Seth William Campbell
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Professional Objective

Develop my career as a research geologist with a concentration in radar geophysics while continuing a part time pursuit of teaching applied earth sciences

Education

Ph.D. Earth Sciences. University of Maine at Orono; expected graduation 2013
M.S. Earth Sciences. University of Maine at Orono; 3.72 GPA
M. Business Administration. University of Maine at Orono; 3.32 GPA
B.S. Earth Sciences. University of Maine at Orono; 3.62 GPA
B.A. Environmental Science, Minor: Geology. University of Maine at Farmington; 2.46 GPA

Special Trainings

EMT-Intermediate. (lapsed) Kennebec Valley Community College, Fairfield, ME; 3.84 GPA
Wilderness EMT-B/NREMT-B. SOLO Wilderness Medicine; Conway, NH
Wilderness First Responder. SOLO Wilderness Medicine; Conway, NH
Mountain Instructor Course. NOLS, Lander, WY; Valedictorian
Juneau Ice Field Research Program. University of Southeast Alaska, Juneau, AK; 4.0 GPA
Rock Instructor Course. American Mountain Guides Association; Boulder, CO.
Alpine Guide Course. Western State College; Gunnison, CO.
Top Rope Site Manager. (lapsed) American Mountain Guides Association; Boulder, CO.
Level I Rope Technician. On Rope 1 Inc; Chattanooga, TN
Avalanche Level I and II. AAIRE; Pinkham Notch, NH.

Recent Professional Collaborations

Steven Arcone (CRREL), Beth Astley (CRREL), Anna Wagner (CRREL), David Finnegan (CRREL), Greg Balco (BGC), Claire Todd (PLU), Donald Albert (CRREL), Kevin Bjella (CRREL), Roger Hooke (UMaine), Robert Hawley (Dartmouth), Erich Osterberg (Dartmouth), Peter Koons (UMaine), Karl Kreutz (UMaine), Cameron Wake (U New Hampshire)

Relevant Coursework

Stratigraphy and Sedimentation
Structural Geology
Geophysics and Applied Geophysics
Radar Geophysics
Terrain Analysis (Aerial Photo Interpretation)
GIS and Remote Sensing
Glacial Geology/Stratigraphy/Glaciology
Fluid Dynamics
Marine Geology
Climate Change
Ore Deposits
Hydrology and Hydrogeology
Soil Science
Mineralogy
Petrology/Petrography
Chemistry I/II, Physics I/II, Calculus I/II
Instrumental Analysis/Analytical Chemistry
Isotope Geology

Geophysical Instruments

Worden and Lacoste-Romberg Gravimeters
Bison 9024 24 Channel Seismograph
GSSI SIR-3000 Ground Penetrating Radar
GSSI EM_400 Profiler
Sensors and Software Pulse Ekko Pro GPR
Sensors and Software Noggin GPR
GF Instruments CMD-4 Electromagnetic Conductivity Meter
Geometrics 856 Proton Precession Magnetometer
Geometrics Ohm Mapper Resistivity Meter
Geonics EM31-MK2 Magnetometer
Advanced Geosciences Super Sting R8 IP Earth Resistivity Meter

Professional Interests

Applied Geophysics, Glaciology, Climate Change, Hydrogeology, Hydrology, Glacial Geology, Alternative Energy, Mountain Guiding, Rock Climbing, Ice Climbing, Mountaineering, Wilderness Medicine

Recent Awards and Scholarships

SAGEEP Geometrics Scholarship (2010)
Graduate School Government Grant (2009, 2010)
Dan and Betty Churchill Research Grant (2008, 2009, 2010)
Trefethen Field Research Scholarship (2008)
Nancy Morse Dysart Travel Award (2008)
Presidential Achievement Award and Deans List (2008)
NASA Space Grant (2007)
National Outdoor Leadership School Instructor Course Valedictorian Grant (2005)

Recent Field Experience

- One research expedition to Pensacola Mountains, Antarctica (Nov 2010 – Jan 2011)
- Four glaciological research expeditions to Alaska including one as co-leader and one as leader of the expedition (July-August 2007, May 2008, May 2009, May 2010)
- Geophysical Expedition to the Wapta Icefield/Peyto Glacier, Canada (March 2010)
- Geophysical Exploration of Permafrost Research Tunnel Site in Fox, Alaska (Sept 2009)
- Six geophysical research surveys at Fort Wainwright, Alaska (2009 - 2010)
- One research expedition to Greenland (August 2009)
- STEEP Project seismic research scientist in the Gulf of Alaska (Sept - Oct 2008)
- Previous experience with GPS (Rapid Static and RTK) and GIS applications (digitizing, data entry, queries, analysis, and mapping) with state and federal agencies (ARC Info, Arc View 3.0, 3.2, and ArcGIS 9.0 - 9.3)
- Experience with geologic mapping, gravity mapping, magnetic mapping, aerial photo geologic analysis, sediment analysis, soil mapping and sediment/ice coring, and hydrologic flow studies
- Experience with seismic, gravity, magnetic, electromagnetic, and resistivity data collection and post processing software
- Experience conducting transmission line sag surveys, land and water topographical surveys, stream, wetland, and sensitive habitat delineation surveys, and construction site boundary surveys
- 16 years of climbing/mountaineering experience and 13 years of glacial travel experience

