Matthew D. Miksch

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Research Interests

Land-air interactions, remote sensing of land surfaces and processes, urban energy balance and climate

Education

Utah State University
M.S. in Climate Science, GPA: 4.0
Fall 2016 - Spring 2019 (expected)
Advising Professors: Dr. Lawrence Hipps and Dr. Simon Wang

Iowa State University
B.S. in Meteorology, GPA: 3.71
Fall 2012 - Spring 2016

Awards & Fellowships

Apogee Instruments - Campbell Scientific Graduate Fellowship, Spring 2017

Burt Tanner - Campbell Scientific Graduate Fellowship, Spring 2017

Skills and Interests

Programming

- Most comfortable with Python
- Proficient in Fortran and JavaScript
- Familiar with HTML/CSS, Matlab, Java, and MPI-Fortran

Computing

- Comfortable in both Unix and Windows environments
- Working knowledge of Google Earth Engine API
- Experience with Adobe InDesign, Photoshop, and Lightroom

Interests

Hiking/Backpacking, photography, cross-country skiing

Research Experience

Graduate Research Assistant, August 2016 - Current
Utah State University, Logan, UT

- Collecting and processing eddy covariance, energy balance, and weather station data at a suburban golf course during the 2016-2018 growing seasons
- Comparing observed latent heat fluxes to simple remote sensing evapotranspiration models using surface imagery from Landsat and MODIS
- Diagnostically modeling evapotranspiration to estimate changes in water use for large irrigated urban landscapes

Biological Science Aid, June 2014 - June 2016
National Lab for Agriculture and the Environment, Ames, IA

- Assisted technician in the soil, water, and air resources group to maintain and troubleshoot weather and eddy covariance stations
- Utilized Microsoft Excel and Python to perform preliminary data QA/QC

Atmospheric Science REU, Summer 2015
Texas A&M University, College Station, TX

- Studied forecast uncertainty in global ensemble models in the Southern Hemisphere extratropics
- Participated in a field experience measuring properties of the sea breeze in Galveston, TX
- Presented poster at the end of the REU and at the National AMS Student Conference

Teaching Experience

Student Helper, Fall 2018
Software and Data Carpentry (8-15 students), Logan, UT

- Aided students with properly setting up their Python environments, debugging code, and providing insights outside of the in-class exercises

Teaching Assistant, Spring 2018
Aviation Weather (64 Students), Logan, UT

- Assisted in creating course content, grading labs, and answering student questions during labs and outside of class

Teaching Assistant, Fall 2017
The Atmosphere and Weather (119 Students), Logan, UT

- Gave weather discussions, created visualizations to supplement lecture material, and graded assignments and exams