

Peiyuan Li

Ph.D. Pre-candidate, Graduate Research Assistant
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Education

- Aug. 2017 – Present** **Doctoral Degree in Civil Engineering**
Arizona State University, Tempe, USA
Direction: Hydrosystem Engineering, Soil Evaporation, Hydrologic Models
- Sept. 2014 - May. 2016** **Master of Science in Environmental Engineering**
University of Michigan, Ann Arbor, USA
GPA: 3.74/4.00
- Sept. 2010 - Jun. 2014** **Bachelor of Engineering in Hydrology and Water Resources Engineering**
Hohai University, Nanjing, China
GPA: 89/100

Research Experience

- Aug. 2017 – Present**
Graduate Research Assistant: Urban Environment Research
Arizona State University, Tempe, USA
Research on soil evaporation modeling and its application in urban environment.
- May. 2016 – Feb. 2017**
Research Assistant: DOE NETL Project - Impact of microstructure on the containment and migration of CO₂ in fractured basalts.
University of Michigan, Ann Arbor, USA
Developed a series of 2.5D numerical models using reactive transport code CrunchTope to simulate CO₂ saturated water flow through the fracture in basalt, achieved the prediction of mineral dissolution and precipitation patterns and amount on a long time scale.
- Oct. 2015 - May. 2016**
Independent Graduate Research Assistant: Modeling of CO₂ Sequestration in Fractured Basalt Using CrunchFlow
University of Michigan, Ann Arbor, USA
Created a conceptual model for CO₂ sequestration process in basalt based on calculation method of CrunchFlow, discovered the feasibility of applying CrunchFlow in simulating CO₂ saturated water flow through fracture scenario.
- Sept. 2015 – May. 2016**
Teaching Assistant
University of Michigan, Ann Arbor, USA
CEE 428 Groundwater Hydrology; CEE 591 Environmental Fluid Mechanics; CEE 581 Aquatic Chemistry
- Apr. 2014 – Jun. 2014**
Undergraduate Graduation Design: Decision Support System for Estimating Reference Evapotranspiration
Hohai University, Nanjing, China
Developed a computational software, Reference Evapotranspiration Decision Support System(ET₀-DSS), which combined with 23 kinds of numerical methods to allow convenient ET₀ evaluation under data-shortage conditions,

and assist in decision-making through ranking function identifying the best alternative for FAO-Penman Method. Registered as a copyright in China National Copyright Bureau. Registration #: 2015SR037703

Apr. 2013 – Apr. 2014

Research Assistant: National Innovative Training Program: Runoff Separation Based on Iodine Isotope

Hohai University, Nanjing, China

Conducted runoff separation method based on isotopes. Awarded the Second Prize in National Innovative Programs Competition. Funded by National Nature Science Foundation of China (Project #:51309075).

Publication & Conference

Menefee, A.H., **Li, P.**, Giammar, D.E., Ellis, B.R. "The Roles of Transport Limitations and Mineral Heterogeneity in Carbonation of Fractured Basalts" *Environmental Science & Technology* 2017 51 (16), 9352-9362 DOI: 10.1021/acs.est.7b00326

Liu, Y., Hu, S., **Li, P.**, "Applications of GIS and RS in distributed hydrological models," 2013 21st International Conference on Geoinformatics, Kaifeng, 2013, pp. 1-4. doi: 10.1109/ Geoinformatics. 2013.6626148

Menefee, A.H., **Li, P.**, Giammar, D.E., Ellis, B.R. (2016). "CO₂ storage in fractured basalt: Coupling experimental analyses with reactive transport modelling," Goldschmidt Conference, Yokohama, Japan, Jun. 27-Jul. 1, 2016.

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