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Personal Details

- Father's Name: Motiur Rahman
- D.O.B: 02-10-1993
- Nationality: Indian
- Gender : Male
- Language Known: English, Urdu & Hindi.
- **Mailing Address:** Department of Geography, Institute of Science, Banaras Hindu University, Varanasi, Uttar Pradesh - 221005
- **Permanent Address:** Vil.- Barhampura, PO- Pohaddi Bela, PS- Ghanshyampur, District-Darbhanga (Bihar)- 847427

Education

- | | |
|-------------|---|
| 2018 – 2022 | ❖ Ph.D. Geography, Jamia Millia Islamia, New Delhi
Thesis Title: Impact of Urbanization on Climatic Conditions: A Comparative Analysis of Delhi and Mumbai Metro Cities using Geospatial Techniques |
| 2022-23 | ❖ Post Graduate Diploma in Geoinformatics, Jamia Millia Islamia, New Delhi
First Division with Distinction [84.30%] |
| 2015 – 2017 | ❖ M.A. Geography, Jamia Millia Islamia, New Delhi
First Division with Distinction [CGPA: 8.95 or 84.5%] |
| 2012 – 2015 | ❖ B.A. (H) Geography, Jamia Millia Islamia, New Delhi
First Division [CGPA: 8.49 or 71.23%] |
| 2010 | ❖ Intermediate (12th) from Bihar School Examination Board, Patna
First division [66.10%] |
| 2008 | ❖ Matriculation (10th) from Bihar School Examination Board, Patna
Second division [58.60%] |

Teaching Experience

27 Sept 2024 – till date	❖ Assistant Professor , Department of Geography, Institute of Science, Banaras Hindu University, Varanasi
11 Sept 2023 – 26 September 2024	❖ Assistant Professor (Contractual) Department of Geography, Jamia Millia Islamia, New Delhi
Aug 2020 – November 2022	❖ Teaching Assistant, Department of Geography, Jamia Millia Islamia, New Delhi Taught 5 Papers at Undergraduate and Post-graduate levels

Fellowships & Awards

National Post-Doctoral Fellowship (N-PDF) by Science and Engineering Research Board (SERB) under Department of Science and Technology (DST)	❖ 2024 [Did not avail]
Best paper Award in National Conference on Transforming India – Risk to Resilience jointly organized by Special Centre for Disaster Research (SCDR), Jawaharlal Nehru University (JNU) and Disaster Management Initiatives and Convergence Society (DMICS)	❖ March 15-17, 2023
Best paper Award in Internal Conference on Geography in the 21st Century: Navigating Trends, Tackling Challenges organised by Institute of Indian Geographers and University of North Bengal	❖ February 19-21, 2026
Senior Research Fellowship (SRF)	❖ January, 2020 – July 2022
Junior Research Fellowship (JRF)	❖ January, 2017 – December, 2019
Merit Scholarship for securing second position in M.A.	❖ 2017
Merit Scholarship for securing third position in B.A. (H)	❖ 2015

Honors & Memberships

Featured in **Global Top 2% Scientist List of 2025**, jointly published by Stanford University and Elsevier. <https://topresearcherslist.com/Home/Search?AuthFull=Shahfahad>

Editorial Board Member, **Discover Sustainability** [IF: 2.4, Scopus], Springer Nature Switzerland AG.

Editorial Board Member, **Discover Atmosphere** [Scopus], Springer Nature Switzerland AG.

Life Member, **National Association of Geographers, India** [Life Membership No. 2966].

Life Member, **Indian Society of Remote Sensing** [Life Membership No. L-6357]

Life Member, **Institute of Indian Geographers** [Life Membership No. L-1210]

Life Member, **National Geographical Society of India** [Life Membership No. L-510]

Books Authored/Edited

Mohammad, P., **Shahfahad.**, Comino, J. R., & Matamanda, A. R. (Eds.). (2025). *Geographic Approaches to Climate Change and Mitigation: Urban and Rural Perspectives (Volume 1)*. Springer. <https://doi.org/10.1007/978-3-031-92119-3>

Shahfahad., Mohammad, P., Comino, J. R., & Matamanda, A. R. (Eds.). (2025). *Geographic Approaches to Climate Change and Mitigation: Urban and Rural Perspectives (Volume 2)*. Springer. <https://doi.org/10.1007/978-3-031-92115-5>

