

MADELINE M. KELLEY

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EDUCATION

Arizona State University

Ph.D. - Geography

School of Geographical Sciences and Urban Planning

Advisor: Dr. Ian Walker

August 2018 - Present

GPA: 3.75/4.00

University of Denver

Master of Science - Geographic Information Science

Department of Geography and the Environment

Advisor: Dr. Hillary Hamann

Capstone Project- *Developing a Flood Risk Information System for Colorado: a Mixed Methods Approach*

Graduated June 2018

GPA: 3.95/4.00

University of Denver

Graduate Certificate - Geographic Information Systems

University College

Graduated June 2016

GPA: 3.91/4.00

University of Pittsburgh

Bachelor of Arts - Environmental Studies

Geographic Information Systems Certificate

Department of Geology and Environmental Sciences

Graduated June 2014

GPA: 3.450/4.00

ACADEMIC EXPERIENCE

Graduate Research Assistant

Arizona State University

August 2018 - Present

- Earth Surface Process and Geomorphology Lab under the direction of Dr. Ian Walker
- Prepare field equipment (TLS, UAS, and RTK GPS) for deployment, assist with data collection to generate topographic data, post-process and analyze pointcloud, raster, and vector data for change detection analysis, generate metadata and manage legacy data, and prepare for and attend lab meetings

Graduate Teaching Assistant

University of Denver

September 2016 - June 2018

- Assisted professors with course preparation and lecture/lab tasks
- Developed my teaching and management skills while maintaining an understanding of course material
- Graded assignments and exams, updated lab assignments with software changes as needed, and met with students outside of class.
- Courses include: Cartography, Intro GIS, Geographic Statistics, Water Resources and Sustainability, Hydrology, and Human Population.

Undergraduate Research Assistant

University of Pittsburgh - Dr. Rick Relyea (currently at Rensselaer Polytechnic Institute)

August 2013 - August 2014

- Acquired knowledge of experimental design, data collection, statistical analyzes, animal husbandry, and field work. Developed scientific reading and writing skills while reviewed research papers and prepared for lab meetings.

- Completed a senior GIS analysis project resulting prediction maps of long-term pesticide application and its impacts to amphibian populations

ADDITIONAL EXPERIENCE

Field Paleontologist and GIS Analyst

June 2017 - August 2018

Paleo Solutions

- Paleontological and cultural resources consulting group
- Field identification of geologic formations, collection and recording of field data using Trimble devices, ArcGIS Collector, Kordata, and Avenza
- Generated maps and survey reports.
- Gained experience working with sensitive data and strict deadlines, and collaborating with large teams across multiple companies and nation-wide offices.

Physical Scientist Researcher - Floodplain Mapping Specialist Colorado Water Conversation Board

January 2018 - August 2018

Colorado Water Conversation Board (CWCB)

- Applied knowledge of physical science, geography, hydrology and hydraulics, and GIS and RS to state-level water issues
- Supported projects related to flood hazard mapping that aimed to reduce flood loss, wise development, and better digital data for statewide use
- Collaborated with engineer consultants to ensure compliance with state and federal guidelines for topographic data collection, modeling standards, and additional mapping products
- Assisted with seeking funding for LiDAR acquisitions related to both the CTP and Hazard Mapping programs for Colorado. Lastly, I assisted in developing and conducting outreach activities aimed at improving flood risk knowledge.

Information Services and Flood Warning Program Intern

March 2017 - January 2018

Urban Drainage and Flood Control District

- Developed proficiency in ArcGIS Desktop, ArcGIS Pro, ArcOnline, and HEC-RAS
- Created, maintained, and shared GIS databases, maps, and applications that support organization's efforts to protect people, property, and the environment.
- Employed GIS tools and methods for new floodplain delineation data review, I provided project support
- Prepared board meeting presentations and project proposal maps.

Student Contractor

October 2016 - March 2017

U.S. Geological Survey

- A part of the National Geospatial Technical Operations Center Transportation team
- Assisted with the management, review, and editing of the National Map data.
- Used ESRI's suite of ArcGIS software I was responsible for Census TIGER roads and USFS/Census Roads Integration
- Worked with the NGTOC management team to ensure project tasks were performed within time frames met requirements.

