

**Reshmi Das, PhD.**

UGC Assistant Professor (2018 December to present)  
 School of Environmental Studies, Jadavpur University, Kolkata, INDIA  
 Visiting Scientist, Earth Observatory of Singapore, Nanyang Technological University, SINGAPORE  
 Ph: +91 8017134019, WhatsApp: +65 98850611  
 Email: [reshmidas.sest@jadavpuruniversity.in](mailto:reshmidas.sest@jadavpuruniversity.in); [das.reshmi@gmail.com](mailto:das.reshmi@gmail.com);

**Field of Specialization:** Geochemistry

**Research Interest:** Air pollution, Isotope geochemistry, Metal biogeochemistry

**Courses Taught:** Introduction to Environmental Science; Environmental Pollution; Environmental Health and Toxicology (all are M.Tech courses)

**Education:**

- 2001-2006 PhD. Geology –Florida State University, Tallahassee, Florida. USA.
- 1998-2000 M.Sc. Geology – University of Calcutta, Calcutta, India.
- 1995-1998 B.Sc. Geology – University of Calcutta, Calcutta, India.

**Professional Experience**

- 2013, March – 2018, November. Senior Research Fellow, Earth Observatory of Singapore, Nanyang Technological University.
- 2010, August – 2011 September. Research Associate, Department of Earth and Ocean Sciences, University of South Carolina, Columbia, South Carolina, USA.
- 2009, July – 2010, July. Scientist D, Geosciences Division, Physical Research Laboratory, Department of Space, Govt. of India.
- 2007, January – 2009, June. Post-Doctoral Fellow, National High Magnetic Field Laboratory, Tallahassee, Florida, USA.

**Publications:****\*corresponding author**

1. Kayee, J., Bureekul, S., Sompongchaiyakul, P., Wang, X. and **Das, R\***. (2021). Sources of Atmospheric Lead (Pb) after Quarter Century of Phasing Out of Leaded Gasoline in Bangkok, Thailand. **Atmospheric Environment**. 253, 118355.
2. Majumdar, A., Satpathy, J., Kayee, J., and **Das, R\***. (2020). Trace metal composition of rainwater and aerosol from Kolkata, a megacity in eastern India. **SN Applied Sciences** 2, 2122.
3. Mitra, S., and **Das, R\***. (2020). Health risk assessment of construction workers from trace metals in PM<sub>2.5</sub> from Kolkata, India. **Archives of Environmental & Occupational Health** 1–16.
4. Kayee, J., Sompongchaiyakul, P., Sanwlani, N., Bureekul, S., Wang, X., and **Das, R.\*** (2020). Metal Concentrations and Source Apportionment of PM<sub>2.5</sub> in Chiang Rai and Bangkok, Thailand during a Biomass Burning Season. **ACS Earth and Space Chemistry** 4, 1213–1226.
5. Chowdhury, N.R., Das, A., Joardar, M., De, A., Mridha, D., **Das, R.**, Rahman, M.M., and Roychowdhury, T. (2020). Flow of arsenic between rice grain and water: Its interaction, accumulation and distribution in different fractions of cooked rice. **Science of the Total Environment** 731, 138937.
6. George, S., Chua, M.L., ZheWei, D.Z., **Das, R.**, Bijin, V.A., Connolly, J.E., Lee, K.P., Yung, C.F., Teoh, O.H., and Thomas, B. (2020). Personal level exposure and hazard potential of particulate matter during haze and non-haze periods in Singapore. **Chemosphere** 243, 125401.