Talukdar, S., **Shahfahad.**, Pal, S., Naikoo, M. W., Ahmed, S., & Rahman, A. (Eds.). (2024). *Water Resource Management in Climate Change Scenario: Innovations in Geospatial Techniques and Models*. Springer. <https://doi.org/10.1007/978-3-031-61121-6>

Rahman, A., Roy, S. S., Talukdar, S., & **Shahfahad.** (Eds.). (2023). *Advancements in urban environmental studies: application of geospatial technology and artificial intelligence in urban studies*. Springer Nature Switzerland AG. <https://doi.org/10.1007/978-3-031-21587-2>

Research Publications:

Journal Articles: 73

1. Islam, M. R., Rihan, M., Ansari, I., Talukdar, S., **Shahfahad.**, de Sherbinin, A., & Rahman, A. (2026). Evaluating the air pollutant attenuation potential of urban green infrastructure: insights from spatial field monitoring in Kolkata. *Spatial Information Research*, 34(4), 40.
2. Chanda, D., Poddar, S., Mukhopadhyay, U., Talukdar, S., **Shahfahad.**, & Rahman, A. (2026). Probabilistic Ensemble Machine Learning and Remote Sensing Integration for Betel Vine (Piper betle L.) Site-Suitability Assessment in Purba Medinipur District, India. *Applied Spatial Analysis and Policy*, 19(3), 150.
3. Kumar, N., Ahmad, M., Haq, I. U., Naikoo, M. W., **Shahfahad.**, & Asgher, M. S. (2026). Spatial assessment of water scarcity in the cold desert of Leh district, India using water poverty index. *Geology, Ecology, and Landscapes*, 1-16. <https://doi.org/10.1080/24749508.2026.2640692>

4. **Shahfahad.**, Rihan, M., Islam, M. R., Ansari, I., Talukdar, S., Siddiqui, A. M., Rahman, A. (2025). Decadal Pattern of Built-up Expansion and its Consequences on Urban Green and Blue Space Fragmentation. *Journal of the Indian Society of Remote Sensing*, 1-16. [Springer, IF: 2.2]. ISSN: 0974-3006. <https://doi.org/10.1007/s12524-024-02035-5>
5. Ahmed, I. A., Talukdar, S., Naikoo, M. W., **Shahfahad**, & Rahman, A. (2025). Multi-dimensional assessment of flood susceptibility drivers in the urban watershed of Guwahati. *Acta Geophysica*, 73(6), 5815-5837. <https://doi.org/10.1007/s11600-025-01666-7>
6. Rihan, M., Talukdar, S., Naikoo, M. W., Ahmed, R., **Shahfahad**, & Rahman, A. (2025). Improving Landslide Susceptibility Prediction in Uttarakhand through Hyper-Tuned Artificial Intelligence and Global Sensitivity Analysis: M. Rihan et al. *Earth Systems and Environment*, 9(4), 3405-3424. <https://doi.org/10.1007/s41748-024-00457-2>
7. Rihan, M., Naikoo, M. W., Neog, D., **Shahfahad**, Islam, M. R., Ansari, I., ... & Rahman, A. (2025). Integrated geospatial assessment of human footprint impact on regulating ecosystem services in the Himalayan urban landscape. *Urban Ecosystems*, 28(4), 172. <https://doi.org/10.1007/s11252-025-01784-6>
8. Ansari, I., Naikoo, M. W., Islam, M. R., Rihan, M., **Shahfahad.**, Talukdar, S., & Rahman, A. (2025). Variability and trend analysis in the extreme climatic conditions in Beas River Sub-Basin of the Western Himalayas: A geo-statistical and geospatial approach. *Physics and Chemistry of the Earth, Parts A/B/C*, 104112. <https://doi.org/10.1016/j.pce.2025.104112>
9. Rihan, M., Talukdar, S., Naikoo, M. W., Islam, M. R., **Shahfahad**, & Rahman, A. (2025). Optimizing land use/land cover mapping accuracy: A comprehensive analysis of random forest with explainable artificial intelligence based feature importance analysis. *Journal of the Indian Society of Remote Sensing*, 53(11), 3735-3754. <https://doi.org/10.1007/s12524-025-02229-5>
10. Naikoo, M. W., **Shahfahad**, Talukdar, S., Rihan, M., Ishtiaq, M., Roy, S. S., & Rahman, A. (2025). Mapping real estate-induced urban expansion in Delhi NCR: a synergy of artificial intelligence and geospatial models. *Earth Systems and Environment*, 9(3), 2079-2095. <https://doi.org/10.1007/s41748-025-00588-0>
11. Rihan, M., Mallick, J., Ansari, I., Islam, M. R., Hang, H. T., **Shahfahad**, & Rahman, A. (2025). Flash flood susceptibility modeling using optimized deep learning method in the Uttarakhand Himalayas. *Earth Science Informatics*, 18(1), 24. <https://doi.org/10.1007/s12145-024-01564-4>
12. Ansari, I., Rihan, M., Islam, M. R., Naikoo, M. W., Talukdar, S., **Shahfahad.**, Rahman, M. R., & Rahman, A. (2025). Soil erosion-induced watershed prioritization in the beas river sub-basin of the western himalayas: A multi-criteria decision-making and XAI-Based approach. *Physics and Chemistry of the Earth, Parts A/B/C*, 140, 104011. <https://doi.org/10.1016/j.pce.2025.104011>
13. **Shahfahad**, Naikoo MW, Das T, Talukdar S, Asgher MS, Asif, Rahman A (2024). Prediction of land use changes at a metropolitan city using integrated cellular automata: past and future. *Geology, Ecology, and Landscapes*, 8(3), 287-305. <https://doi.org/10.1080/24749508.2022.2132010>. {Taylor & Francis} ISSN: 2474-9508
14. **Shahfahad.**, Talukdar, S., Naikoo, M. W., Rahman, A. (2024). Urban expansion and vegetation dynamics: The role of protected areas in preventing vegetation loss in a

