

Faculty Details

Name- Dr. SUCHISMITA DAS

Designation- ASSISTANT PROFESSOR (STAGE III)

Department: LIFE SCIENCE AND BIOINFORMATICS

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Email- drsuchismita9@gmail.com

Year of Joining: 2005



Areas of Interest/Specialization: Environmental Monitoring, Aquatic Toxicology, and Remediation

Experience: (In Year) 16 years

Career Profile:

Education qualification:

Post-doctoral research: **University of Florida, Gainesville, USA**

Ph.D.- **Assam University Silchar, India**

M. Sc- **Banaras Hindu University, Varanasi, UP, India**

Honours/Awards (National/ International):

1. DBT-Overseas Associateship (N.E.) Long term fellowship (1 year) awarded by Department of Biotechnology, India (2016-17)
2. CSIR-JRF (+ LS) Fellowship awarded by CSIR, India (2003)
3. GATE Fellowship awarded by Indian Institute of Technology (2004)
4. Recipient of Hanuman Prasad Singh Memorial Gold Medal for standing 1st in Fish Biology, M.Sc (Zoology), Banaras Hindu University (2004)
5. Recipient of Rank Certificate for standing 1st in B.Sc (Zoology), Assam University, Silchar (2002)

International Collaboration/Consultancy:

Soil and water Science, University of Florida, USA

Research group: Aquatic Toxicology, and Remediation

Ph.D awarded:

1. **Debasish Bhattacharjee.** Toxicological studies on the effects of organochlorine pesticide, lindane in *Channa punctata* (Bloch, 1793) (**date of award: 29/09/2016**) Regn No. **Ph.D/2097/12, Dt. 26.09.12**
2. **Sunayana Goswami.** A study on phytoremediation of cadmium and copper, from soil and water with selected hyperaccumulators from Barak valley, Assam (**date of award: 15/03/2018**) Regn No. **Ph.D/1672/2011, Dt. 15.09.12**
3. **Sangeeta Dey.** Toxicological effects of effluents of Cachar Paper Mill, Panchgram, Barak Valley, on teleost species, *Cyprinus carpio* and *Ctenopharyngodon idella* (**date of award: 16/03/2018**) Regn No. **Ph.D/1691/2011, Dt. 15.09.12**
4. **Kisholay Mazumdar.** Phytoremediation of papermill effluent using selected aquatic hyperaccumulators from Northeast India. (**date of award: 09/12/2019**) Regn No. **Ph.D/2121/12, Dt. 26.09.12**
5. **Nobonita Deb.** Interactive effects of pesticide Chlorpyrifos and fertilizer, urea on selected biomarkers of *Channa punctata* (Bloch, 1793) (**date of award: 10/11/2020**) Regn No. **Ph.D/2113/12, Dt. 26.09.12**
6. **Parmita Bhattacharjee.** Protective role of quercetin in deltamethrin induced toxic effects in *Channa punctata* (Bloch, 1793): an integrated approach (**date of award: 05/01/2021**) Regn No. **Ph.D/2428/13, Dt. 12.09.13**

M.Phil awarded:

1. **Anima Das.** Comparative study of the uptake, regulation and sequestration patterns of two heavy metals, Pb and Zn on *Clarias batrachus* (**date of award: 05/03/2014**) Regn. No. 17-100022491 of 2010-11; Roll-011110 No-00170092)
2. **Shamim Sultana Choudhury.** A study on toxicological effects on fish inhabiting a polluted wetland-Chawli beel in Barak Valley, South Assam. (**date of award: 21/12/2015**) Regn. No.10104008 of 2007-08; Roll-011312 No-00170306)
3. **Agniv Kumar Laskar.** Source identification and risk assessment for heavy metals in roadside plants. (**date of award: 28/07/2020**) Regn No. 10105910 of 2009-2010 Roll -011514/00160177)

Ph.D Ongoing: 02 Numbers

Best Peer Reviewed Publications (up to 5):

