Jonathan M. G. Viducich, PE

Point Loma Nazarene University
Dept. of Physics & Engineering
San Diego, CA 92106
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EDUCATION

Master of Science in Water Resources Engineering
Oregon State University, Corvallis, OR
Graduated July 2015, Cumulative GPA: 3.95
Thesis Title: *Spillway Staging and Selective Sediment Deposition in Sand Storage Dams*

Bachelor of Science in Engineering Applied Sciences, minor in Global Urban Ministries
Seattle Pacific University, Seattle, WA
Graduated Magna cum Laude, June 2009, Cumulative GPA: 3.83

SUMMARY OF QUALIFICATIONS

- Strong background in cross-discipline engineering applications, research, teaching, and technical field work
- Worked on four continents using three languages (English, Portuguese, Spanish)
- Registered Professional Civil Engineer in California

EMPLOYMENT AND RESEARCH EXPERIENCE

Point Loma Nazarene University, California, USA
Adjunct Professor, August 2021 – Present (Part-time)

- Taught a three-unit Analog Electronics course and lab (EGR2053/L) to upper division engineering students.

River Focus, California, USA
Senior Water Resources Engineer, September 2021 – Present (Part-time)

- Performed a range of hydraulic (1D and 2D) and hydrologic analyses for private and public clients.

Lifewater International, California, USA
Manager of WASH Engineering, July 2020 – June 2021

- Oversaw engineering operations across organization, providing leadership to US-based headquarters engineering team and regular support and to program engineering leadership in Uganda, Ethiopia, Tanzania, and Cambodia. Selected tasks included:
  - Oversaw all hardware and water quality standards and processes, including development and updates
  - Oversaw hardware planning; reviewed and approved project hardware plans with in-country leadership
  - Reviewed, advised on, and approved technical drawings and BOQs
  - Reviewed, advised on, and approved hardware contracts
  - Oversaw the creation, revision, and rollout of all hardware monitoring surveys
  - Ensured in-country engineering leadership had necessary training and support to implement quality hardware
  - Proactively integrated learning and best practices from the sector into engineering strategies, processes, and standard operating procedures

WASH Engineer, January 2018 – July 2020

- Provided engineering support and oversight to five technical field teams in Uganda and Cambodia. Selected tasks included:
  - Supported field teams in WASH hardware design and planning, contract development, technical drawing development, construction supervision, and hardware review
  - Led regular calls to support project management
  - Performed mapping and access calculations to support water point (boreholes, springs, rainwater harvesting systems) and latrine planning for rural communities, schools, and health facilities
  - Visited field to review hardware quality and lead trainings
  - Developed and reviewed technical standards and processes for hardware implementation

WEST Consultants, Inc., California, USA

Staff Hydraulic Engineer, August 2015 – January 2018

- Performed a range of hydraulic (1D and 2D), hydrologic and sediment transport analyses for private and public clients. Selected projects included:
  - Developed 2D HEC-RAS dam break models for San Bernardino Flood Control District
  - Performed long-term, unsteady sediment transport modeling on Missouri River using (and testing) new HEC-RAS BSTEM functionality for Army Corps of Engineers
  - Supported development of large-scale FLO2D models for National Trails Highway inundation analyses
  - Performed flood inundation mapping for San Diego River as part of RTS deployment for San Diego County
  - Developed CAVI and HEC-RAS model for Bighorn River CWMS deployment for the Army Corps of Engineers

Oregon State University Water Resources Graduate Program, Oregon, USA

M.S. Thesis Research, August 2013 – July 2015

- Studied impacts of spillway staging on sedimentation for sand dams built on seasonal rivers
- Conducted field research in Kenya and Mozambique during July-August 2014
- Used HEC-RAS, ArcMap, MATLAB and other engineering software in analysis

Oregon State University Department of Biological and Ecological Engineering, Oregon, USA

Graduate Research Assistant, August 2013 – July 2015

- Provided technical and administrative support for the Trans-African HydroMeteorological Observatory (www.tahmo.org) project in West, East and Southern Africa
- Designed and built solar chargers, rain gauge brackets and calibrators for TAHMO agro-met stations

Columbia School of English, Portland, OR

GRE Prep Instructor, January 2013 – March 2013

- Instructed international ESL students in verbal and quantitative reasoning and analytical writing
- Taught three, two-hour class sessions per week during ten-week course

Mennonite Central Committee, Tete, Mozambique

Service Worker - Water Engineer, August 2009 – July 2012

- Partnered with Mozambican national development organization and rural communities to develop water resources for semi-arid, food-insecure regions
- Sited, designed and/or oversaw construction of over 30 sand dams in seasonal rivers
- Worked cross-culturally to develop partner capacity in project design, management, and evaluation

Seattle Pacific University Electrical Engineering Department
Teacher's Assistant, September 2007- June 2009

- Required minimal oversight for accurate, thorough, prompt grading of electric circuit theory assignments
- Commended by supervising professor as best grader during her twelve years of instruction

HCJB Global, Quito, Ecuador
Clean Water Summer Intern, May 2008 - July 2008

- Completed unpaid internship with international development organization
- Designed appropriate clean water distribution system for rural village in Ecuador
- Developed and utilized skills in topographical survey, AutoCAD design, and cross-cultural communication

PROFESSIONAL SERVICE

Water Resources Engineering Consultant: Mennonite Central Committee, Mozambique: August 2014, May 2016, September 2017
Water Resources Engineering Consultant: Restore International, Uganda: 2013-present
Mentorship Team Leader: Hydrophiles, Oregon State University student chapter of the American Water Resources Association: 2014-2015
Vice President, Engineers Without Borders (SPU chapter): 2008-2009

CONFERERENCE PRESENTATIONS

- Viducich, J.M.G. & Teal, M.J. (2017, April 5). Sediment Transport Through Lake Clarke and Lake Aldred. [Session 5B: Reservoir Sedimentation]. 37th Annual USSD Conference and Exhibition: It's a Small World: Managing Our Water Resources, Anaheim, California. http://toc.proceedings.com/38948webtoc.pdf.
- Viducich, J. (2015, April 28). Towards Optimizing Sedimentation Processes in Sand Dams. [Session 6: Water Management and Infrastructure]. 2015 Hydrophiles' Water Research Symposium: Connections—Ourselves to Water, Each of Us with One Another, and Our Work to Others, Corvallis, Oregon. https://people.wou.edu/~taylors/g473/OSU_H2O_Symposium_2015_abstract_book.pdf

LICENSES AND CERTIFICATIONS

- *Professional Civil Engineer*, California Board for Professional Engineers, Land Surveyors, and Geologists. Credential ID 91362.
- *Unmanned Aircraft System Remote Pilot,* Federal Aviation Administration. Certificate Number 4533122.

HONORS

Research featured on cover of OSU's College of Engineering *Momentum!* publication: 2015
Recipient, Wade Rain Irrigation Scholarship: 2015
Recipient, Evans Family Fellowship Travel Scholarship: 2014
Recipient, Ron Miner Memorial Scholarship: 2013
Recipient, Seattle Pacific University Full Tuition Scholar Award: 2005-2009