- growing mega city. *Habitat International*, 150, 103129. [Elsevier, IF: 6.8] ISSN: 1873-5428 <https://doi.org/10.1016/j.habitatint.2024.103129>
15. **Shahfahad.**, Talukdar, S., Naikoo, M. W., Rihan, M., Mohammad, P., & Rahman, A. (2024). Seasonal dynamics of land surface temperature and urban thermal comfort with land use land cover pattern in semi-arid Indian cities: Insights for sustainable Urban Management. *Urban Climate*, 57, 102105. <https://doi.org/10.1016/j.uclim.2024.102105>
 16. Islam, M. R., **Shahfahad**; Talukdar, S., Rihan, M., & Rahman, A. (2024). Evaluating Cooling Effect of Blue-green Infrastructure on Urban Thermal Environment in a Metropolitan City: Using Geospatial and Machine Learning Techniques. *Sustainable Cities and Society*, 113, 105666. <https://doi.org/10.1016/j.scs.2024.105666>
 17. Das, T., Talukdar, S., **Shahfahad**; Naikoo, M. W., Ahmad, I. A., Rahman, A., Islam, M. K., & Alam, E. (2024). Integration of fuzzy AHP and explainable AI for effective coastal risk management: A micro-scale risk analysis of tropical cyclones. *Progress in Disaster Science*, 100357. <https://doi.org/10.1016/j.pdisas.2024.100357>
 18. Naikoo, M. W., Bindajam, A. A., **Shahfahad.**, Talukdar, S., Tayyab, M., Mallick, J., Ishtiaq, M., & Rahman, A. (2025). Monitoring dynamics of urban expansion using time series Landsat imageries and machine learning in Delhi NCR. *Environment, Development and Sustainability*, 27, 27699–27732. <https://doi.org/10.1007/s10668-024-04859-0>
 19. Alshehri, F., **Shahfahad.**, & Rahman, A. (2024). Optimizing Machine Learning Models with Bayesian Techniques for Prediction of Groundwater Quality Index in Southwest Saudi Arabia. *Earth Systems and Environment*, [Springer, IF: 5.3] ISSN: 2509-9434. <https://doi.org/10.1007/s41748-024-00475-0>
 20. Das, T., **Shahfahad**, & Rahman, A. (2024). Assessing tropical cyclone risk for improving mitigation strategies in Coastal Odisha, India. *Environmental Science and Pollution Research*, 31, 53856–53876. <https://doi.org/10.1007/s11356-024-33017-2>
 21. Sarkar, S. K., Alshehri, F., **Shahfahad.**, Rahman, A., Pradhan, B., & Shahab, M. (2025). Mapping groundwater potentiality by using hybrid machine learning models under the scenario of climate variability: a national level study of Bangladesh. *Environment, Development and Sustainability*, 27, 19799–19827. <https://doi.org/10.1007/s10668-024-04687-2>
 22. Naikoo, M. W., **Shahfahad**, Talukdar, S., Rihan, M., Ahmed, I. A., Thi Hang, H., ... & Rahman, A. (2024). A Geospatial Approach to Mapping and Monitoring Real Estate-Induced Urban Expansion in the National Capital Region of Delhi. *PFG–Journal of Photogrammetry, Remote Sensing and Geoinformation Science*, 92, 177–200. <https://doi.org/10.1007/s41064-024-00278-y>
 23. Talukdar, S., **Shahfahad.**, Bera, S., Naikoo, M. W., Ramana, G. V., Mallik, S., Kumar, P. A., & Rahman, A. (2024). Optimisation and interpretation of machine and deep learning models for improved water quality management in Lake Loktak. *Journal of Environmental Management*, 351, 119866. <https://doi.org/10.1016/j.jenvman.2023.119866>
 24. Ahmed, I. A., Talukdar, S., Baig, M. R. I., **Shahfahad.**, Ramana, G. V., & Rahman, A. (2024). Quantifying soil erosion and influential factors in Guwahati's urban watershed using statistical analysis, machine and deep learning. *Remote Sensing Applications: Society and Environment*, 33, 101088. <https://doi.org/10.1016/j.rsase.2023.101088>
 25. Das, T., Talukdar, S., **Shahfahad**, Baig, M. R. I., Hang, H. T., Siddiqui, A. M., & Rahman, A. (2024). Assessing vulnerability to cyclones in coastal Odisha using fuzzy logic integrated AHP: towards effective risk management. *Spatial Information Research*, 32, 277–295. <https://doi.org/10.1007/s41324-023-00556-8>

