Yiwei Cheng (Wayne)

yiweicheng@gmail.com | http://www/linkedin.com/in/yiweicheng

Experience

California Department of Water Resources

Position: Water Resource Engineer July 2020 - Present

- Design of water resources modeling studies for State Water Project, California. Application and development of hydrologic models for planning and operational analyses.

Lawrence Berkeley National Laboratory

Position: Earth Research Scientist May 2018 — Jun 2020

Position: Geological Postdoc Fellow May 2013 — May 2018

- Spearheaded multi million dollar projects in energy (conventional and renewable) and environmental water sectors with private industries, universities and government agencies (city, state and federal) as clients/collaborators. Example project: Algal blooms and impacts on California estuaries and coasts (collaboration with scientists from UC universities and Department of Water Resources).
- Developed numerical (physically based, machine learning) models of surface and subsurface eco-hydrology, and conducted simulations of existing and proposed systems to evaluate impacts of management decisions and climate change.
- Designed proposals with UC faculties related to California watershed issues (mercury, wildfire).
- Main convener in international scientific conferences. Preparation of technical reports and publications in peer-reviewed journals.

Ecohydrological Lab at Georgia Tech Position: Graduate Research Assistant 2006 — 2013

- Developed watershed ecosystem land management model in collaboration with Environmental Protection Agency. Model name: VELMA
- Developed a wetland model to investigate the impacts of water resource management and climate change on the Florida Everglades (In collaboration with USGS).
- Conducted modeling studies to investigate the impacts of management decision and climate change on the water quality for watersheds throughout USA (Arctic Alaska, Pacific Northwest).
- Performed geospatial analyses and modeling for watershed delineation. Conducted hydrological studies: frequency analyses, statistical analyses, and precipitation run-off modeling.
- Taught hydrological and hydraulic analyses to undergraduate and graduate classes.
- See all models developed at: https://simulatingecosystemscience.wordpress.com/

Skills

- Languages/Technologies: Proficient in Matlab, R; familiar with CUDA, C++, Processing, Python, Fortran; previously used Mathematica, Javascript, HTML. Experienced with Github, Bitbucket.
- Experience in software: ESRI ArcGIS, ERDAS IMAGINE, HEC-RAS

Honors and Awards

- Keith Runcorn Award from European Geosciences Union 2011
- Everglades Foundation Fellowship 2010

Education

Georgia Institute of Technology, Atlanta, Georgia, 2005 – 2013

Ph.D. in Civil Engineering, GPA: 3.9 2013

Concentration: Environmental Water Resource and Fluid Dynamics, Geographic Information Systems

M.S. in Computer Science and Engineering, GPA: 3.9 2012

M.S. in Civil Engineering, GPA: 4.0 2009

B.S. in Civil Engineering, GPA: 3.8 (highest honor) 2007