Jedidiah Ernest Dale

Graduate Student
Department of Geography and the Environment
University of Texas at Austin

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Education

University of Texas at Austin – Austin, TX   2020 *(expected)*
  Master of Arts in Geography
  Thesis Advisor: Professor Timothy Beach

University of Pennsylvania – Philadelphia, PA   2018
  Bachelor of Arts in Earth Science, cum laude
  Thesis Advisor: Professor Clark Erickson
  Thesis: "A Remote Sensing Analysis of Burning Dynamics in the Llanos de Moxos"

Experience

University of Texas at Austin, Department of Geography and the Environment - Austin,TX
  Graduate Research Assistant   June 2019 – *Present*
  • Perform research in Environmental Hydrology and Soils & Geoarchaeology Laboratories
  • Performs comprehensive suite of chemical analyses on water samples from international projects
  • Performs mineralogical and geochemical analysis using Olympus XRD/XRF instruments
  • Keeps lab in compliance with university EHS, and USDA Foreign Soil Import regulations
  • Works with PIs and other graduate researchers to coordinate laboratory needs for ongoing projects

University of Texas at Austin, Department of Geography and the Environment - Austin,TX
  Graduate Teaching Assistant   August 2018 – May 2019
  • TA for Introductory Human (Fall 2018) and Physical Geography (Spring 2019) courses
  • Responsible for leading multiple lab and discussion sections
  • Graded student assignments and maintained proper records
  • Held office hours and helped students engage with course content

University of Pennsylvania, Department of Anthropology - Philadelphia, PA
  Research Assistant   April 2017 – August 2018
  • Part of an interdisciplinary team studying the Precolumbian landscape of the Bolivian Amazon
  • Project funded through NASA Space Archaeology Program
  • Utilized GIS and remote sensing techniques for long term analysis of flood and fire regimes
  • Applied hydraulic models for the assessment of indigenous water management practices

Global Water Alliance - Philadelphia, PA
  Planning Assistant   October 2015 – October 2017
  • Designed and taught lessons on water stewardship to Philadelphia high school students
  • Contributed to the execution of organization conferences and programs

BROOKHAVEN NATIONAL LABORATORY, COMPUTATIONAL SCIENCE INITIATIVE - UPTON, NY

    STUDENT COLLABORATOR   June – August 2014; June – August 2016

- Participated in Department of Energy Science Undergraduate Laboratory Internship Program
- Interned jointly with the Nonproliferation Department and Computational Science Initiative
- Researched the application of machine learning techniques to satellite imagery analysis

UNITED STATES GEOLOGICAL SURVEY, NEW YORK WATER SCIENCE CENTER - CORAM, NY

    INTERN   May – August 2015

- Contributed to ongoing surface and groundwater monitoring programs
- Applied field and laboratory techniques to the assessment of water and sediment quality
- Worked on project to integrate legacy groundwater well data into GIS based aquifer mapping model

Field Experience

Orange Walk District, Northwest Belize   (1 month per year) 2018, 2019

- Collected lake and river bathymetry for integration with LiDAR data into a unified surface model
- Utilized side scan sonar to map woody debris concentrations in the Rio Bravo and its tributaries
- Used an Acoustic Doppler Current Profiler to quantify hydraulics and suspended sediment loads
- Collected lake cores for paleo-environmental reconstruction

White Sands National Monument, NM   (1 week) 2017

- Conducted geomorphology field work on aeolian processes
- Geostatistically analyzed grain size distribution patterns over interacting barchan dunes

Long Island, NY   (3 months) 2015

- Collected steam discharge data with ADCP
- Assisted in the maintenance and installation of tide and water quality monitoring stations

Presentations (* Indicates Presenter)

*Dale, J., Krause, S., Luzzadder-Beach, S., Beach, T. *Production and Pollution: Geoarchaeological and Paleoenvironmental Potential of a Northwest Belize Laguna.* American Association of Geographers Annual Meeting. Washington DC, April 2019.

*Dale, J., Erickson, C., and Beach, T. *Remote Sensing of Burning Dynamics in the Domesticated Landscape of the Bolivian Amazon.* Southwest Division of the American Association of Geographers Annual Meeting. Baton Rouge, LA October 2018.

*Erickson, C., ***Dale, J.** *Precolumbian Water Management in Engineered Landscapes of the Bolivian Amazon.* Presentation at The Penn Museum. Philadelphia, PA August 2018.

Erickson, C., ***Dale, J.,** Wdowinski, S., Thayn, J., Nicoll, J., and Rowley, R. *Flood Regimes, Earthworks, and Water Management in the Domesticated Landscapes of The Bolivian Amazon.* Presented in the symposium *Anthropogenic Rainforest: Landscape Management in the Amazon Before the European Conquest*, Annual Meeting of the Society for American Archaeology, Washington DC, April 2018.

*Cisek, D., Mahajan, M., **Dale, J.**, Pepper, S., Lin, Y., and Yoo, S. *A transfer learning approach to parking lot classification in aerial imagery*. In *IEEE: New York Scientific Data Summit (NYSDS)*, 2017 New York. IEEE-Xplore.

*Cisek, D., **Dale, J.**, Pepper, S., Mahajan, M., and Yoo, S. *Parking lot delineation and object detection using a localized Convolutional Neural Network.* In *IEEE: New York Scientific Data Summit (NYSDS)*, 2016 New York. IEEE-Xplore.

Honors and Awards

VESELKA GRADUATE RESEARCH TRAVEL GRANT
UNIVERSITY OF TEXAS DEPARTMENT OF GEOGRAPHY AND THE ENVIRONMENT   2019

RECRUITMENT FELLOWSHIP
UNIVERSITY OF TEXAS DEPARTMENT OF GEOGRAPHY AND THE ENVIRONMENT   2018

PETRONELLA VAN WEEZEL AWARD
UNIVERSITY OF PENNSYLVANIA DEPARTMENT OF GERMANIC LANGUAGES AND LITERATURES   2016

USGIF SCHOLARSHIP
UNITED STATES GEOSPATIAL INTELLIGENCE FOUNDATION   2014

SEG/ANADARKO SCHOLARSHIP
SOCIETY OF EXPLORATION GEOPHYSICISTS   2014

Affiliations

• American Association of Geographers
• Geological Society of America
• Society of American Archaeologists

Service

Webmaster - University of Texas at Austin Graduate Association of Geography and the Environment

Alumni Interviewer - Penn Club of Austin

Skills

Languages
• Dutch (Elementary)
• Spanish (Elementary)
Programming Languages
• Python
• MATLAB
• Bash

Software
• ArcGIS
• QGIS/GRASS GIS
• Google Earth Engine
• HEC-RAS
• WinRIver II
• Linux System Administration

Field & Laboratory Techniques
• ADCP
• Sidescan sonar
• XRD
• XRF
• Laser difraction particle sizer
• CAMSIZER grain size analysis