26. **Shahfahad**, Bindajam, A. A., Naikoo, M. W., Talukdar, S., Asif, Mallick, J., & Rahman, A. (2023). Analysing diurnal temperature range and extreme temperature events over Delhi and Mumbai mega cities. *Natural Hazards*, 1-29. <https://doi.org/10.1007/s11069-023-06077-9> {**Springer, IF: 3.7**}, ISSN 1573-0840.
27. **Shahfahad**, Talukdar, S., Ghose, B., Islam, A. R. M. T., Hasanuzzaman, M., Ahmed, I. A., ... & Afzal, M. (2023). Predicting long term regional drought pattern in Northeast India using advanced statistical technique and wavelet-machine learning approach. *Modeling Earth Systems and Environment*, 1-22. <https://doi.org/10.1007/s40808-023-01818-y> {**Springer, IF: 3.0**}, ISSN 2363-6211.
28. **Shahfahad**, Ahmed Ali Bindajam, Mohd Waseem Naikoo, Juhi Priyanka Horo, Javed Mallick, Mohd Rihan, Manisha Dabral Malcoti, Swapan Talukdar, Rejaur Rahman, Atiqur Rahman (2023). Response of soil moisture and vegetation conditions in seasonal variation of land surface temperature and surface urban heat island intensity in sub-tropical semi-arid cities. *Theoretical and Applied Climatology*, <https://doi.org/10.1007/s00704-023-04477-2>, {**Springer, IF: 3.4**}. ISSN: 1434-4483,
29. Malcoti, M. D., Zia, H., Kabre, C., Hang, H. T., **Shahfahad**, & Rahman, A. (2023). Analysis of urban streets and surface thermal characteristics using thermal imaging camera in residential streets of Gurugram City, India. *Environmental Science and Pollution Research*, 30, 86892–86910. <https://doi.org/10.1007/s11356-023-28553-2> {**Springer, IF: 5.8**}, ISSN 1614-7499.
30. **Shahfahad**, Talukdar S, Naikoo MW, Rahman A, Gagnon AS, Islam, ARMT, Mosavi A (2023) Comparative Evaluation of Operational Land Imager sensor on board Landsat 8 and Landsat 9 for Land use Land Cover Mapping over a Heterogeneous Landscape. *Geocarto International*, 38(1), 2152496. <https://doi.org/10.1080/10106049.2022.2152496> {**Taylor and Francis, IF: 3.450**} ISSN: 1752-0762
31. Alqadhi, S., Bindajam, A. A., Mallick, J., **Shahfahad**., Rahman, A., & Talukdar, S. (2023). Mapping and evaluating sustainable and unsustainable urban areas for ecological management towards achieving low-carbon city: an empirical study of Asir Region, Saudi Arabia. *Environmental Science and Pollution Research*, 30, 65916–65932. <https://doi.org/10.1007/s11356-023-27129-4> {**Springer, IF: 5.190**} ISSN: 1614-7499
32. Talukdar, S., **Shahfahad**., Ahmed, S., Naikoo, M.W., Rahman, A., Mallik, S., Ningthoujam, S., Bera, S., Ramana, G.V. (2023). Predicting lake water quality index with sensitivity-uncertainty analysis using deep learning algorithms. *Journal of Cleaner Production*, 406, 136885. <https://doi.org/10.1016/j.jclepro.2023.136885> {**Elsevier, IF: 11.072**} ISSN: 1879-1786
33. Rihan, M., Bindajam, A. A., Talukdar, S., **Shahfahad**., Naikoo, M. W., Mallick, J., & Rahman, A. (2023). Forest Fire Susceptibility Mapping with Sensitivity and Uncertainty Analysis Using Machine Learning and Deep Learning Algorithms. *Advances in Space Research*, 72(2), 426-443. <https://doi.org/10.1016/j.asr.2023.03.026> {**Elsevier, IF: 2.611**} ISSN: 1879-1948
34. Bindajam AA, Mallick J, Talukdar S, **Shahfahad**, Shohan AAA, Rahman A (2023) Modeling the spatiotemporal heterogeneity of land surface temperature and its relationship with land use land cover using geo-statistical techniques and machine learning algorithms. *Environmental Science and Pollution Research*, 30, 106917–

