CV of Dr Pulak Kumar Patra

Present Position: Associate Professor

Date of Birth: 23rd April 1968

Date of Joining at Visva-Bharati :14.02.2002

Educational Qualification:

B.Sc. (Geology Hons.), 1988, Ravenshaw College, Cuttack

M.Sc. (Applied Geology), 1990, IIT, Bombay

M. Tech. (Applied Geology), 1992, IIT, Kharagpur

Ph.D., 1997, IIT, Bombay

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Research areas:

Environmental Geology, Hydrogeochemistry, Environmental Meteorology,

Remote Sensing & GIS Applications

Awards:

• Among the best ten (8th) candidates in Board of Secondary Education, Orissa, in 1983.

• Among the best ten candidates in UGC-CSIR (NET) Dec.1989.

Research Scholars: PhD Awarded – 09, PhD pursuing- 04

Publication

Books- 3 Edited Books – 4 Referred Journals: 43, Book chapters: 30

Some Important Publications

Books/Edited Books

1. P.K. Patra, 2012, A Text book on Climatology, Kalyani Publishers, Ludhiana, 255p ISBN 978-93-272-2601-0

2. P.K. Padhy, P.K. Patra and U.K. Singh (eds) 2017 Emerging Issues in Environmental Science: Concerns and Management. New Delhi Publishers, New Delhi p.321-330. ISBN: 978-93-85503771

3. P.K. Patra, 2018, Environmental Studies, Studera Press, Delhi, 390p. ISBN 9789385883118

4. Swain K.C., Chatterjee A.K., Patra, P.K. and Kandasamy P., (edited) 2020, Proceedings on Application of space and modern technology in Agriculture and Environment, Mukund Publication, Delhi-51, ISBN.978-93-84335-35-9

Journals publications in Scopus index journals (last 10 years)

1. S. Chakrabarti, P.K. Patra, 2015 Biochemical and antioxidant responses of paddy (Oryza sativa l.) to fluoride stress. Fluoride, 48(1):56–61
2. S. Chakrabarti, P.K. Patra, 2016 Chemical Analysis of Ground Water of Bolpur Block, Birbhum, West Bengal, India. Rasayan Journal of Chemistry, 9(4): 627 – 633.
3. S. Chakrabarti, P.K. Patra, 2017 Hydrochemical analysis of ground water of Rampurhat-II block, Birbhum district, West Bengal, India, Rasayan Journal of Chemistry v.10: pp1424 1430.
4. Suman Samanta Patra, P.K.., Banerjee, S., Narsimhaiah L. & Chandran M.A.S., Kumar V & Bandyopadhyay S., Generation of common coefficients to estimate global solar radiation over different locations of India, Theoretical and Applied Climatology, v136, pp 943-953;
5. D. Pal, P., Patra, P. K. and Mukhopadhyay, D., 2018 Effect of tillage and organic residues on yield of wheat (Triticum aestivum L.), Res. on Crops 19 (3) : 373-379
6. Indrani Mukherjee, Umesh Kumar Singh, Pulak Kumar Patra, 2019 Exploring a multi exposure-pathway approach to assess human health risk associated with groundwater fluoride exposure in the semi-arid region of east India, Chemosphere
7. S. Samanta, S.Banerjee, A. Mukherjee, P.K. Patra and P. Chakraborty, 2019, Deriving PAR use efficiency of wet season rice from bright sunshine hour data and canopy characteristics, Mausam, 70, 2 (April 2019), 349-358,
8. Hossain, Mobarok and Patra, Pulak Kumar, 2020, Contamination zoning and health risk assessment of trace elements in groundwater through geostatistical modelling, Ecotoxicology and Environmental Safety, v.189, p1100-38.
9. Hossain, M. and Patra, P.K., 2019 Hydrogeochemical characterisation and health hazards of fluoride enriched groundwater in diverse aquifer types, Environmental Pollution doi.org/10.1016/j.envpol.2019.113646
10. Suman Samanta, Saon Banerjee, Pulak Kumar Patra, Sudhansu Sekhar Maiti and Nabansu Chattopadhyay, 2020 Choice of ideal sunshine hour-based model to predict global solar radiation in India, Mausam, v.71(3), p451—466.
11. Samanta, S and Banerjee, S and Mukherjee, A and Patra, PK and Chakraborty, PK, 2020, Determining the radiation use efficiency of potato grown in Eastern India from sunshine hour data: a simple approach, Spanish Journal of Agricultural Research, v.18(2).
12. Hossain, Mobarok and Patra, Pulak Kumar, 2020 Water pollution index--A new integrated approach to rank water quality, Ecological Indicators,117, p.1066-68.
13. Hossain, Mobarok and Patra, Pulak Kumar and Begum, Syeda Nurunnesa and Rahaman, Chowdhury Habibur, 2020, Spatial and sensitivity analysis of integrated