7. **Das, R\***, Wang, X., Itoh, M., Shiodera, S., and Kuwata, M. (2019). Estimation of Metal Emissions from Tropical Peatland Burning in Indonesia by Controlled Laboratory Experiments. **Journal of Geophysical Research: Atmospheres** 124, 6583–6599.
8. Kumar, M., Goswami, R., Awasthi, N., and **Das, R.** (2019). Provenance and fate of trace and rare earth elements in the sediment-aquifers systems of Majuli River Island, India. **Chemosphere** 237, 124477.
9. Roy Chowdhury, N., **Das, R.**, Joardar, M., Ghosh, S., Bhowmick, S., Tarit Roychowdhury, T. (2018). Arsenic accumulation in paddy plants at different phases of pre-monsoon cultivation. **Chemosphere** 210, 987-997.
10. **Das, R\***, Mohtar A. Taufiq Bin, Rakshit D., Shome D., & Wang X. (2018). Sources of atmospheric lead (Pb) in and around an Indian megacity. **Atmospheric Environment**. 193, 57-65.
11. **Das, R\***, Wang X., Khezri B., Webster R. D., Sikdar P.K., & Datta S. (2016). Mercury isotopes of atmospheric particle bound mercury for source apportionment study in urban Kolkata, India. **Elementa: Science of the Anthropocene**. 4,
12. Diong, H. Ting, **Das R\***, Khezri B., Srivastava B., Wang X., Sikdar P. K., et al. (2016). Anthropogenic platinum group element (Pt, Pd, Rh) concentrations in PM<sub>10</sub> and PM<sub>2.5</sub> from Kolkata, India. **SpringerPlus**. 5,
13. **Das, R\***, Khezri B., Srivastava B., Datta S., Sikdar P. K., & Webster R. D. (2015). Trace Element Composition of PM<sub>2.5</sub> and PM<sub>10</sub> from Kolkata - A Heavily Polluted Indian Metropolis. **Atmospheric Pollution Research**. 742-750.
14. **Das, R\***, Landing W., Bizimis M., Odom L., & Caffrey J. (2015). Mass Independent Fractionation of Mercury Isotopes as Source Tracers in Sediments. **Procedia Earth and Planetary Science**. 13, 151-157.
15. Chakraborti, D., Rahman M. Mahmudur, Murrill M., **Das R.**, Siddayya, Patil S. G., et al. (2013). Environmental arsenic contamination and its health effects in a historic gold mining area of the Mangalur greenstone belt of Northeastern Karnataka, India. **Journal of Hazardous Materials**. 262, 1048-1055.
16. **Das, R.**, Bizimis M., & Wilson A. M. (2013). Tracing mercury seawater vs. atmospheric inputs in a pristine SE USA salt marsh system: Mercury isotope evidence. **Chemical Geology**. 336, 50-61.
17. Holm-Denoma, C. S., & **Das R.** (2010). Bimodal volcanism as evidence for Paleozoic extensional accretionary tectonism in the southern Appalachians. **Geological Society of America Bulletin**. 122, 1220-1234.
18. Sen, G., Bizimis M., **Das R.**, Paul D. K., Ray A., & Biswas S. (2009). Deccan plume, lithosphere rifting, and volcanism in Kutch, India. **Earth and Planetary Science Letters**. 277, 101-111.
19. **Das, R.**, Salters V. J. M., & Odom L. (2009). A case for in vivo mass-independent fractionation of mercury isotopes in fish. **Geochemistry, Geophysics, Geosystems**. 10, Q11012.

#### Book Chapters:

1. **Das, R\*** and Mukherjee, M. (2021) Earth Science in Environmental Management in Sikdar, P.K. (ed.) *Environmental Management: Issues and Concerns in Developing Countries*. Capital Publishing Company Co-published by Springer, pp. 23-41
2. **Das, R\***. (in press). Sources of Atmospheric Lead (Pb) over Indian Cities and Health Impact in Singh, R.P. (ed) *Asian Atmospheric Pollution*. Elsevier, chapter 21.

#### M.Tech. Thesis Guidance

1. **Shoumick Mitra (Completed 2020)** – Pursuing PhD in IIT Madras
2. **Jaydeep Satpathy (Completed 2020)** – Associate Analyst at Zifo RnD Solutions
3. **Aditi Majumdar (ongoing)**
4. **Ahana Dutta (ongoing)**

#### PhD Students

1. **Jariya Kayee** – Chulalongkorn University, Bangkok, Thailand. Expected date of graduation 2021
2. **Tanaya Bhowmick** - CSIR Fellow. Ongoing

### Professional Activities:

- 2007-present: Member of ACS (American Chemical Society)
- **Referee for journals:** Science of Total Environment (Elsevier), Atmospheric Environment (Elsevier), Journal of Hazardous Material (Elsevier), Atmospheric Pollution Research (Elsevier), Urban Climate (Elsevier), ACS Earth and Space Chemistry(American Chemical Society)

### Honours and Awards:

- Certificate of *Outstanding Contribution in Reviewing* from Atmospheric Environment, Elsevier.
- Teaching and research assistantship at Florida State University from 2001-2006
- Dissertation writing grant from Florida State University 2006
- Nominated for “Outstanding Teaching Assistance Award” by Florida State University- 2005.
- Travel Grant from “Ridge 2000 Distinguished Lecturer Series” to host Prof. Ken Macdonald as colloquium speaker in 2005.
- Travel Grants from COGS (Congress of Graduate Studies) to present at Geological Society of America (GSA) conferences in 2002, 2004, 2005.
- Travel Grant from GSA (Geological Society of America) to attend GSA annual meeting in 2002 and 2005.
- State scholarship from West Bengal Govt., India, 1998-2000 (during MSc).

### Funded Research Projects:

Project title	Budget / Sponsoring agency/Period of Operation	Country
Chemical Composition and Source Apportionment of Thai Aerosols.	₹ 2,30,000 INR/ASEAN-India STI Cooperation Scheme, DST. 2019 November-2020 February	India
Sources Of Species Specific Mercury (Hg) In Urban Atmosphere	₹ 4,30,000 INR/ RUSA 2.0. 2019 June – 2020 March	India
Metal Biogeochemistry in the Environment	₹ 10,00,000 INR/UGC Start Up Grant. 2019 April-2021 March	India
Anthropogenic Lead In The Atmosphere - Isotopes For Source Apportionment	\$125,000 SGD/ Singapore Ministry of Education, Academic Research Fund, Tier 1. 2017 March – 2019 December	Singapore
Mercury Isotopes of Atmospheric Particle Bound Mercury	\$60,000 SGD/Earth Observatory of Singapore. 2014 April – 2016 March.	Singapore
Assessing the Role of Submarine Groundwater Discharge as a Major Source of Mercury in Coastal Waters	\$19,499 USD/University of South Carolina. 2009 August – 2010 July.	USA