106935 <https://doi.org/10.1007/s11356-022-23211-5> {Springer, IF: 5.190} ISSN: 1614-7499

35. Ahmad M, Kumari M, Kumar N, Goswami G, **Shahfahad**, Asgher M (2023). Assessing livelihood vulnerability to climate variability in the Himalayan region: a district-level analysis of Jammu Province, India. *GeoJournal*, 88, 3631–3650. <https://doi.org/10.1007/s10708-023-10829-2> {Springer} ISSN: 1572-9893
36. Ahmed IA, Talukdar S, Naikoo MW, **Shahfahad**, Parvez A, Pal S, Ahmed S, Rahman A, Islam ARMT, Mosavi A (2023) A new framework to identify most suitable priority areas for soil-water conservation using coupling mechanism in Guwahati urban watershed, India, with future insight. *Journal of Cleaner Production*, 382, 135363. <https://doi.org/10.1016/j.jclepro.2022.135363> {Elsevier, IF: 11.072} ISSN: 0959-6526.
37. Naikoo MW, **Shahfahad**, Talukdar S, Ishtiaq M, Rahman A (2023) Modelling built-up land expansion probability using the integrated fuzzy logic and coupling coordination degree model. *Journal of Environmental Management*, 325, 116441. <https://doi.org/10.1016/j.jenvman.2022.116441> {Elsevier, IF: 8.91} ISSN: 0301-4797
38. Talukdar S, Pal S, **Shahfahad**, Naikoo MW, Parvez A, Rahman A (2023) Trend analysis and forecasting of streamflow using random forest in the Punarbhaba River basin. *Environmental Monitoring and Assessment*, 195: 153. <https://doi.org/10.1007/s10661-022-10696-3> {Springer, IF: 3.307} ISSN: 1573-2959
39. **Shahfahad**, Naikoo M W, Islam ARMT, Mallick, J, Rahman A (2022) Land use/land cover change and its impact on surface urban heat island and urban thermal comfort in a metropolitan city. *Urban Climate*, 41, 101052. <https://doi.org/10.1016/j.uclim.2021.101052> {Elsevier, IF: 6.663} ISSN: 2212-0955
40. **Shahfahad**, Naikoo MW, Talukdar S, Das T, Rahman A (2022) Identification of homogenous rainfall regions with trend analysis using fuzzy logic and clustering approach coupled with advanced trend analysis techniques in Mumbai city. *Urban Climate*, 46, 101306. <https://doi.org/10.1016/j.uclim.2022.101306> {Elsevier, IF: 6.663} ISSN: 2212-0955
41. **Shahfahad**, Talukdar S, Islam A R M T, Das T, Naikoo M W, Mallick J, Rahman A (2022) Application of advanced trend analysis techniques with clustering approach for analysing rainfall trend and identification of homogenous rainfall regions in Delhi metropolitan city. *Environmental Science and Pollution Research*, 30, 106898–106916. <https://doi.org/10.1007/s11356-022-22235-1> {Springer, IF: 5.190} ISSN: 1614-7499
42. **Shahfahad**, Talukdar S, Ali R, Nguyen K A, Naikoo M W, Liou Y A, Islam A R M T, Mallick J, Rahman A (2022). Monitoring drought pattern for pre-and post-monsoon seasons in a semi-arid region of western part of India. *Environmental Monitoring and Assessment*, 194(6), 1-19. <https://doi.org/10.1007/s10661-022-10028-5> {Springer, IF: 3.307} ISSN: 1573-2959
43. **Shahfahad**, Talukdar S, Rihan M, Hang HT, Bhaskaran S, Rahman A (2022) Modelling urban heat island (UHI) and thermal field variation and their relationship with land use indices over Delhi and Mumbai metro cities. *Environment, Development and Sustainability*, 24, 3762–3790. <https://doi.org/10.1007/s10668-021-01587-7> {Springer, IF: 4.080} ISSN: 1573-2975