GIS Analyst

September 2014 - June 2016

Purple Land Management

- Used ESRI's suite of ArcGIS software to manage and visualize GIS and oil and gas data
- Produced client products, completed spatial analyses, plotted deed surveys, verified leases and conveyances of surface or subsurface rights, and created well distribution analyses and maps to support various projects

- Lead large projects across multiple offices

GUEST LECTURE

ArcHydro for watershed delineation

Hydrology

Spring 2018

Dr. Hillary Hamann

- Presented GIS and RS applications in hydrology and ArcMap and ArcHydro capabilities for watershed analysis

PRESENTATIONS

American Geophysical Union Fall Meeting

Poster

December 10-14, 2018

- A New Flood Risk Communication Tool: A Proof-of-Concept Product for Boulder County, Colorado

Colorado Association of Stormwater and Floodplain Managers

20 min Presentation

September 25-28, 2018

- Showcasing Boulder County's Flood Risk Information System (FRIS): Holistic Flood Risk Communication

American Association of Geographers

20 min Presentation

April 10-14, 2018

- Developing a Flood Risk Information for Colorado

GIS in the Rockies

20 min Presentation

September 21-22, 2017

- Developing a Flood Risk Info System for Colorado: A Mixed Methods Approach

Colorado Association of Stormwater and Floodplain Managers

20 min Presentation

September 19-22, 2017

- Developing a Holistic Flood Risk Info System (FRIS) for Colorado

AWARDS & HONORS

2018 ASU Graduate and Professional Student Association Individual Travel Grant

2018 ASU SGSUP University Graduate Fellowship

2018 Dr. Laurance C. Herold Award for Outstanding Graduate Research in Geography

2018 Association for Women Geoscientists Outstanding Student Award

2017-2018 GIS in the Rockies Scholarship

2017 Dr. Laurance C. Herold Award for Outstanding Graduate Teaching Assistant in Geography

2017-2018 Laurance C. Herold Memorial Fund in support of field research in Geography

2017 Sustaining Watersheds Conference Scholarship Award

TECHNICAL SKILLS

Computer Languages: Python, C++, HTML, & Java

Software & Tools: ArcGIS Desktop, ArcOnline, ENVI, CloudCompare, Agisoft, JMP, HEC-RAS, RiSCAN, Kordata,& GeoDa

Equipment Experience Terrestrial Laser Scanner, UAS (DGI), Total Station, Automatic Level, and RTK GPS devices

RELEVANT GRADUATE COURSES

Advanced Geographic Statistics
Cartography
Fundamental Geographic Perspectives
Geographic Information Analysis
Geography of Soils (Audit)
GIS Project Management
Remote Sensing

Advanced Remote Sensing
Close Range Remote Sensing
Geodatabase Application
Geomorphology
Geofluids
Python Programming
Research Methods

SERVICE

School of Geographical Sciences and Urban Planning Graduate Student Council 2018 - Present

President

Arizona State University

- Attend faculty meetings. Organize bi-monthly counsel meetings. Assist in providing social and career building events. Maintain and update website and meeting notes. Maintain open flow on communication between faculty/staff and graduate student body.

GPSA Reviewer

Volunteer

Spring 2019 - present

Arizona State University

- Review and score applications for funding and awards

Graduate Student of the Four Faculties (GSFF)

Vice President

2017 - Present

University of Denver

- Reviewed GSFF funding request applications
- Scheduled and lead all GSFF meetings and send out meeting reminders
- Maintained the GSFF website
- Assumed the duties of the President in their absence

Geography and the Environment

Graduate Student Representative

2017 - Present

University of Denver

- Attend faculty meetings to update department on graduate students' progress and concerns
- Reported back to fellow graduate students on faculty items. Organize the set-up and clean-up of weekly colloquia

AAG-Esri GeoMentors Program

Geomenter, Partnering with Arts Street

October 20 - 23rd 2016

Denver, CO

- Digital Tour Guide: GIS Mapping
- Planned and taught weekend educational event for Denver Public School District students to learn about GIS and GPS

Colorado Mountain Club's Youth Education Program (YEP)

Volunteer

2017 - 2018

Golden, CO

- Volunteer Environmental Educator

MEMBERSHIPS

American Geophysical Union Fall Meeting December 10-14,

Association for Women Geoscientists (AWG)

American Association of Geographers (AAG)

American Geophysical Union (AGU)