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Personal Information:

Family name and name: Ali, Shakir

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Education:

2017-2022 Ph.D in Hydrogeochemistry, University of Delhi, India
2014-2017 M.Phil in Hydrogeochemistry, University of Delhi, India
2010-2012 M.Tech in Geo-Exploration, IIT Bombay, India
2006-2008 M.Sc in Applied Geology (Hons.), AMU Aligarh, India
2003-2006 B.Sc in Geology (Hons.), AMU, Aligarh, India

Current position:

Independent researcher from 16/05/2024 to present in Jal Jeevan Mission.

Professional experience:

2023-2024 Research Associate at Water Centre, MRIIRS, Faridabad, India. Worked in the one of the flagship programs of Govt. of India, “**Jal Jeevan Mission**” launched to supply water to every household. My responsibilities were to assist and advise HWRA (Haryana Water Resources Authority) in various water related schemes. Also, I assisted HWRA in smooth conducting of workshops. This includes all the water related Departments of Haryana state Govt. such as, Irrigation, Agriculture, Lakes and Ponds, Fisheries etc. and help them to prepare various research projects for funding.

2008-2009 Worked as Junior Research Fellow at IIT Roorkee on a project entitled “Development on Hydroinformation System for Ramganga Watershed in Uttarakhand State. Worked on ERDAS IMAGINE and Arc-GIS and developed hydroinformation system for Ramganga watershed which lies in the amidst of Himalayas.

Honors and awards:

- Qualified **Geological Survey of India Exam** with all India **134th** rank in 2009.
- All India Rank **109th** in **GATE** exam, conducted by the IITs and IISc in 2010.
- All India Rank **406th** in **GATE** exam, conducted by the IITs and IISc in 2017.
- All India Rank **42th** in **CSIR-NET** exam in 2014.
- All India Rank **60th** in **CSIR-NET** exam in 2018.
- All India Rank **10th** in **CSIR-NET** exam in 2019.
- Received C.I.S.F scholarship in every standard for securing first division during schooling from Govt. of India.

Teaching experiences:

- Taught as Guest Faculty (Assistant Professor), HP University, Dharamshala, PG College India. Taught Hydrogeology and Sedimentology to M.Sc. students from 2013-2014.
- Taught as Guest Faculty (Assistant Professor), HP University, Dharamshala, PG College India. Taught Hydrogeology and Sedimentology to M.Sc. students from 2016-2017.

Projects:

Granted project from Delhi Metro Rail Corporation R & D consultancy project of **6773 US dollars** entitled “Groundwater impact assessment study for Yamuna Bank depot”. Conducted short duration pumping test of batteries of tube wells along Yamuna River and identified aquifer parameters in 2018.

Journal publications:

- Saha, D., Dwivedi, S.N. and **Ali, S***, 2024. Research on groundwater science and management in India. *Proceedings of the Indian National Science Academy*, pp.1-14. (I led the article as a corresponding author).
- Zaryab*, A., Farahmand, A., Jafari, Z., **Ali, S***, Alijani, F. and Nassery, H.R., 2024. Geochemical evolution of spring waters in carbonate dominated aquifer in Upper Shirin Tagab sub-basin, northern Afghanistan. *Groundwater for Sustainable Development*, p.101102. (I led the article as a second corresponding author).
- **Ali, S.**, Mehri, F., Nasiri, R. et al. Fluoride in Raw Rice (*Oryza sativa*): A Global Systematic Review and Probabilistic Health Risk Assessment (2023). *Biol Trace Elem Res*. <https://doi.org/10.1007/s12011-023-04004-4>. (I led the article as a first author).
- **Ali S***, Shashank Shekhar, Rakesh Kumar, K Brindha, Peiyue Li (2023) Genesis and Mobilization of Fluoride in Groundwater of India: Statistical Evaluation, Health Impacts, and Potential Remedies, *Journal of Hazardous Materials Advances*. doi: <https://doi.org/10.1016/j.hazadv.2023.100352>. (I led the article as a first and corresponding author. This article was based on my Ph.D Thesis).
- Zaryab*, A., Farahmand, A., Nassery, H.R., Alijani, F., **Ali, S***, Jamal, M.Z., 2023. Hydrogeochemical and isotopic evolution of groundwater in shallow and deep aquifers of the Kabul Plain, Afghanistan. *Environ. Geochem. Health*, <https://doi.org/10.1007/s10653-023-01734-1>. (I led the article as a second corresponding author).
- Amiri, V., **Ali, S.**, Sohrabi, N. et al. (2023) Hydrogeochemical evaluation with emphasis on nitrate and fluoride in urban and rural drinking water resources in western Isfahan province, central Iran. *Environ Sci Pollut Res*. <https://doi.org/10.1007/s11356-023-30001-0>. (I led the article as a second author. My role was to advise and help the first author to extract scientific outcome from the generated data).
- **Ali, S***, Shekhar, S*, Chandrasekhar, T., Yadav, AK., Arora, NK., Kashyap CA., Rai SP., Pande, P., Bhattacharya, P., & Chandrasekharam, D (2021) Influence of the water sediment interaction on the major ions chemistry and high fluoride in groundwater of the Older Alluvium Plains of Delhi, India. *Jour Earth system science*. <https://doi.org/10.1007/s12040-021-01585-3>. (I led the article as a first author. This article was based on my Ph.D Thesis).
- Kashyap, CA*, Arindam, G., Swati, S., **Ali, S.**, Singh, HK., et al (2020) Distribution, genesis and geochemical modelling of fluoride in the water of Tribal area of Bijapur district, Chhattisgarh, Central India. *Groundwater for Sustainable Development* <https://doi.org/10.1016/j.gsd.2020.100403>. (I was placed as a fourth author in the research article. I assisted first author in generating the scientific outcomes from the data and helped in writing).
- Saha, D*, Shekhar, S., **Ali, S.**, Elango, L., & Vittala, SS., (2019). Recent Scientific Perspectives on the Indian Hydrogeology. *Proceedings of the Indian National Science Academy*. (I collected all the literature and provided a substantial section in the article).

- **Ali, S.,** Kumar, S., & Shekhar, S* (2019) A glimpse of spatio-temporal variation in dynamic groundwater resources of National Capital Region, Delhi. *Geostatistics and Geospatial Technologies for Groundwater Resources in India*, Edited Volume, Springer. (I led the article as a first author).
- **Ali, S*,** Fakhri, Y*, Golbini, M., Thakur, S. K., Alinejad, A., Parseh, I., ... & Bhattacharya, P. (2019). Concentration of fluoride in groundwater of India: A systematic review, meta-analysis and risk assessment. *Groundwater for Sustainable Development*, 100224 (<https://doi.org/10.1016/j.gsd.2019.100224>). (I led the article as a first and corresponding author. This article was based on my Ph.D Thesis).
- Bay, A., **Ali, S.,** Ghezelsofla, M., Keramati, H., Moradi, B., & Fakhri, Y*, (2018). Dataset on non-carcinogenic risk via nitrate and nitrite in the groundwater of Divandarreh County, Kurdistan province, Iran: A potential concern for drinking. *Data in brief*, 20, 1822-1828. (I led the article as a second author. I helped in formulas to generate the results from the data).
- **Ali, S*,** Shekhar, S*, Bhattacharya, P., Verma, G., Chandrasekhar, T., & Chandrashekhar, A.K (2018) Elevated fluoride in groundwater of Siwani Block, Western Haryana, India: A potential concern for sustainable water supplies for drinking and irrigation. *Groundwater for Sustainable Development* (doi. 10.1016/j.gsd.2018.05.008). (I led the article as a first and corresponding author).
- **Ali, S*,** Thakur, S. K., Sarkar, A., & Shekhar, S., (2016) Worldwide contamination of water by fluoride. *Environmental chemistry letters*, 14(3), 291-315 (<https://doi.org/10.1007/s10311-016-0563-5>). (I led the article as a first and corresponding author. This article was the outcome of my M.Phil thesis).
- Saha, D., Shekhar, S., **Ali, S*,** Vittala, SS., & Raju, NJ., (2016). Recent hydrogeological research in India. *Proceedings of the Indian National Science Academy*, 82(3), 787-803 (doi: 10.16943/ptinsa/2016/48485). (I led the article as a corresponding author).
- Mathew, G*, De Sarkar, S., Pande, K. Dutta S., **Ali, S.,** Rai, A., & Netravali, S., (2013) Thermal metamorphism of the Arunachal Himalaya, India: Raman thermometry and thermochronological constraints on the tectono-thermal evolution. *International Journal of Earth Sciences* (doi: 10.1007/s00531-013-0904-6). (I was placed as a fifth author. This article was based on my M.Tech thesis, sixth author M.Tech thesis and first author Ph.D Thesis).