44. Das T, **Shahfahad**, Naikoo M W, Talukdar S, Parvez A, Rahman, A, Pal S, Islam A R M T, Mosavi A (2022). Analysing Process and Probability of Built-Up Expansion Using Machine Learning and Fuzzy Logic in English Bazar, West Bengal. *Remote Sensing*, 14(10), 2349 <https://doi.org/10.3390/rs14102349> {**MDPI, IF: 5.349**} ISSN: 2072-4292
45. Naikoo, M. W., Rihan, M., **Shahfahad**; Peer, A. H., Talukdar, S., Mallick, J., Ishtiaq, M., & Rahman, A. (2022). Analysis of peri-urban land use/land cover change and its drivers using geospatial techniques and geographically weighted regression. *Environmental Science and Pollution Research*, 30, 116421–116439. <https://doi.org/10.1007/s11356-022-18853-4> **Springer, IF: 5.190**} ISSN: 1614-7499
46. Abrar, R., Sarkar, S.K., Nishtha, K.T., Talukdar, S., **Shahfahad**., Rahman, A., Islam, A.R.M.T., Mosavi, A. (2022). Assessing the Spatial Mapping of Heat Vulnerability under Urban Heat Island (UHI) Effect in the Dhaka Metropolitan Area. *Sustainability*, 14, 4945 <https://doi.org/10.3390/su14094945> [**MDPI, IF: 3.889**]. ISSN: 2071-1050
47. **Shahfahad**, Rihan M, Naikoo MW, Ali MA, Usmani TM, Rahman A (2021) Urban Heat Island Dynamics in Response to Land use/Land cover Change in the Coastal City of Mumbai. *Journal of the Indian Society of Remote Sensing*, 49, 2227–2247 <https://doi.org/10.1007/s12524-021-01394-7> {**Springer, IF: 1.894**} ISSN: 0974-3006
48. **Shahfahad**, Mourya M, Kumari B, Tayyab M, Paarcha A, Asif, Rahman A (2021) Indices based assessment of built-up density and urban expansion of fast-growing Surat city using multi-temporal Landsat data sets. *GeoJournal*, 86, 1607–1623 <https://doi.org/10.1007/s10708-020-10148-w> {**Springer**} ISSN: 1572-9893
49. **Shahfahad**, Kumari B, Tayyab M, Hang HT, Khan MF, Rahman A (2019) Assessment of Public Open Spaces (POS) and Landscape Sustainability based on Per-capita POS Index: A Case Study of East Delhi. *SN Applied Sciences*, 1:368. <https://doi.org/10.1007/s42452-019-0372-0> {**Springer**} ISSN: 2523-3971
50. Naikoo MW, Rihan M, Ishtiaq M, **Shahfahad** (2020) Analyses of land use land cover (LULC) change and built-up expansion in the suburb of a metropolitan city: Spatio-temporal analysis of Delhi NCR using Landsat datasets. *Journal of Urban Management*, 9: 347–359 <https://doi.org/10.1016/j.jum.2020.05.004> {**Elsevier**} ISSN: 2226-5856
51. Baig, M. R. I., **Shahfahad**., Naikoo, M. W., Ansari, A. H., Ahmad, S., & Rahman, A. (2022). Spatio-temporal analysis of precipitation pattern and trend using standardized precipitation index and Mann–Kendall test in coastal Andhra Pradesh. *Modeling Earth Systems and Environment*, 8, 2733–2752. <https://doi.org/10.1007/s40808-021-01262-w> {**Springer**} ISSN: 2363-6211
52. Talukdar S, Singha P, **Shahfahad**, Mahato S, Praveen B, Rahman A (2020) Dynamics of ecosystem services (ESs) in response to land use land cover (LU/LC) changes in the lower Gangetic plain of India. *Ecological Indicators*, 112: 106121 <https://doi.org/10.1016/j.ecolind.2020.106121> {**Elsevier, IF: 6.263**} ISSN: 1470-160X
53. Roy SS, Rahman A, Ahmed S, **Shahfahad**, Ahmad IA (2022) Long-term trends of groundwater level variations in response to local level land use land cover changes in Mumbai, India. *Groundwater for Sustainable Development*, 18, 100797 <https://doi.org/10.1016/j.gsd.2022.100797> {**Elsevier**} ISSN: 2352-801X