1. Goswami, S. and **Das, S. (2018)**. *Eichhornia crassipes* mediated copper phytoremediation and its success using catfish bioassay. *Chemosphere* 210:440-448. (Elsevier). (IF=5.7)
2. de Oliveira, L.M. **Das, S.** da Silva, E.B. Gao, Gress, J. Liu, Y. and Ma, L.Q. (2018). Metal concentrations in traditional and herbal teas and their potential risks to human health. *Science of the Total Environment*. 633: 649-657 (Elsevier) (IF=6.58)
3. **Das, S.**, de Oliveira, L.M., da Silva, E., Liu, Y. and Ma, L.Q. (2017). Fluoride concentrations in traditional and herbal teas: Health risk assessment. *Environmental Pollution*, 231: 779-784. (Elsevier). (IF=6.79)
4. **Das, S.**, de Oliveira, L.M., da Silva, E., and Ma, L.Q. (2017). Arsenate and fluoride enhanced each other's uptake in As-sensitive plant *Pteris ensiformis*. *Chemosphere*. 180: 448-454. (Elsevier) (IF=5.7)
5. **Das, S.** and Mazumdar, K., (2016). Phytoremediation potential of a novel fern, *Salvinia cucullata*, Roxb. Ex Bory, to pulp and paper mill effluent: Physiological and anatomical response. *Chemosphere*, 163: 62-72. (Elsevier) (IF=5.7)

List of Publications:

1. Das, S., Das, A. Mazumder, P.E.T. Paul, R. Das, S. (2021). Lead phytoremediation potentials of four aquatic macrophytes under hydroponic cultivation. *Int. J of phytorem.* <http://dx.doi.org/10.1080/15226514.2021.1895714>. (Taylor & Francis) (IF= 2.5)
2. **Das, S.**, Nath, M., Laskar, A.K. *et al.* (2021) Lead and cadmium exposure network in children in a periurban area in India: susceptibility and health risk. *Environmental Science and Pollution Research*. <https://doi.org/10.1007/s11356-021-12608-3>. (Springer) (IF=3).
3. Deb, N. **Das, S. (2020)**. Acetylcholine esterase and antioxidant responses in freshwater teleost, *Channa punctata* exposed to chlorpyrifos and urea. *Comparative Biochemistry and Physiology Part C: Toxicology & Pharmacology*, <https://doi.org/10.1016/j.cbpc.2020.108912>. (Elsevier) (IF= 2.8)
4. Nath, A., Chakraborty, D., **Das, S. (2019)**. Assessment of lead and cadmium in fifty-four Indian herbal medicine: tribal and marketed varieties. *Environmental Science and Pollution Research*. 27: 4127–4136 (Springer) (IF=3).
5. Bhattacharjee, P., Borah, A., **Das, S. (2019)**. Quercetin-induced amelioration of deltamethrin stress in freshwater teleost, *Channa punctata*: Multiple biomarker analysis. *Comparative Biochemistry and Physiology Part C: Toxicology & Pharmacology*, 108626. (Elsevier) (IF= 2.8).
6. Mandal, P., and **Das, S. (2018)**. Leachable lead and cadmium in microwave-heated ceramic cups: possible health hazard to human. *Environmental Science and Pollution Research*, 25 (29): 28954–28960 (Springer) (IF=3)
7. Goswami, S., and **Das, S. (2018)**. *Eichhornia crassipes* mediated copper phytoremediation and its success using catfish bioassay. *Chemosphere* 210: 440-448. (Elsevier). (IF=5.7)

