

## Keith M. Jackson

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3718 Osceola St  
Denver, CO 80212  
Phone: 503.784.2866 ~ Email: kjackso@gmail.com

### EDUCATION

- 2003-2007 Portland State University** Portland, Oregon  
*Degree:* M.S. Geography, specializing in glacial studies  
GPA: 3.74  
*Thesis:* *Spatial and morphological change of Eliot Glacier, Mount Hood, Oregon*
- 1998-2003 Ohio University** Athens, Ohio  
*Degree:* B.S. Environmental Geography  
Overall GPA: 3.4 Major GPA: 3.85

### WORK EXPERIENCE

- 08.2011 - Present GIS/Remote Sensing Analyst, Ocean Imaging, Inc.**  
Developed Python scripts that automate the production of ocean current vector files from netcdf files and oversee their implementation via ArcGIS Server for the county of San Diego. Expert at image classifications and analysis, including kelp biomass, oil thicknesses, bays, rivers, and intertidal zones. Created a unique and innovative methodology combining vector and raster data for intertidal coastline mapping involving multispectral aerial imagery of differing spatial resolutions (ADS40, UltraCam, and DMSC) as well as LiDAR data, which has been implemented on 400+ km of California's coastline. Day-to-day work involves extensive use of ArcGIS 10.1 on oil spill response projects (notably ongoing Deepwater Horizon work), intertidal classification mapping, environmental consulting projects, and professional map production for printing as well as online display in presentations and on websites.
- 2010 - 2011 Digital Mapping Analyst I, Equiom, Inc. (Microsoft Vendor)**  
Worked on the Bing Maps Global Ortho product conducting image analysis, editing, and QC of RGB and CIR vertical aerial imagery. Part of a cutting edge team that produced 2.7 million km<sup>2</sup> of high resolution imagery in 2011. Utilized ArcGIS 9.x, an in-house GIS product for seamline and DEM editing, and Photoshop, used to fix more difficult imagery breaks and warps such as bridges. Additionally, was responsible for management and tracking of all data transfer and inventory.
- 2008 - 2010 GIS Specialist, Equiom, Inc. (Microsoft Vendor)**  
Worked as the technical lead for the "Streetside" product in the production department, which involved the project planning and tracking of 45 vehicles being deployed to domestic and international roads. Additionally cataloged, reviewed, performed QA/QC, and processed incoming StreetSide data. Collaborated with our project partner company on where to collect data via ArcGIS 9.x software and implemented a geo-spatial database to maintain and manage records of acquisitions.
- 2007 - 2008 GIS Technician, Equiom, Inc. (Microsoft Vendor)**  
Coordinated and executed the planning, receipt, and QC of ground control points and incoming 3-D building files through the use of ArcGIS.

- 2004 - Graduate Research Assistant, Portland State University**  
**2007** Research assistant of Dr. Andrew Fountain studying glacier extents of the continental United States. Assisted with the creation of a database of glacier extents at the 1:100k and 1:24k scales. Utilized ArcGIS 9.x to create a FGDC-compliant historic database of photographs, maps, and digital files of Oregon and Washington's glaciers. Additionally, designed a website examining the glaciers of Oregon (<http://glaciers.research.pdx.edu/Glaciers-Oregon>).
- 2006 - Geographer, United States Geological Survey**  
**2007** Research assistant of Dr. Jim O'Connor, examined stream morphology and floodplain vegetation change on the Sprague River of southern Oregon through the use of ArcGIS 8.x and Microsoft Access.
- 2001 - Research Assistant, Ohio University**  
**2003** Research assistant on LTER Project (Long Term Ecosystem Research) studying historical infant mortality rates in Baltimore, Maryland. Utilized ArcView 3.2, Microsoft Excel and Access, and other programs to examine a variety of spatial patterns in historical Baltimore.
- 2002 Survey Assistant, City of Bowling Green, Ohio**  
 Worked with the surveyor of Bowling Green on a variety of tasks including surveying land for future wind towers as well as topographic surveys of urban and rural environments.

## **PUBLICATIONS**

Jackson, K.M. and Fountain, A.G. 2007. Spatial and morphological change on Eliot Glacier, Mount Hood, Oregon, USA. *Annals of Glaciology*, 46:222-226.

