

# Curriculum Vitae

## **Corresponding Address:**

Mantaqi Centre for Science and Society, Islamic University of Science and Technology, University Avenue, Awantipora, Pulwama, Pin-192122 Jammu and Kashmir



**Position:** Dr. DS Kothari Fellow

## **Personal details:**

**Name:** Dr. Rayees Ahmad Shah

**Father's name:** Wali Mohmad Shah

**D.O.B:** 01 September 1991      **Sex:** Male

**Contact No.** +917006366411; **E-mail ID:** [shahrayees04@gmail.com](mailto:shahrayees04@gmail.com); [rayees.shah@iust.ac.in](mailto:rayees.shah@iust.ac.in)

**Language Proficiency:** English.

**Specialization/ Research Interest:** Palaeoclimatology, Palaeolimnology, Biogeochemistry, Environment Geology, Palaeopedology, Geomorphology, Geochemistry etc.

**Software skills:** OxCal, C2, DRAC, Coral Draw, SigmaPlot, SPSS, Triplot, MS Office etc.

**Instrument Specialization:** Accelerator mass spectrometer, Ionplus AGE Graphitizing Unit for AMS <sup>14</sup>C Dating, Vacuum Glass Line Graphitizing Unit (Indigenous developed system), Isotope Ratio Mass Spectrometer, Lexsyg Smart OSL reader, X-ray fluorescence.

## **Educational Qualification and Research Experience:**

Qualification/ Experience	Institute	University/Department	Year
Senior Project Associate	Centre of excellence for Glacial studies in western Himalaya	University of Kashmir	October 2020 – Feb 2022
PDF	Physical Research Laboratory	Dept. of Space, Govt. of India	March 2019 - October 2020
Ph.D. Geology	Department of Geology	Anna University, Chennai	2015 - 2019
M.Sc. (Applied Geology)	Department of Earth Science	University of Kashmir	2012 - 2014
B. Sc. (Geology, Zoology, Chemistry, English & Environmental Science)	S.P. College Srinagar	University of Kashmir	2009 - 2011

**Ph.D. Thesis Title:** *Reconstruction of the Late Quaternary Palaeoclimate using Lake and Loess Palaeosol Sediments, Kashmir Valley, North-Western Himalayas*

### **Awards & Competitive Examination Qualified:**

- UGC-Dr. D.S. Kothari Post-Doctoral Fellowship (September 2021)
- Institute postdoctoral fellowship by Physical Research Laboratory (March 2019)
- DST-PURSE Ph.D. research fellowship. (Feb 2015- Feb 2018)
- CSIR-NET in earth, atmospheric, ocean and planetary sciences. (June 2016)
- NCC “C” certificate in navel wing. (Jan 2012)

### **Reviewer Role in Journals**

- Catena
- Aquatic Geochemistry
- Quaternary International
- Episodes
- Journal of Hydrology: Regional Studies
- Sustainable Environment Research
- Acta Ecologica Sinica
- Groundwater for Sustainable Development
- Journal of the Geological Society of India
- Applied Water Sciences
- Environmental and Sustainability Indicators
- Frontiers in Earth Science
- Arabian Journal of Geosciences

### **Research Publications**

1. **Shah RA**, Rahman A, Yadava MG & Kumar S\* (2023). Mid-Late Holocene palaeoclimate and biogeochemical evolution of the Wular Lake, Kashmir Valley, India. *Journal of Quaternary Science*. <https://doi.org/10.1002/jqs.3565> **Impact Factor: 2.76**
2. Rahman A, **Shah RA**, Ajayeta R, Yadava MG & Kumar S\* (2023). Transport pathways of black carbon to a high mountain Himalayan Lake during late Holocene: Inferences from nitrogen isotopes of black carbon. *Palaeogeography, Palaeoclimatology, Palaeoecology*. <https://doi.org/10.1016/j.palaeo.2023.111865> **Impact Factor: 3.56**
3. Verma S, Rahman A, **Shah RA**, Agrawal RK, Yadava MG & Kumar S\* (2023). Late Holocene fire and precipitation history of the Kashmir Himalaya: Inferences from black carbon in lake sediments. *Palaeogeography, Palaeoclimatology, Palaeoecology*. <https://doi.org/10.1016/j.palaeo.2023.111401> **Impact Factor: 3.56**

