

# Stanford

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## Sarfaraz Alam

Postdoctoral Scholar, Geophysics

### Bio

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#### BIO

Sarfaraz Alam is a Postdoctoral Scholar at Stanford University, where he is modeling nitrate transport in groundwater and surface water to improve approaches to enforcement. His research integrates hydrologic modeling, contaminant transport, remote sensing, and data science to understand how climate and human-induced changes affect water resources and the environment. Sarfaraz earned his Ph.D. in Civil Engineering from UCLA in 2021.

Sarfaraz received an Outstanding Ph.D. student award, Dissertation Year Fellowship, and Graduate Division Fellowship at UCLA. He authored nine peer-reviewed journal articles and presented his research in over ten international conferences.

#### HONORS AND AWARDS

- Civil & Environmental Engineering Outstanding Ph.D. Student Award, UCLA (2021)
- Dissertation Year Fellowship, UCLA (2020)

#### PROFESSIONAL EDUCATION

- Ph.D., University of California, Los Angeles , Civil Engineering
- M.S., Bangladesh University of Engineering and Technology , Water Resources Engineering
- B.S., Bangladesh University of Engineering and Technology , Water Resources Engineering

#### STANFORD ADVISORS

- Jenny Suckale, Postdoctoral Faculty Sponsor
- Rosemary Knight, Postdoctoral Research Mentor

### Publications

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#### PUBLICATIONS

- **Corrigendum to "Assessing the utility of remote sensing data to accurately estimate changes in groundwater storage" [Sci. Total Environ. 807 (2022) 150635].** *The Science of the total environment*  
Ahamed, A., Knight, R., Alam, S., Pauloo, R., Melton, F.  
2022; 847: 157678
- **The evolving roles of intensity and wet season timing in rainfall regimes surrounding the Red Sea** *ENVIRONMENTAL RESEARCH LETTERS*  
Haleakala, K., Yue, H., Alam, S., Mitra, R., Bushara, A., Gebremichael, M.  
2022; 17 (4)
- **Post-Drought Groundwater Storage Recovery in California's Central Valley** *WATER RESOURCES RESEARCH*  
Alam, S., Gebremichael, M., Ban, Z., Scanlon, B. R., Senay, G., Lettenmaier, D. P.

2021; 57 (10)

- **Managed aquifer recharge implementation criteria to achieve water sustainability** *SCIENCE OF THE TOTAL ENVIRONMENT*  
Alam, S., Borthakur, A., Ravi, S., Gebremichael, M., Mohanty, S. K.  
2021; 768: 144992
- **Budyko-Based Long-Term Water and Energy Balance Closure in Global Watersheds From Earth Observations** *WATER RESOURCES RESEARCH*  
Koppa, A., Alam, S., Miralles, D. G., Gebremichael, M.  
2021; 57 (5): e2020WR028658
- **Multi-model ensemble projection of mean and extreme streamflow of Brahmaputra River Basin under the impact of climate change** *JOURNAL OF WATER AND CLIMATE CHANGE*  
Alam, S., Ali, M., Rahaman, A., Islam, Z.  
2021
- **What Drives Crop Land Use Change during Multi-Year Droughts in California's Central Valley? Prices or Concern for Water?** *REMOTE SENSING*  
Gebremichael, M., Krishnamurthy, P., Ghebremichael, L. T., Alam, S.  
2021; 13 (4)
- **Assessing the utility of remote sensing data to accurately estimate changes in groundwater storage.** *The Science of the total environment*  
Ahamed, A., Knight, R., Alam, S., Pauloo, R., Melton, F.  
2021: 150635
- **Can Managed Aquifer Recharge Mitigate the Groundwater Overdraft in California's Central Valley?** *WATER RESOURCES RESEARCH*  
Alam, S., Gebremichael, M., Li, R., Dozier, J., Lettenmaier, D. P.  
2020; 56 (8)
- **Climate change impacts on groundwater storage in the Central Valley, California** *CLIMATIC CHANGE*  
Alam, S., Gebremichael, M., Li, R., Dozier, J., Lettenmaier, D. P.  
2019; 157 (3-4): 387-406
- **Remote Sensing-Based Assessment of the Crop, Energy and Water Nexus in the Central Valley, California** *REMOTE SENSING*  
Alam, S., Gebremichael, M., Li, R.  
2019; 11 (14)
- **Climate Elasticity of Low Flows in the Maritime Western US Mountains** *WATER RESOURCES RESEARCH*  
Cooper, M. G., Schaperow, J. R., Cooley, S. W., Alam, S., Smith, L. C., Lettenmaier, D. P.  
2018; 54 (8): 5602-5619
- **Future Streamflow of Brahmaputra River Basin under Synthetic Climate Change Scenarios** *JOURNAL OF HYDROLOGIC ENGINEERING*  
Alam, S., Ali, M., Islam, Z.  
2016; 21 (11)