Book chapters:

- **Ali, S*.** (2023). Uncovering Fluoride Contamination in Groundwater of Arid and Semi-Arid Regions: Stigma to Solutions. In: *The Handbook of Environmental Chemistry*. Springer, Berlin, Heidelberg. https://doi.org/10.1007/698_2023_1060. (I led the book chapter).
- Bahir, M., el Mountassir, O., **Ali, S. (2023)**. Understanding Seawater Intrusion by Hydrochemical Parameters and Stable Water Isotopes Along the Coastal Alluvial Aquifers of the Essaouira Basin, Morocco. In: *The Handbook of Environmental Chemistry*. Springer, Berlin, Heidelberg. https://doi.org/10.1007/698_2023_1059. (I was placed as a third author. I helped in the environmental isotope sections).
- Kumar R., **Ali S.,** Sandun Sandanayake S., Islam M.A., Ijumulana J., Maity J.P., Vithanage M., Armienta M.A., Sharma P., Hamisi R., Kimambo V., Bhattacharya P*. (2023) Fluoride as a global groundwater contaminant Naidu R. (Ed.), *Inorganic Contaminants and Radionuclides*, Elsevier, The Netherlands. <https://doi.org/10.1016/B978-0-323-90400-1.00010-0>. (I led the chapter as a second author. I worked very closely with first author in all sections of the chapter).
- Sarkar, A., **Ali, S.,** Kumar, S., Shekhar, S*, & Rao, SVN., (2016) Groundwater environment in Delhi, India. In *Groundwater Environment in Asian Cities* (pp. 77-108). Butterworth-Heinemann <https://doi.org/10.1016/B978-0-12-803166-7.00005-2>. (I led the chapter as a second author. I worked very closely with first author in finalization of all sections in the chapter).

- Kumar, S., Sarkar, A., **Ali, S.**, & Shekhar, S.,* (2018). Groundwater System of National Capital Region Delhi, India. In *Groundwater of South Asia* (pp. 131-152). Springer, Singapore (https://doi.org/10.1007/978-981-10-3889-1_9). (I led the chapter as a third author. I helped the corresponding author in generating all the figures and finalization of chapter).

Edited books:

- Groundwater in Arid and Semi-Arid Areas: Monitoring, Assessment, Modelling, and Management (2023); Editors **Shakir Ali and Asaad Armanuos**. Springer Publication ISBN NO. 978-3-031-43348-1 (**Available at** <https://link.springer.com/book/9783031433474>). (I am the leading and senior editor in the book).
- Groundwater Quality and Geochemistry in Arid and Semi-Arid Areas (2024); Editors **Shakir Ali and Abdelazim Negm**. Springer Publication. (**Available at** <https://link.springer.com/book/9783031537769>). (I am the leading and senior editor in the book).
- Groundwater in Developing Countries (2025); Editors **Shakir Ali and Abdelazim Negm**. Springer Publication (**Available at** <https://link.springer.com/book/9783031791215>). (I am the leading and senior editor in the book).

