

Sara Crepinsek

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Qualifications

I am currently enrolled in the Geography Master's Program at the University of Colorado at Boulder. My area of focus is physical geography with an Arctic emphasis. My current thesis topic includes analysis of inhomogeneity of conductive heat fluxes around the Tiksi meteorological tower in the Russian Arctic. I completed my undergraduate degree of the University of Colorado with a Bachelor Degree in Environmental Science with an Emphasis in Climate and a minor in Atmospheric and Oceanic Science. I have experience in researching information and compiling data that has later been used by divisions in their assessment of both Arctic research and ozone depletion events. I am the current data manager of three Arctic stations (Tiksi, Eureka, Alert) in my Physical Sciences Division where I facilitate data flow (maintaining data stream flow of Arctic instrument suites), data archival (develop, implement, and maintain data stream organization structure), data retrieval (obtaining data-sets from international collaborations for ingesting purposes), and data submission to global/national archives. I have the experience and willingness to travel to extreme Arctic locations in the U.S. and other Arctic countries for installation, maintenance and repair trips as part of a team. I am competent in computer office programs, such as MATLAB, Interactive Data Language (IDL), HYSPLIT Modeling, Microsoft Office and Mac software.

Education

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| 2015-present | University of Colorado at Boulder | Boulder, CO |
| | Currently in Master's Geography Program: Physical Geography, Arctic Emphasis | |
| 2006-2010 | University of Colorado at Boulder | Boulder, CO |
| | Bachelor Degree Environmental Science with an emphasis in Climate, Minor in Atmospheric and Oceanic Science | |

Work Experience

- Cooperative Institute for Research in Environmental Sciences at the National Oceanic and Atmospheric Administration (PSD3 Weather & Climate Physics) 02/2012 – present
Arctic Data Manager (Professional Research Assistant) 303-497-6409
 - Manage incoming Arctic data streams and instrument operations of Arctic sites
 - Development of a web accessible ftp site for PSD Arctic data sets with consistent formats, file structures, data transfer, ingest and tools
 - Create and develop ingest, reformatting and diagnostic display software with MATLAB and IDL programs for Arctic data sets
 - Manage the processing and archiving of data from a wide range of commercial and research grade sensors
 - Site visit to the Arctic Station in Tiksi, Russia for maintenance and calibration of on-site instrumentation
 - Repairing, troubleshooting, calibrating Arctic instruments (ozone, sonic anemometers, etc.)
 - Creating instrument manuals/instruction sets for Arctic on-site repairs
 - Data downloading, data archival, data retrieval, data submission to global/national archives
 - Metadata assistance and implementation to the IASOA project (International Arctic Systems for Observing the Atmosphere)
 - Calculate, calibrate, organize, and smooth incoming Arctic station data streams
 - Creation of "Datagrams" for technical, mechanical, and processing support

- Researching/writing comparative instrument studies to provide guidance on instrument modifications necessary for Arctic environments
- Initiated research/writing of two scientific papers: “Comparison of Heat Flux Measurements and Calculations at an Arctic Site”, “Datagrams for Arctic Sites”
- 2B Technologies 02/2012 – 06/2012
Manufacturing Assistant 303-273-0559
 - Calibration of ozone monitors and calibration sources
 - Manufacturing of ozone monitor lamps and photo diodes
 - Running and creating experiments to improve the manufacturing of ozone monitor lamps and photo diodes
- Cooperative Institute for Research in Environmental Sciences at the National Oceanic and Atmospheric Administration 303-497-6279
Professional Research Assistant (Associate Scientist I) 12/2011 – 02/2012
 Science and Technology Corp. at the National Oceanic and Atmospheric Administration
Associate Computer Specialist 11/2010 – 11/2011
Tropospheric Ozone Program Research Assistant 11/2010 – 11/2011
 - Data analysis and plotting of Tropospheric ozone results using IDL programs
 - Taking ozone measurements using Dobson Radar
 - Process and archive ozone measurement data
 - Lab work: maintenance, construction, and upgrading of ozone aircraft, surface, and tower instruments from 2B Technologies and TEI Thermo Scientific Corporation
 - Perform calibrations using the TEI Standard Ozone Calibrator for aircraft, surface, and tower ozone instruments
 - Maintain and diagnose problems with ozone instruments at designated ozone sites across the world
 - Update and maintain NOAA ftp customer site with ozone data and plots
 - Creating HYSPLIT (Hybrid Single Particle Lagrangian Integrated Trajectory Model) trajectory models

Activities/Memberships/Awards/Technical Training

- Member of the American Meteorological Society
- Member of the American Geophysical Union
- Oral presentation at the American Geophysical Union Conference: “Comparison of Measurements and Calculations of Surface Heat Flux at an Arctic Site”, 2013
- Surface Ozone Principle Investigator for Tiksi Arctic Hydro-meteorological Station, 2013 (Tiksi, Russia)
- Training in surface ozone and sonic anemometer instrumentation maintenance, 2012, 2013
- Attended the International Polar Year 2012 Conference in Montreal, Canada
- Poster Presenter at Energy & Environment Workshop at University of Colorado, 2012
- NASA Student Involvement Program Regional First Place Winner, 2003
- Invited presenter at the 2003 National Science Teachers Association Convention

References

Taneil Uttal 303-497-6409 Relationship – NOAA Science Advisor
Taneil.Uttal@noaa.gov Meteorologist