmcotta in collaboration with UGC-HRDC, University of Kerala, Thiruvanthapuram from 12th August to 18th August 2020.