Management, Supervision, and Teaching Experience

- Previous Assistant Chief of Service for University Volunteer Ambulance Service in charge of training and assessing emergency staff skills for over 60 student employees (2007-2008)
- Previous supervisor to 40+ student staff at UMO Outdoor Education Program (2002-2005)
- Supervising Climbing Guide for Atlantic Climbing School; Bar Harbor, Maine (2003-2008)
- Taught semester long Introduction to Geophysics Lab section which included application and instruction of gravity, seismic, resistivity, and GPR field methods (2008)
- Taught over 1000 hours of wilderness emergency medicine courses for college credit and nationally recognized certifications through SOLO Wilderness Medicine (2004-2009) including courses taught at the following institutions:

Maine EMS	University of Maine
Skidmore College	University of New England
Trinity College	University of Alaska, Southeast
Colby College	Dartmouth College

Memberships

American Geophysical Union

Geological Society of America

Society of Exploration Geophysicists

Environmental and Engineering Geophysical Society

American Mountain Guides Association

American Alpine Club

National Registry of EMT's

Community Involvement

AGU Near Surface Geophysics Group Executive Committee Student Rep., 2010 – Present

University Volunteer Ambulance Corps (UVAC); University of Maine; 2002 – 2010

EMS Instructor, Maine Emergency Medical Services and UVAC; 2006 - 2010

University of Maine Geological Society, President; 2007 – 2008

University of Maine Student Advisory Committee; 2007 – 2008

Climbing Staff Trainer and Program Instructor; Maine Bound; 2003 – 2008

Freshman Boys Basketball Coach; Lincoln Academy; 2001 – 2002

Teaching Assistant/Tutor; Geology Dept., University of Maine at Farmington; 1998-2001

Employment

Temporary Professional Research Staff, Earth and Space Sciences, Glaciology Group. University of Washington; Seattle. Geophysical researcher studying ice flow dynamics and structural glaciology of the Foundation Ice Stream near the Pensacola Mountains, Antarctica. *Nov 2010 – Present*

Graduate Research Assistant, Earth Sciences Dept and Climate Change Institute, University of Maine; Orono. PhD research assistant focusing on ice flow dynamics, mass balance, and structural glaciology of Alaska Range Glaciers. *Sept 2010 – Present*

Research Physical Scientist/STEP, Army Corps of Engineers Cold Regions Research and Engineering Lab; Hanover, NH. Conduct applied field geophysical research for the Army Corps of Engineers in cold regions of the earth through projects requiring geophysics applications such as GPR, galvanic resistivity, and other EM or magnetic geophysical instrumentation. *June 2009 – Present*

Instructor, SOLO Wilderness Medicine; Conway, NH. Instruct Wilderness First Aid, Wilderness First Responder, and Wilderness EMT-B courses to groups up to 26 students in size. *2003 – Present*

TA Coordinator, Earth Science Dept. University of Maine; Orono. Organized laboratory assignments and equipment and assist graduate teaching assistants for ERS 101 and ERS 102 introduction level earth science courses at the University of Maine. *Sept 2008 – May 2009*

Climbing Guide, Atlantic Climbing School; Bar Harbor, ME. Supervised and trained 4 or 5 professional climbing guides and instructed rock climbing courses in Acadia National Park, Maine. *2003 – 2008*

TA, Earth Science Dept. University of Maine; Orono. Taught and designed laboratory and field projects for students in Introduction to Geophysics. Field projects included seismic, gravity, magnetic, and electromagnetic studies. *Jan – May 2008*

EMT-Intermediate, CLC Ambulance Service; Damariscotta, ME. Provided emergency medical care for Lincoln County, Maine *2003 – Feb 2008*

Graduate Assistant, Maine Bound; University of Maine; Orono. Instructed credit college courses and guided numerous outdoor adventure courses in technical rock, ice, and mountain climbing. Trained/supervised indoor and outdoor student climbing instructor staff. *2002-2003*

Customer Sales Associate, Red Oak Sports; Farmington, ME. Provided customer service/sales as assistant manager for outdoor gear store. *2001*