54. Sarkar SK, Talukdar S, Rahman A, **Shahfahad**, Roy SK (2021) Groundwater potentiality mapping using ensemble machine learning algorithms for sustainable groundwater management. *Frontiers in Engineering and Built Environment*, 2(1), 43-54 <https://doi.org/10.1108/FEBE-09-2021-0044> {**Emerald**} ISSN: 2634-2502
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56. Kumari B, **Shahfahad**, Tayyab M, Ahmed IA, Baig MRI, Ali MA, Asif, Usmani TM, Rahman A (2022) Land use/land cover (LU/LC) change dynamics using indices overlay method in Gautam Buddha Nagar District-India. *GeoJournal*, 87, 2287–2305 <https://doi.org/10.1007/s10708-021-10374-w> {**Springer**} ISSN: 1572-9893
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Brahmaputra River in the urban watershed of Guwahati, India. *Environmental Monitoring and Assessment*, 193(8), 1-21. <https://doi.org/10.1007/s10661-021-09284-8> {Springer, IF: 3.307} ISSN: 1573-2959

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20. Asif, **Shahfahad**, Tayyab M, Ahmed IA, Baig MRI, Rahman A (2020). Traffic Air Pollution and its Effect on the Health: A Case Study of NCT of Delhi. In Rahman A, Praveen, S Tahir M (eds.) *Urban Environment, Issues and Challenges*. RK Book, New Delhi. pp-340-363. ISBN: 978-93-82847-99-1.
21. Tayyab M, Kumari B, **Shahfahad**, Asif, Hang HT, Hameed SS, Rahman A (2021). Geo-Spatial Analysis of Health Care Service Centres for Smart Cities: A Study of South-East District, Delhi-India. In: Sharma P. (eds) *Geospatial Technology and Smart Cities. The Urban Book Series*. Springer, Cham. Pp-225-244. https://doi.org/10.1007/978-3-030-71945-6_13 [ISBN: 978-3-030-71945-6]

Invited Lectures/ Resource Person/ Seminars/ Workshops

- “Seasonal Dynamics of Land Surface Temperature and Surface Urban Heat Island Intensity in Response to Soil Moisture and Vegetation Condition in Semi-arid Cities”

in National Conference on Transforming India – Risk to Resilience jointly organized by Special Centre for Disaster Research (SCDR), Jawaharlal Nehru University (JNU) and Disaster Management Initiatives and Convergence Society (DMICS) during March 15-17, 2023.

