Tyler Ketron, EIT

3850 Lyman Road • Oakland, CA 94602 • (423) 612-0783 • tketron@gmail.com

EDUCATION

M.S. in Earth Systems, Stanford University, Stanford, CA **06/2011**
Concentration in computer modeling and water resources.

Coursework: Watersheds & Wetlands; Transport & Mixing; Rivers, Streams, & Canals; Aquatic Chemistry & Biology; Spatial Statistics; Programming Abstractions

B.S. in Earth Systems, Stanford University, Stanford, CA **06/2010**
An interdisciplinary major in science, technology and policy; focus on land systems.

EXPERIENCE

Hydrogeologist – *Haley & Aldrich, Inc.* **06/2013 – present**

- Created and calibrated both steady state and transient groundwater flow and transport models using MODFLOW/MT3D. Modified models to evaluate multiple scenarios for regulatory compliance, pumping system optimization, and in support of fast-moving litigation cases. Utilized PEST and distributed computing to calibrate models in an efficiently to meet project deadlines. Pre- and post-processed spatial data using GIS.
- Designed procedures for and subsequently analyzed data for stepped and constant rate aquifer tests in both unconsolidated sediment and fractured bedrock settings.
- Corrected and modified pressure transducer data for aquifer tests and groundwater flow models.
- Consolidated spatial data from multiple disciplines into site conceptual models and innovative presentations for clients using GIS and associated tools. Deliverables included webmaps, 3D subsurface visualizations, multi-layer PDFs, cross sections, and time-series animations.
- Managed multiple field sampling events throughout California. Tasks included obtaining permits, coordinating subcontractors, overseeing various drilling methods and logging unconsolidated sediments, performing groundwater, soil, and soil vapor sampling, management of investigation derived waste, and delivery of samples to laboratories.
- Communicated with clients and project teams in multiple offices around the United States.
- Drafted technical reports, work plans, and proposals for internal and external clients.

Scientific Programmer – *U.S. Environmental Protection Agency* **07/2011 – 06/2013**

- Developed an analytical groundwater flow model with contaminant transport and GIS support.
- Implemented complex potential theory and source dissolution equations in Java.
- Utilized a variety of open source libraries and administered version control.
- Refined research objectives and goals for the model.

Research Assistant – *DEVELOP Program, NASA Ames Research Center* **06/2010 – 03/2011**

- Performed multidisciplinary research on sediment dynamics in San Francisco Bay salt ponds.
- Modeled sediment flow and deposition using a custom GIS tool and scripting languages.
- Developed analysis tools in MATLAB and trained fellow team members on how to use them.

TECHNICAL SKILLS/CERTIFICATIONS

Programming: Python, Java, MATLAB, FORTRAN
Software: ArcGIS 10.x, Groundwater Vistas, AQTESOLV, Rockworks, Adobe Illustrator, Microsoft Office
Engineer-In-Training (EIT), California, 12/2011
OSHA 40-HOUR HAZWOPER

PUBLICATIONS/PRESENTATIONS

Ketron, T., Chu, J., Einarson, M. 2015. *An Improved Modeling Approach to Evaluate the Performance of an Open-Loop Groundwater Heat Pump System*. Poster session presented at the Groundwater Resources Association of California Annual Meeting.

Newcomer, M., Kuss, A., Ketron, T., Remar, A., Choksi, V., and Skiles, J. 2013. *Estuarine sediment deposition during wetland restoration: A GIS and remote sensing modeling approach*. Geocarto International: 1-17.

Ketron, Tyler. *Modeling Sediment Deposition for Predicting Marsh Habitat Development.* 2011. Presentation at the American Society for Photogrammetry & Remote Sensing Annual Conference.