Customer Sales/Service Representative, L.L. Bean; Freeport, ME. Provided customer service and sales experience for one of the largest outdoor gear distributors in the world. *2000*

Surveyor Tech., E/Pro Engineering & Environmental Consulting LLC; Augusta, ME. Conducted land, water, topographic, construction site, boundary, and wetland delineation surveys. *1999-2000*

Surveyor Tech., Union Water Power Company; Augusta, ME. Conducted land, water, topographic, construction site, boundary, and wetland delineation surveys. *1999*

Environmental/GIS Tech., Department of Environmental Protection; Augusta, ME. Conducted GIS/GPS work, fisheries studies, MTBE, Mercury, and water quality monitoring studies. *1998-1999*

Research Intern, Environmental Protection Agency; Boston, MA. Conducted GIS/GPS work, fisheries studies, MTBE, Mercury, and water quality monitoring studies. *1998*

Tour Guide, Central Maine Power Company; Brunswick, ME. Provided educational opportunities for visitors and tour groups at the Brunswick Fish Way Observation Facility. *1997*

Submitted Manuscripts

Campbell, S., Kreutz, K., Wake, C., Osterberg, E., Arcone, S., Introne, D., Winski, D., Volkening, K. 2010. Melt regimes, internal stratigraphy, and flow dynamics of three glaciers in the Alaska Range. *J of Glaciol.*

Campbell, S., Kreutz, K., Wake, C., Osterberg, E., Arcone, S., Winski, D., Volkening, K. 2010. Flow dynamics of an accumulation basin: A case study of the upper Kahiltna Glacier on Mount McKinley, Alaska. *J of Glaciol.*

Recent Presentations

Campbell, S., Kreutz, K., Wake, C., Osterberg, E., Arcone, S., Introne, D., Kelsey, E., Lurie, M., Volkening, K. In search of a new ice core drill site: GPR and GPS results from the Central Alaskan Mountain Range. Army Cold Regions Research and Engineering Lab. June 10, 2010.

Campbell, S., Kreutz, K., Wake, C., Osterberg, E., Arcone, S., Introne, D., Kelsey, E., Lurie, M., Volkening, K. Ice core oh ice core, where art thou? GPR and GPS results from the Central Alaskan Mountain Range. Hal Borns Climate Change Symposium. May 7, 2010.

Campbell, S., Schild, K. Mountains and Glaciers of the World: Science meets Passion. Nobleboro Central School, Maine. April 30, 2010.

Campbell, S., Kreutz, K., Wake, C., Osterberg, E., Arcone, S., Introne, D., Kelsey, E., Lurie, M., Volkening, K. In search of a new ice core drill site: GPR and GPS results from the Central Alaskan Mountain Range. Midwest Glaciology Meeting. April 15, 2010.

Campbell, S., GPR and GPS applications to modeling flow dynamics of the Kahiltna Glacier, Mount McKinley, Alaska. University of Maine, Farmington. April 8, 2010.

Campbell, S., Kreutz, K., Wake, C., Osterberg, E., Arcone, S., Introne, D., Kelsey, E., Lurie, M., Volkening, K. Application of geodetics, ground penetrating radar, and computer modeling to the selection of an ice core drill site on the Kahiltna Glacier of Mount McKinley, Alaska. NH Geological Society. October 15, 2009.

Campbell, S. Application of geodetics and ground penetrating radar profiles to stratigraphic analysis of the Kahiltna Glacier on Mount McKinley, Alaska. University of Maine. April 25, 2009**.**

Recent Poster Presentations

Campbell, S., Kreutz, K., Wake, C., Osterberg, E., Arcone, S., Introne, D., Kelsey, E., Lurie, M. Application of Ground Penetrating Radar and Geodetics to the selection of an ice core drill site on the Kahiltna Glacier of Mount McKinley, Alaska. AGU Conference, San Francisco, CA. December 15, 2009

Astley, B., and **Campbell, S.**, A seasonal comparison of GPR and resistivity data quality for permafrost mapping. AGU Conference, San Francisco, CA. December 17, 2009.

Campbell, S., Kreutz, K., Wake, C, Osterberg, E., Arcone, S; Introne, D.; Kelsey, E; Lurie, M. Reconnaissance of a Potential Surface to Bedrock Ice Core Drill Site in Denali National Park, Alaska. Arctic Workshop, Bates College, ME. April 22-23, 2009.

Lurie, M., Kreutz, K., Osterberg, E., Wake, C., Introne, D., **Campbell, S.,** Kelsey, E., and Arcone, S., Relationship Between Snow Stable Isotope Ratios and Elevation, Denali National Park, Alaska. Arctic Workshop, Bates College, ME. April 22-23, 2009.