



Interested in remote sensing of water cycle and precipitation



Ali Behrangi, Professor

University of Arizona (behrangi@arizona.edu)

- 1. Supported by NASA to investigate precipitation analysis and data record using satellite and in situ data**
- 2. Cloud precipitation and aerosol studies**

Visit my personal webpage if you want to know more about my group research
(<https://has.arizona.edu/people/ali-behrangi>)

Postdoctoral opening:

<https://arizona.csod.com/ux/ats/careersite/4/home/requisition/6157?c=arizona>



Interested in Aerosols, Clouds, and Radiation as well as their interactions?



Contact Professor Xiquan Dong, xdong@arizona.edu
Department of Hydrology & Atmospheric Sciences at the University of Arizona

Two PhD GRA positions:

1. Supported by NSF program to investigate the aerosol and cloud properties, as well as their interactions over two hemispheres using multiple datasets (Aircraft, surface and satellite) and models (WRF-Chem)
2. Supported by NASA Libera project to calculate the TOA and surface Shortwave radiation fluxes using MODTRAN6.0 radiative transfer model and then compare with observations.

To learn about my research team visit: <http://xiquandong.faculty.arizona.edu>

Interested in Aerosols, Clouds, and Radiation as well as their interactions?



Contact Professor Xiquan Dong, xdong@arizona.edu
Department of Hydrology & Atmospheric Sciences at the University of Arizona

Two PhD GRA positions:

1. Supported by NSF program to investigate the aerosol and cloud properties, as well as their interactions over two hemispheres using multiple datasets (Aircraft, surface and satellite) and models (WRF-Chem)
2. Supported by NASA Libera project to calculate the TOA and surface Shortwave radiation fluxes using MODTRAN6.0 radiative transfer model and then compare with observations.

To learn about my research team visit: <http://xiquandong.faculty.arizona.edu>

A fully-funded PhD Position in Hydrology at the University of Arizona

We invite applications for a fully-funded PhD position through the Department of Hydrology and Atmospheric Sciences at the University of Arizona. The graduate student will participate in an NSF-funded Growing Convergence Research (GCR) project on “Growing a new science of landscape terraformation: The convergence of rock, fluids, and life to form complex ecosystems across scales”. This is a highly interdisciplinary project that will involve a diverse team of researchers including hydrologists, geochemists, microbiologists, ecologists, and social scientists. The graduate student will lead the modeling effort on the hydrobiogeochemical processes in the subsurface and at the land surface under the guidance of Prof. [Bo Guo](#), Prof. [Guo-Yue Niu](#), and Prof. [Peter Troch](#). In the meantime, the student will also collaborate with geochemists from the Department of Environmental Science at the University of Arizona including Prof. [Jon Chorover](#) and Prof. [Katerina Dontsova](#). The modeling team will closely collaborate and interact with a transdisciplinary experimental team that will conduct a wide range of experiments across scales at the Landscape Evolution Observatory (LEO) at Biosphere 2.

Students with bachelor’s and/or master’s degrees in hydrology, civil and environmental engineering, environmental science, or other closely related fields are encouraged to apply. Applicants with only a bachelor's degree would need to apply to the MS program first, and express an intention to continue to complete a PhD. Candidates with a strong background in subsurface hydrological modeling and excellent programming and communication skills are especially welcome. To apply, please contact Prof. Bo Guo (boguo@arizona.edu), Prof. Guo-Yue Niu (niug@arizona.edu), and Prof. Peter Troch (patroch@arizona.edu). When contacting via email, please include the following materials: *unofficial transcripts, curriculum vitae, and a brief summary that highlights your skills and research interests relevant to the project*. All applicants should meet the minimum admission requirements (see link [here](#)) set by the Graduate College at the University of Arizona. Note that GRE scores are no longer required by the Department of Hydrology and Atmospheric Sciences. The application deadline is **January 15, 2022**.

The University of Arizona is committed to equal opportunity and affirmative action in all aspects of employment for qualified minorities, women, individuals with disabilities, and protected veterans. We strongly encourage applications from these and other underrepresented groups.

I (Dr. Jennifer McIntosh) am looking to recruit a PhD student to start Fall 2022 at the University of Arizona (UA) in the Department of Hydrology and Atmospheric Sciences, co-advised by Prof. Grant Ferguson at the University of Saskatchewan (adjunct at UA). The position is funded as a part of a new NSF project on Evolution of Subsurface Microbe-Rock-Fluid systems (<https://news.arizona.edu/story/nsf-awards-uarizona-led-team-28m-study-earthsmysterious-subsurface>). We are seeking a motivated and engaged PhD student interested in understanding how changes to the earth's surface over geologic time have influenced deep subsurface flow systems, fluid-rock reactions, and microbial life. Open questions include: how the geometry of flow systems and permeability distribution have changed in response burial and uplift/exhumation; key hydrologic drivers of paleofluid flow, mineral disequilibria, and metabolic potential; origin, preservation, and flushing of fluids; limits to life in the subsurface; etc. Research approaches include hydrogeologic, geochemical, and isotopic data analysis, as well as conceptual and numerical hydrogeologic and/or geochemical modeling, and opportunities for fieldwork and laboratory analyses. The PhD student will join a large, interdisciplinary, and international project team including other graduate students and postdoctoral fellows. Students will also have an opportunity to participate in public education and outreach activities for under-served school children.

