**Faculty Profile: Arash Massoudieh**

Professor

Department: Civil and Environmental Engineering

School: School of Engineering

Email: [m](mailto:liuh@cua.edu)assoudieh@cua.edu

Phone: 202-319-5671

Education: Ph.D., Civil and Environmental Engineering, UC Davis, 2006

**Research Interests and Expertise:**

Subsurface hydrology, contaminant fate and transport, sustainable stormwater management, wastewater treatment.

**Biography:**

Arash Massoudieh joined the Catholic University of America in 2008 where he currently is a professor in the Department of Civil and Environmental Engineering. Prior to joining Catholic University, he was a project scientist at UC Davis for two years. Massoudieh’s research interest is mainly the interface between software development and Environmental Engineering. Specifically, Massoudieh has worked on developing software applications for predicting the effects of sustainable stormwater management practices on hydrology and water quality of surface water, inverse modeling, and upscaling reactive transport of contaminants in subsurface environments.

**Five Selected Papers:**

1. A. Massoudieh and M. Dentz, (2020), Upscaling non-linear reactive transport in correlated velocity fields, Advances in Water Resources, 143, 103680, https://doi.org/10.1016/j.advwatres.2020.103680.
2. Alikhani, J., C. Nietch, Jacobs S., Shuster, B., and Massoudieh, A., (2020), Modeling and Design Scenarios Analysis of Long-Term Monitored Bioretention System for Rainfall-Runoff Reduction to Combined Sewer in Cincinnati, OH, Journal of Sustainable water in the build environment, 6(2), 04019016.
3. Liang, X , N. Lu, L. Chang, T. H. Nguyen, A. Massoudieh, (2018), Evaluation of Bacterial Run and Tumble Motility Parameters Through Trajectory Analysis, J. Contaminant Hydrology, 211, pp 26-38.
4. Massoudieh, A., M. Maghrebi, B. Kamrani, C. Nietch, M. Tryby, S. Aflaki, S. Panguluri (2017), A flexible modeling framework for hydraulic and water quality performance assessment of stormwater green infrastructure, Environmental Modeling and Software, 92, pp 57–73
5. Alikhani, J., I. Takacs, A. Al-Omari, S. Murthy, A. Massoudieh, (2017), Evaluation of the information content of long-term wastewater characteristics data in relation to activated sludge model parameters, Water Science and Technology, 75(6) pp 1370-1389

**Professional Activities (please also include STEM education/diversity/outreach activities)**

* Developer of Green Infrastructure Flexible Model (GIFMod [www.gifmod.com](http://www.gifmod.com/))
* Developer of integrated water quantity and quality tool OpenHydroQual ([www.openhydroqual.com](http://www.openhydroqual.com/)).
* Serves on the editorial board of journal Water.