groundwater quality index towards irrigational suitability investigation, Applied Geochemistry, v.123, p.1047-82.

14. Hossain, Mobarok and Karmakar, Dipti and Begum, Syeda Nurunnesa and Ali, Syed Yakub and Patra, Pulak Kumar, 2021 Recent trends in the analysis of trace elements in the field of environmental research: A review, Microchemical Journal, p.1060-86.
15. Hossain, Mobarok and Patra, Pulak Kumar, 2021, Investigation of groundwater quality in for agricultural use in a lateritic soil belt, Indian Journal of Environmental Protection, v.41 p.34-41.
16. P. Bose, M. Roy and P.K Patra, 2021, Evaluation of long-term different nutrient management practices on crop productivity and soil quality in rice (Oryza sativa)-potato (Solanum tuberosum)-groundnut (Arachis hypogaea) cropping system in new alluvial soil zone of West Bengal, India Plant Archives Vol. 21, Supplement 1, 2021 pp. 2383-2392
17. Mobarok Hossain, Pulak Kumar Patra, Buddhadev Ghosh, Amina Khatun and Sukanta Nayek, 2021 Sensitive assessment of groundwater-associated, multi-exposure health hazards in a fluoride-enriched region of West Bengal, India, *Env. Geochem Health*, v.43**,** p.4515–4532
18. Suman Samanta, Saon Banerjee, Pulak Kumar Patra, Vinay Kumar Sehgal, Abbhijit Chowdhury, Balwant Kumar, Asis Mukherjee, 2021 Projection of future daily global horizontal irradiance under four RCP scenarios: An assessment through newly developed temperature and rainfall-based empirical model, *Solar Energy* 227 (2021) 23–43.
19. Priyanka Biswas, Mobarok Hossain, Pulak Kumar Patra, 2023 Arsenic hydrogeochemistry, quality assessment, and associated health risks of groundwater through the novel water pollution index (WPI) and GIS approach Groundwater for Sustainable Development v.21 p.100944.
20. Ghosh, B.; Padhy, P.K.; Niyogi, S.; Patra, P.K.; Hecker, M. A, 2023 Comparative Study of Heavy Metal Pollution in Ambient Air and the Health Risks Assessment in Industrial, Urban and Semi-Urban Areas of West Bengal, India: An Evaluation of Carcinogenic, Non-Carcinogenic, and Additional Lifetime Cancer Cases. Environments, v.10, p10110190. https://doi.org/ 10.3390/environments10110190

Sponsored Projects

- UGC Major Research Project **(**F. 3-24-2004) 2004-2007
  ‘Wetlands and ponds of Santiniketan: impact of pollution on water quality and biodiversity.’ Co- Principal Investigator

- UGC Major Research Project (F. 41-1008-2012) 2012-2015
  ‘Hydrogeochemical and Stable isotope investigations on the fluoride enrichment processes of groundwater in parts of Birbhum district, West Bengal, India.’
  Principal Investigator

- SPARC-MHRD (IIT Kharagpur) International collaborative Project (Project code P1389) 2019- 2023. ‘Fine particulate matters in the air environment and their cancer risks in human being.’ Co- Principal Investigator

- MoE-STARS (IISC, Bangalore)/STARS-2 Project (Code 2023-0906) 2023-2026 ‘Predictive modelling of sea level rise and saltwater intrusion into aquifers along the coastal zone of West Bengal and Odisha.’ Principal Investigator

Patent: 1 (One)
Sibdas Bandyopadhyay, Indrani Mukherjee, Umesh Kumar Singh, Pulak Kumar Patra

Process for preparation of absorbent material for production of low fluoride drinking water” (Patent Number- 370358 granted on 25-06-2021, Application no. 201711018552 Dated: 26-May-2017)