4. **Shah RA\***, Khan I, Rehman A, Kumar S, Achyuthan H, Shukla AD, Kumar P & Dash C (2022). Holocene climate events and associated land use changes in the eastern coast of India: Inferences from the Chilika Lagoon. *The Holocene*. <https://doi.org/10.1177/09596836221106964> **Impact Factor: 2.77**
5. Lone AM, Singh SP\*, **Shah RA**, Achyuthan H, Ahmad N, Qasim A, Tripathy GR, Samanta A & Kumar P (2022). The late Holocene hydroclimate variability in the Northwest Himalaya: Sedimentary clues from the Wular Lake, Kashmir Valley. *Journal of Asian Earth Sciences*. <https://doi.org/10.1016/j.jseaes.2022.105184> **Impact Factor: 3.44**
6. Dash C, Shankar R, Pati P, Manjunatha BR, **Shah RA** & Jose J (2022). Changes in the Indian Summer Monsoon during the past 600 years: A high-resolution record from the Anshupa Lake, Upper Mahanadi Delta, Core Monsoon Zone of India, *Asian Earth Sciences*. <https://doi.org/10.1016/j.jseaes.2021.105048> Impact Factor: 3.44
7. **Shah RA\***, Achyuthan H, Lone AM, Jaiswal MK & Paul D (2021). Constraining the timing and deposition pattern of loess-palaeosol sequences in Kashmir Valley, Western Himalaya: Implications to paleoenvironment studies. *Aeolian Research*. <https://doi.org/10.1016/j.aeolia.2020.100660> **Impact Factor: 3.33**
8. **Shah RA\***, Achyuthan H, Lone A, Kumar P, Ali A & Rahman A (2021). Palaeoenvironment Shifts During Last ~500 Years and Eutrophic Evolution of the Wular Lake, Kashmir Valley, India. *Limnology*. <https://doi.org/10.1007/s10201-020-00639-7> **Impact Factor: 1.57**
9. **Shah RA\***, Achyuthan H, Krishnan H, Lone A, Saju S, Ali A, Lone SA, Malik SM & Dash C (2021). Heavy metal concentration and ecological risk assessment in surface sediments of Dal Lake, Kashmir Valley, Western Himalaya. *Arabian Journal of Geosciences*. <https://doi.org/10.1007/s12517-021-06504-w> **Impact Factor: 1.82**
10. Lone AM\*, Sharma S, Achyuthan H, Shukla AD, **Shah RA**, Sangode SJ & Fousiya AA (2021) Climatic implications of late Holocene loess and intervening paleosols, Southern Zaskar range, northwestern Himalaya. *Physical Geography*. <https://doi.org/10.1080/02723646.2021.1938501> **Impact Factor: 2.08**
11. **Shah RA\***, Achyuthan H, Lone AM, Kumar S, Kumar P, Sharma R, Amir M, Singh AK & Dash C (2020). Holocene palaeoenvironmental records from the high-altitude Wular Lake, Western Himalayas. *The Holocene*. <https://doi.org/10.1177/0959683619895592> **Impact Factor: 2.77**
12. **Shah RA\***, Achyuthan H, Sangode SJ, Lone AM & Rafiq M (2020). Mineral magnetic and geochemical mapping of the Wular Lake sediment, Kashmir Valley, NW Himalaya. *Aquatic Geochemistry*. <https://doi.org/10.1007/s10498-019-09364-9> **Impact Factor: 1.51**