Conference publications:

- Hydrogeochemical assessment of fluoride toxicity, sources, and health hazards in the bongo district of the upper east region, Ghana. **GSA-2023, Pennsylvania, USA.**
- Attended HWRA, Haryana state Conference on **Water Conclave** during 25-26 April 2023 held at Panchkula, Haryana and attended by CM Haryana and other top notched Haryana Water Departments. I worked as a knowledge partner in the conference.
- **Ali, S***, Shekhar, S., Ray, JS., Yadav, AK., & Kant, A., (2020) A glimpse into the seasonal variations in the stable isotope signatures in groundwater of Delhi, India. Paper submitted in IGC 2020 conference scheduled to be held in Noida, Delhi NCR, but couldn't held due to COVID-19.
- **Ali, S***, Shekhar, S., Chandrasekhar, T., & Bhattacharya, P., (2020) Major ions chemistry and non-carcinogenic health risk assessment of fluoride in groundwater of the alluvial plains of River Yamuna, Delhi, India. Paper submitted in WRAA 2020 Muscat, Oman.
- Yadav, AK., Shekhar, S*, Yadav, HK., **Ali, S.**, et al., (2019) Characterization of arsenic pollution in alluvial aquifers of the NCT Delhi. Poster presented in 8TH International groundwater IGWC 2019 conference held at IIT Roorkee.
- **Ali, S***, & Savita., (2014) Role of Himalaya in arsenic contaminated groundwater: An Indian perspective. Paper presented in Water conservation and management issues in Himalayas. Workshop conducted by CGWB Dharamshala, India. (Received the award of best paper presentation).

Academic achievements:

- Launched an especial issue in Springer Water Journal on “**Recent Advances in Groundwater Contamination Assessment, Risk Assessment, and Sustainable Remediation Strategies (RAGRS)**” with University of Johannesburg, South Africa in 2024. (I am leading the issue as a third editor).
- Secured 1080+ google scholar citations till date (<https://scholar.google.com/citations?user=4OujJjIAAAAJ&hl=en>).

Advisory in M.Sc Thesis:

- Conducted field work in and around Dharamshala, Kangra HP, India and guided M.Sc students in preparing **field report on geological mapping** in 2013, 2014, 2016 and 2017 at HP University, Regional Centre, Dharamshala, Western Himalayas, India. (Guided all the M.Sc students in their thesis)
- Guided M.Sc. student thesis at University of Delhi on “**Lead in the soils, sediments, and aqueous environment: A review on the mobilization, occurrence and remediation**” in 2020. The thesis is further extensively elaborated and submitted in Springer Journal “Environmental Chemistry Letters” having Impact Factor of 15 and currently under review in which I am the corresponding author.
- Guided M.Sc. student thesis at University of Delhi on “**A review on the Submarine Groundwater Discharge along the Coastal areas of India**” in 2021. The thesis is further extended and currently working to publish as a scientific review article. I am the second, and corresponding author of the article and collaborating with James Cook University, Australia and American University, Washington D.C, USA.

Reviewers in international per reviewed journals:

- Reviewer of Groundwater for Sustainable Development, Journal Elsevier, Impact Factor 4.9. Reviewed 32 articles.
- Reviewer of Journal of Hydrology, Journal Elsevier, Impact Factor 5.9.
- Reviewer of Journal of Hazardous Material, Journal Elsevier, Impact Factor 6.

Workshops:

- Participated in intra department GEA and secured **second prize** in best paper presentation at IIT Bombay in 2011.
- Attended a workshop on Arc IMS at IIT Roorkee in 2008.

Practical skills:

- GW Vista (MODFLOW) for mathematical modelling.
- XRD and XRF for mineralogy.
- ICP-OES for heavy metals analysis.
- Ion-Chromatograph for various anions analysis.
- Arc GIS, Grapher and CorelDRAW for maps preparation.

Event organisation:

- Part of an international scientific committee in the 9th International Congress & Exhibition on Arsenic in the Environment to be held in India (<https://as2024.kiit.ac.in/>) from 20-24 Oct, 2024. Participating as a capacity of youth member in the advisory board.
- Proposed a short course on “Water Stewardship” in the 9th International Congress & Exhibition on Arsenic in the Environment to be held in India (<https://as2024.kiit.ac.in/>) from 20-24 Oct, 2024.

Public outreach:

- Corroborating with numerous top universities in India and Abroad such as Sweden, USA, Germany, Poland, Australia, Egypt, UK etc.
- URL google scholar: <https://scholar.google.com/citations?user=4OujJIAAAAJ&hl=en>