8. de Oliveira, L.M., **Das, S.**, da Silva, E.B., Gao, Gress, J., Liu, Y., and Ma, L.Q. (2018). Metal concentrations in traditional and herbal teas and their potential risks to human health. *Science of the Total Environment*. 633: 649-657 (Elsevier) (IF=6.58)
9. S. Dey, M.Dutta Choudhury, **S. Das.** (2018). Assessment of pulp and paper mill effluent quality and its toxicity to fingerlings of *Cyprinus carpio*. *Fisheries & Aquatic Life*. 26: 243-256.
10. de Oliveira, L.M., **Das, S.**, da Silva, E.B., Gao, P. Vardanyan, L., Liu, Y. and Ma, L.Q. (2018). Interactive effects of chromate and arsenate on their uptake and speciation in *Pteris ensiformis*. *Plant and Soil*, 422 (1-2): 515-526. (Springer). (IF=3.05)
11. Bhattacharjee, D., and **Das, S.** (2017). Microscopic Studies on Erythrocytes of *Channa punctata* exposed to commercial grade Lindane. *Brazilian Archives of Biology and Technology*. 60: e17160341 <http://dx.doi.org/10.1590/1678-4324-2017160341> (SciELO, IF=0.506)
12. **Das, S.**, de Oliveira, L.M., da Silva, E., Liu, Y. and Ma, L.Q. (2017). Fluoride concentrations in traditional and herbal teas: Health risk assessment. *Environmental Pollution*, 231: 779-784. (Elsevier). (IF=6.79)
13. **Das, S.**, de Oliveira, L.M., da Silva, E., and Ma, L.Q. (2017). Arsenate and fluoride enhanced each other's uptake in As-sensitive plant *Pteris ensiformis*. *Chemosphere*. 180: 448-454. DOI: <http://doi.org/10.1016/j.chemosphere.2017.04.050> (Elsevier) (IF=5.7)
14. Bhattacharjee, P., and **Das, S.** (2017). Deltamethrin induced alteration of biochemical parameters in *Channa punctata*, Bloch and its amelioration by quercetin. *Bulletin of Environmental Contamination and Toxicology*, 98 (6): 763-769 (Springer) (IF=1.42)
15. Goswami, S., and **Das, S.** (2017). Screening of cadmium and copper phyto remediation ability of *Tagetes erecta*, using biochemical parameters and SEM-EDX analysis. *Environmental Toxicology and Chemistry*. 36(9): 2533-2542. (Wiley) (IF=3.4)
16. de Oliveira, L.M., **Das, S.**, Gress, J., Rathinasabapathi, B., Chen, Y. and Ma, L.Q. (2017). Arsenic uptake by lettuce from As-contaminated soil remediated with *Pteris vittata* and organic amendment. *Chemosphere*. DOI: <http://dx.doi.org/10.1016/j.chemosphere.2017.02.124> (Elsevier) (IF=5.7)
17. **Das, S.** and Mazumdar, K., (2016). Phytoremediation potential of a novel fern, *Salvinia cucullata*, Roxb. Ex Bory, to pulp and paper mill effluent: Physiological and anatomical response. *Chemosphere*, 163: 62-72. (Elsevier) (IF=5.7)
18. **Das, S.** and Goswami, S. (2016). Copper phytoextraction by *Salvinia cucullata*: biochemical and morphological study. *Environmental Science and Pollution Research*, 24 (2): 1363–1371 (Springer) (IF=3)
19. Goswami, S. and **Das, S.**, (2016). Copper phyto remediation potential of *Calandula officinalis* L. and the role of antioxidant enzymes in metal tolerance. *Ecotoxicology and Environmental safety*, 126: 211-218. (Elsevier) (IF= 4.5)
20. Dey, S., Choudhury, M.D. and **Das, S.** (2016). Sublethal effects of pulp and paper mill effluent on two commonly cultured carps: a SEM-and EDS-based hematological biomarker analysis. *Fish physiology and biochemistry*, 42(6): 1791-1805. (Springer) (IF= 1.72)
21. **Das, S.** and Choudhury, S.S. (2016). Analysis of heavy metals from water, sediment, and tissues of *Labeo angra* (Hamilton, 1822), from an Ox-box lake-an wetland site from Assam, India. *Journal of Environmental Science and Health, Part A*, 51(1): 21-33. (Taylor & Francis) (IF=1.42)
22. **Das, S.**, Goswami, S. and Talukdar, A.D. (2016). Physiological responses of water hyacinth, *Eichhornia crassipes* (Mart.) Solms, to cadmium and its phyto remediation potential. *Turkish Journal of Biology*, 40(1): 84-94. (Tubitak) (IF=1.2)

23. Goswami, S. and **Das, S. (2015)**. A study on cadmium phytoremediation potential of Indian mustard, *Brassica juncea*. *International Journal of phytoremediation*, 17(6): 583-588. (Taylor & Francis) (**IF= 2.5**)
24. Mazumdar, K. and **Das, S. (2015)**. Phytoremediation of Pb, Zn, Fe, and Mg with 25 wetland plant species from a paper mill contaminated site in North East India. *Environmental Science and Pollution Research*, 22(1): 701-710. (Springer) (**IF=3.0**)
25. **Das, S.,** Goswami, S. and Talukdar, A.D. (2014). A study on cadmium phytoremediation potential of water lettuce, *Pistia stratiotes*. L. *Bulletin of Environmental Contamination and Toxicology*, 92(2): 169-174. (Springer) (**IF=1.42**)
26. **Das, S.,** and A. Gupta (2012). Effects of Cadmium Chloride on oxygen consumption and gill morphology of Indian flying barb, a teleost fish, *Esomus danricus*. 33(6):1057-1061, *Journal of Environmental Biology* (ISSN 0254-8704) (Triveni Publishers) (**IF=0.727**)