- **“Assessment of Drought Disaster in a Semi-arid Region of Western part of India”** in World Disaster Congress (International Conference), at Indian Institute of Delhi (IITD) during 24-27 November 2021.
- **“Coupling Geospatial Techniques with Cellular Automata and Artificial Neural Network for the Past to Future Urban Expansion Mapping”** 41st INCA International Conference of Indian National Cartographic Association at (Oct 27-29, 2021).
- **“Integration of Image Fusion Techniques and Artificial Neural Network (ANN) for Wetland Mapping”** in ICDP International Conference at Shaheed Bhagat Singh College, University of Delhi (16-18 April, 2021).
- **“A Novel Classifier for Improving Wetland Mapping by Integrating Image Fusion Techniques and Ensemble Machine Learning Classifiers”** in National Web Conference at Savitribai Phule Pune University (SPPU), Pune (10-12 June 2021).
- **“Assessment of Urban Expansion and its impacts on Land Surface Temperature (LST) over Heterogeneous Surface of Mumbai City”** in XV DGSI International Geography Online Conference at University of Allahabad, Prayagraj, India (26th to 28th November, 2020).
- **“Landscape Quality Analysis in Delhi Using Geospatial Technique”** in RSU International Research Conference 2019 at Rangsit University, Bangkok, Thailand (26 April 2018).
- **“Analysis of Land Surface Temperature (LST) using Mono and Split Window Algorithm and its Association with Vegetation and Built-up Density over Selected Metro-Cities of India”** in UGC-DRS SAP-I International Conference at Jamia Millia Islamia, New Delhi (25-26 Nov 2020).
- **“Dynamics of urban thermal field variation and urban heat island and its relationships with land use indices over Delhi and Mumbai a comparative analysis”** in National Conference at Department of Geography, Aligarh Muslim University, Aligarh (1-2 Feb 2020).
- **“Responses of Vegetation Cover- and Built-up Surface to Land Surface Temperature (LST) over Coastal Cities”** in 40th Indian Geographers Meet 2019 & International Conference on Water, Sustainability, Livelihood and Climate Change, by Institute of Indian Geographers (IIG) at CSRD, Jawaharlal Nehru University, New Delhi.
- **“Assessment of Per-Capita Availability of Public Open Spaces (POS) in East Delhi”** in National Seminar at Department of Geography, Jamia Millia Islamia, New Delhi.
- **“Spatio-temporal Analysis of Urban Green Space (UGS) and Land Surface Temperature (LST) using Remote Sensing and GIS Technique”** at National seminar in S. M. College, Chandausi, Sambhal, U.P.
- **“Landslide Risk Assessment Using Weighted Overlay Method (WOM): A Case**

Study of Tehri Reservoir Region” in 30th National Conference of Indian Institute of Geomorphologist at Department of Geography, Jamia Millia Islamia.

- Attended a 5 days’ workshop on “**Managing Floods and Droughts in a Changing Climate**” organized by Dept. of Civil Engineering, JMI, under MHRD’s Global Initiative of Academic Networks (GIAN) in January 2018.
- Attended a 7 days’ workshop on “**SPSS Workshop on Research and Data Analysis Using SPSS 18.0**” organized by Dept. of Geography, JMI, under UGS-DRS Programme.
- Delivered Lecture (2022) at Aryabhata Institute, Delhi Skill and Entrepreneurship University (DSEU) on the topic ‘**Use of Remote Sensing and GIS in the field of Architecture and Planning**’.

Skills

Research Interest	❖ Urban thermal environment, climate change, groundwater and natural hazards studies using geospatial techniques and artificial intelligence.
Teaching Interest	❖ Urban geography, Climatology, environmental Geography, Remote sensing & GIS.
Software Knowledge	❖ R Studio, ArcGIS, QGIS, Erdas Imagine, TerrSet etc.