Students with a background in hydrogeology, geosciences, and/or geochemistry are encouraged to apply. The deadline for applications is January 15, 2022. Interested students are encouraged to send their CV and a brief introduction to Dr. McIntosh (jenmc@email.arizona.edu) and Dr. Ferguson (grant.ferguson@usask.ca) before the application deadline. Please note the undergraduate course prerequisites in science and mathematics for the PhD program in Hydrology at UA (<https://grad.arizona.edu/catalog/>).

At the University of Arizona, we value our inclusive climate because we know that diversity in experiences and perspectives is vital to advancing innovation, critical thinking, solving complex problems, and creating an inclusive academic community. As a Hispanic- and American Indian and Alaska Native-serving institution, we translate these values into action by seeking individuals who have experience and expertise working with diverse students, colleagues, and constituencies. Because we seek a workforce with a wide range of perspectives and experiences, we provide equal employment opportunities to applicants and employees without regard to race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity, or genetic information. As an Employer of National Service, we also welcome alumni of AmeriCorps, Peace Corps, and other national service programs and others who will help us advance our Inclusive Excellence initiative aimed at creating a university that values student, staff and faculty engagement in addressing issues of diversity and inclusiveness.

UArizona BRIDGE program and SONG BIO-ESM Lab PhD research traineeship available

The SONG BIO-ESM Lab are now recruiting PhD students into our Building Resources for InterDisciplinary training in **Genomic and Ecosystem Sciences (BRIDGES) NSF Research Traineeship** for Fall 2022.

About SONG BIO-ESM Lab

- We specialize in Biospheric-Earth System Modeling.
- We aim to advance our understanding and predictive power of the role of **vegetation**, **microbial communities**, and **humans** -the biotic components of the Earth system - in terrestrial-atmospheric interactions.

About BRIDGES Program

- Choice of **biologically-oriented transdisciplinary** graduate training programs, from ecology and evolution, to plant, insect and environmental sciences to big data science and engineering to atmospheric sciences.
- **Competitive student fellowships** (\$34,000 stipend per year for up to two years, plus tuition waiver) for U.S. Citizens and Permanent Residents.
- For international students, **research assistantships will be available from USDA**. You will have opportunity to explore **biochar effect on climate-carbon feedback** and become BRIDGES trainees.

Contact Info



Dr. Yang Song

Email: chopinsong@arizona.edu

Office Phone: 520-626-7843

Office: JW Harshbarger Bldg, Room 309

Address: 1133 E. James E. Rogers Way, Tucson, AZ, 85721-0011

 Follow @chopinzi

PhD Position in Hydrology at the University of Arizona, Tucson

We invite applications for a PhD position in Hydrology at the Department of Hydrology and Atmospheric Sciences at the University of Arizona. The graduate student will participate in an NSF-funded project on “Hydrologic closure relationships at different levels of hillslope model complexity”.

The project:

- Addresses the challenge of predictions of subsurface water flow and solute transport at scales of hillslopes and catchments. Issues at these scales arise from unknown heterogeneity of subsurface properties and simplified representation of the flow and transport dynamics. Within hydrologic models these simplifications require closure relationships (representing the aggregated small-scale physics) that vary in time and space.
- Aims to find and explain temporally changing closure relationships at the hillslope scale for two different levels of model complexity: (i) system-scale closure relationships, e.g., transit time distributions and the storage-discharge relationship, and (ii) simplified process-based representation of coupled unsaturated and saturated zone.
- Will gain novel insights into the closure relationships, e.g., their temporal variability and their connection to other hydrologic variables, by combining recent methodological advances, namely (i) new data-based approaches to determine transit time distributions and the storage-discharge relationship, (ii) data assimilation, and (iii) machine learning methods.
- Will utilize data collected from recent experiments at the Landscape Evolution Observatory (LEO) hillslopes at Biosphere 2 and real-world data from a well-equipped zero-order basin.

The graduate student will closely interact with an international team of researchers working on this project and will have the opportunity to participate in outreach communication with the public through Biosphere 2, a major tourist attraction in the region.

The ideal candidate will have a strong background in hydrologic modeling or subsurface hydrology, as well as excellent programing and communication skills. Experience with machine learning methods is desirable.

The position will remain open until filled and begin either Fall 2021 or Spring 2022.

If you are interested in this position or if you have any questions about this position, please contact Peter A. Troch (patroch@arizona.edu). We strongly encourage applications from veterans, individuals with disabilities, women, minorities, and members of other underrepresented groups.





Land-Atmosphere-Ocean Interaction (LAOI) Group at University of Arizona

Why choose LAOI?

Our Land-Atmosphere-Ocean research group is comprised of post-doctoral researchers, graduate, and undergraduate students with diverse backgrounds which allows for members to explore and collaborate on a wide range of scientific questions and ideas while gaining the perspective of other science fields. In our group's exploratory approach, we strive to integrate the use of big data, machine learning, and artificial intelligence in our modeling and data analysis to discover new, innovative ways to enhance our research.

Opportunities

- Opportunity #1: We will seek two M.S. or Ph.D. students for Fall Semester 2022, particularly those who are interested in atmospheric sciences.
- Opportunity #2: We are seeking a postdoc in atmospheric modeling. Please apply at: <https://arizona.csod.com/ux/ats/careersite/4/home/requisition/7008?c=arizona>

Research Areas

- Hydrometeorology
- Weather and Climate Modeling
- Model Parameterization
- Remote Sensing & Retrieval Algorithms
- Seasonal Forecasting
- Planetary Boundary Layer
- Machine Learning
- Dynamical Processes
- Climate Change

For inquiries regarding the LAOI group please contact Dr. Xubin Zeng at xubin@email.arizona.edu
For more information visit the LAOI Website at <https://sites.google.com/email.arizona.edu/thelaoigroup/>