13. **Shah RA\***, Achyuthan H, Lone AM, Lone SA & Malik SM (2020). Environmental risk assessment of lake surface sediments using trace elements: A case study of the Wular Lake. *Journal of the Geological Society of India*. 95:145-151. <https://doi.org/10.1007/s12594-020-1403-6> **Impact Factor: 1.46**
14. Gopal V\*, Achyuthan H, **Shah RA** & Jayaprakash M (2020). Physicochemical characteristics and spatial distribution pattern of the Yercaud Lake surface sediments, South India. *Geological Journal*. <https://doi.org/10.1002/gj.4023> **Impact Factor: 2.49**
15. Dash C\*, Jaiswal MK, Pati P, Patel NK, Singh AK & **Shah RA** (2020). Fluvial response to Late Quaternary sea level changes along the Mahanadi delta, east coast of India. *Quaternary International*. <https://doi.org/10.1016/j.quaint.2020.07.033> **Impact Factor: 2.13**
16. Lone AM, Achyuthan H\*, **Shah RA**, Sangode SJ, Kumar P, Chopra S & Sharma R (2020). Paleoenvironmental shifts spanning the last ~6000 years and recent anthropogenic controls inferred from a high-altitude temperate lake: Anchar Lake, NW Himalaya. *The Holocene*. <https://doi.org/10.1177/0959683619865599> **Impact Factor: 2.77**
17. Babeesh C\*, Achyuthan H, Resmi M.R, Nautiyal CM & **Shah RA** (2019). Late Holocene Paleoenvironmental Shifts Inferred from Manasbal Lake Sediments, Kashmir Valley: A Multi-Proxy Approach. *Quaternary International*. 507: 156-171. **Impact Factor: 2.13**
18. **Shah RA\***, Achyuthan H, Puthan-Veetil R, Derwaish U & Rafiq M (2019). Sediment distribution pattern and environmental implications of physico-chemical characteristics of the Akkulam-Veli Lake, South India. *Applied Water Science*. v.9: 188. <https://doi.org/10.1007/s13201-019-1054-1> **Impact Factor: 3.87**
19. **Shah RA\*** & Lone SA (2019). Hydrogeomorphological mapping using geospatial techniques for assessing the groundwater potential of Rambiarra river basin, western Himalayas. *Applied Water Sciences*. 9: 64. <https://doi.org/10.1007/s13201-019-0941-9> **Impact Factor: 3.87**
20. Lone, A, Achyuthan H\*, **Shah RA** & S.J Sangode (2018). Environmental magnetism and heavy metal assemblages in lake bottom sediments of Anchar, Srinagar, NW Himalaya, India. *International journal of environmental research*. <https://doi.org/10.1007/s41742-018-0108-9> **Impact Factor: 2.48**
21. **Shah RA**, Achyuthan H\*, Jose P, Lone AM & K Geethanjali (2018). Ferricretes of Sriperumbudur: Micromorphology and Geochemistry. *Journal of the Geological Society of India*. 91: 411-417. **Impact Factor: 1.46**

22. Lone AM, **Shah RA**, Achyuthan H\* & Rafiq M (2018). Nutrient Dynamics and Source Identification of Organic Matter in Freshwater Lake Surficial Sediments, Kashmir Valley. *Himalayan Geology*. 9(1): 101-114. **Impact Factor: 1.29**
23. Lone AM, Fousiya AA, **Shah RA** & Achyuthan H\* (2018). Reconstruction of Paleoclimate and Environmental Fluctuations since the Early Holocene period using OM and C/N proxy records: A review. *Journal of the Geological Society of India*. 91(2): 209-214. **Impact Factor: 1.46**
24. Lone A, **Shah RA**, Achyuthan H & Fousiya AA\* (2018). Geochemistry, Spatial Distribution and Environmental Risk Assessment in Surface Sediments of Freshwater Anchar Lake, Kashmir Himalayas. *Environmental Earth Sciences*. DOI: 10.1007/s12665-018-7242-8 **Impact Factor: 2.78**
25. Agarwal KK\*, **Shah RA**, Achyuthan H, Singh DS, Srivastava S & Khan I (2018). Neotectonic activity from Karewa Sediments, Kashmir Himalaya, India. *Geotectonics*. 52(1): 88-99. **Impact Factor: 1.12**
26. **Shah RA**, Achyuthan H\*, Lone AM & Ramanibai R (2017). Diatoms, Spatial Distribution and Physicochemical Characteristics of Wular Lake Sediments, Kashmir Valley, Kashmir. *Journal of the Geological Society of India*. 90(2): 159-168. **Impact Factor: 1.46**