Chapter in Edited Book

1. Barhai, A. and **Das, S. (2020)**. Bioremediation: Its principle and techniques. In: Recent Trends and Innovation in Social Science and Life Science (Eds. Mishra, N.K. et al.). New Delhi Publisher, Delhi (ISBN: 9789388879873).
2. Barhai, A. Laskar, A.K. and **Das, S. (2020)**. Sustainable Utilization of weeds and roadside plants for decontamination of pollutants. In: Entrepreneurship and Sustainable Development in India (Ed. Shil, P) Pp. 149-164. Publisher: Mittal Publications, New Delhi. (ISBN:81-947123-2-9).
3. Goswami, S. and **Das, S. (2020)**. Sustainable use of Plant Based Technology for Soil and Water Remediation. In: Entrepreneurship and Sustainable Development in India (Ed. Shil, P) Pp. 65-74. Publisher: Mittal Publications, New Delhi. (ISBN:81-947123-2-9).
4. Goswami, S. and **Das, S. (2018)**. Heavy metal phytoremediation potentials of some wetland plants of Northeast India. In: Perspective on Biodiversity and Sustainable Development. (Eds. Khan T.U. and Dey, A.). Pp. 105-112. Publisher: ACTA and Panchajanya Books, Guwahati (ISBN: 978-81-936621-5-1).
5. Dey, S. M. Dutta Choudhury, and **Das, S. (2018)**. Hydro-physico-chemical Grouping of Cachar Paper Mill Effluents in Assam Using Multivariate Statistical Model. In: Urban Ecology, Water Quality and Climate Change. Pp: 203-213. Publisher: Springer, Germany (ISBN: 978-3-319-74493-3).
6. Choudhury, S.S. and **Das, S. (2017)**. Histopathological anomalies in two carps, *Labeo gonius* and *Labeo angra*, collected from a polluted wetland site in Southern Assam. In: *Recent Trends in Basic Science Researches*. Pp 317-323. Publisher: Tirthabhum Publications. (ISBN: 978-81-933690-0-5).
7. Goswami, S. and **Das, S. (2017)**. Cadmium hyperaccumulating plants from Barak Valley, South Assam, India for phytoremediation. In: *Recent Trends in Basic Science Researches*. Pp. 213-218. Publisher: Tirthabhum Publications. (ISBN: 978-81-933690-0-5).
8. Dey, S. and **Das, S. (2017)**. Risk assessment of Pulp and Paper mill effluent in *Cyprinus carpio*. Pp 208-212. In: *Recent Trends in Basic Science Researches*. Pp. 213-218. Publisher: Tirthabhum Publications. (ISBN: 978-81-933690-0-5).
9. Goswami, S. and **Das, S. (2013)**. Study of metal hyperaccumulators from Brassicaceae family for phytoremediation purposes. In: *Emerging areas of Research and Development in*

chemical and Physical Sciences in North East India. (Eds. Sen, R. and Guha Thakurata, D.). pp. 55-60. Publisher: Department of Physics & Chemistry, SS College, Hailakandi (ISBN: 978-81-908204-3-3).

10. **Das, S.** and Gupta, A. (2011). Sublethal Cd induced changes in the chromatophores of Indian flying barb (*Esomus danricus*, Hamilton-Buchanan). In: *Status and conservation of Bio-diversity in North East India* (Eds. Sharma et al.). pp 71-79. Publisher: Swastik Publisher, Delhi. (ISBN: 978-93-81084-10-6).

Book Authored:

1. Das, A. and **Das, S** (2014). Uptake and Sequestration Patterns of Pb and Zn in Fish-A comparative study. Publisher: Lambert Academic Publishing, Germany (ISBN 978-3-659-63988-3)

2. **Das, S.** (2013). Toxicological Effects of Cadmium and Copper on *Esomus danricus*: Assessing some toxicity biomarkers. Publisher: Scholars' Press, Germany (ISBN 978-3-639-70515-7)