## Book chapters

1. Achyuthan H\*, Lone AM, **Shah RA** & Fousiya AA (2020). Climate, C/N Ratio and Organic Matter Accumulation: An Overview of Examples from Kashmir Himalayan Lakes. In: Dimri A, Bookhagen B, Stoffel M, Yasunari T. (eds) *Himalayan Weather and Climate and their Impact on the Environment*. Springer, Cham. [https://doi.org/10.1007/978-3-030-29684-1\\_11](https://doi.org/10.1007/978-3-030-29684-1_11)
2. **Shah RA**, Lone AM, Achyuthan H\* & Ali A (2017). Reconstruction of the Indian summer monsoon fluctuations since the early Holocene using lake and ocean sediment cores from southern India: extreme events and palaeoenvironment. In: Deo SG, Baptista A, Joglekar J. (eds) *Rethinking the Past: A Tribute to Professor V.N. Misra. Indian Society of Prehistoric and Quaternary Studies (ISPQS), Department of Archeology, Deccan College Pune*. ISBN No: 978-81-908330-6-6. pp. 111-117.

## Conference and Workshops Attended

1. '21th INQUA Congress', 14 - 21 July 2023, Rome, Italy.

2. 'PAGES 6th Open Science Meet – 2022', Agadir, Morocco from 16-05-2022 to 20-05-2022.
3. 'Virtual DEUQUA – 2021' Online (Germany), 30-09-2021 to 01-10- 2021.
4. International Virtual Conference on 'EARTH'S CHANGING CLIMATE: Past, Present & Future' 15-17 October 2020 Organized by The Society of Earth Scientists Co-organized by Birbal Sahni Institute of Palaeosciences, Lucknow
5. '20th INQUA Congress', 25 - 31 July 2019, Dublin, Ireland.
6. 'International conference on Advances in Chemical Sciences and Allied fields of Sciences, health, Education and Environment', 8-10 March 2018, Career College Bhopal.
7. 'International conference on Energy, Environment and industrial Safety SALVATIO 18', 22-23 February 2018, Anna University, Chennai.
8. 'Recent Advances in Earth and Atmospheric Monitoring from space', February 21-22, 2017. Centre for Remote Sensing and Geoinformatics, Sathyabama University, Chennai.
9. 'Advances in Water Resource and Environment Research', June 29-30, 2017. Centre for Remote Sensing and Geoinformatics, Sathyabama University, Chennai.
10. 'XXVI – Indian Colloquium on Micropaleontology and Stratigraphy', August 17 - 19, 2017 Department of Geology, University of Madras.
11. Workshop on 'Geochronology', 16-17 November, 2017, Inter University Accelerator Center, New Delhi-110067.
12. Training course on 'Quantitative reconstructions and numerical methods for analysis of past climate variability using diatoms', 21-24 November, 2017, National Centre for Antarctic and Ocean Research (NCAOR) and Norwegian Polar Institute (NPI) Norway at NCAOR, Goa - 403804.
13. 'Placer Mineral Resources and Sedimentary Environments', March 17-18, 2016. Department of Geology, University of Madras, Chennai - 25.
14. Workshop on 'Accelerator Mass Spectrometry', April 21-23, 2016. Inter University Accelerator Centre, New Delhi-110067.