Fountain, A.G., Jackson, K.M., Basagic, H.J., and Sitts, D. 2007. A century of glacier change on Mount Baker, Washington. *Geological Society of America Abstracts with Programs*, 39(4):67.

Fountain, A.G., Hoffman, M., Jackson, K.M., Basagic, H.J., Nylent, T., and Percy, D. Digital Outlines and Topography of the Glaciers of the American West. *U.S.G.S. Open-File Report* 2006-1340. <http://pubs.usgs.gov/of/2006/1340/OFR2006-1340.pdf>

Jackson, K.M. and Fountain, A.G. 2005. The flow and mass wastage of Eliot Glacier, Mt. Hood, Oregon: Examining glacier change. *Geological Society of America Abstracts with Programs*, 37(7):423.

## **PROFESSIONAL PRESENTATIONS**

- 03.03.2006** Jackson, K.M., Schlichting, R.B., and Fountain, A.G. "Eliot Glacier: 104 years of change" Hood River Community Education Program, Hood River, Oregon
- 10.21.2005** Jackson, K.M. "Spatial and morphological change on Eliot Glacier Hood, Oregon" Northwest Glaciology Annual Meeting, Vancouver, British Columbia
- 10.18.2005** Fountain, A.G., Basagic, H.J., Hoffman, M.J., Jackson, K.M., and Percy, D. "Historic glacier changes in the American West," Geological Society of America Annual Meeting, Salt Lake City, Utah
- 02.26.2005** Jackson, K.M. "The flow and mass wastage of Eliot Glacier, Mount Hood, Oregon: Examining Glacier Change" Oregon Academy of Sciences Annual Meeting, Corvallis, Oregon
- 10.15.2004** Jackson, K.M. "Eliot Glacier, Mount Hood, Oregon" Northwest Glaciology Annual Meeting, Seattle, Washington

## **POSTER PRESENTATIONS**

- 09.20.2006** Jackson, K.M. and Fountain, A.G. "The effect of debris on glacier response to climate, Eliot Glacier, Mount Hood, Oregon" MTNCLM Annual Meeting, Timberline, Oregon
- 08.24.2006** Jackson, K.M. and Fountain, A.G. "Spatial and morphological change on Eliot Glacier, Mount Hood, Oregon, USA" International Glaciological Society, International Symposium on Cryospheric Indicators of Global Climate Change, Cambridge, UK
- 10.18.2005** Jackson, K.M. and Fountain, A.G. "The flow and mass wastage of Eliot Glacier, Mount Hood, Oregon: Examining Glacier Change," Geological Society of America Annual Meeting, Salt Lake City, Utah
- 04.21.2005** Jackson, K.M. and Fountain, A.G. "The flow and mass wastage of Eliot Glacier, Mount Hood, Oregon: Examining Glacier Change," Sigma Xi Student Research Symposium, Portland, Oregon
- 04.19.2005** Jackson, K.M. and Fountain, A.G. "The flow and mass wastage of Eliot Glacier, Mount Hood, Oregon: Examining Glacier Change," Association of Engineering Geologists Student Poster Night, Portland, Oregon
- 05.24.2002** Jackson, K.M. "Infant Mortality Patterns and Land Use in Baltimore, Maryland, 1880," Voinovich Undergraduate Scholars Presentation, Athens, Ohio

## **TECHNICAL PROFICIENCIES**

- ArcGIS 8.x, 9.x & 10.x (ArcMap, Catalog, Toolbox, Spatial, 3D & Image Analyst, Raster Calculator) & ArcGIS Server 10.1
- Erdas Imagine
- Python scripting
- Trimble GeoXT GPS units as well as Pathfinder Office
- Microsoft Word, Excel, Access and PowerPoint
- Photogrammetry and remote sensing principles and associated spatial statistics
- Adobe Illustrator and Photoshop
- Familiarity with HTML and PHP (created the <http://geopulse.org> website)

## **GRANTS RECEIVED**

- Geological Society of America Graduate Student Research Grant, \$1,100 (2005)
- Mazamas Graduate Student Research Grant, \$1,280 (2005)
- Geological Society of America Graduate Student Research Grant, \$1,900 (2004)
- Sigma Xi Grants-in-Aid of Research, \$200 (2004)

## **AWARDS**

- Third place, Association of Environmental and Engineering Geologists Student Poster Session, Portland State University, annual membership
- Voinovich Center Undergraduate Research Scholar, Baltimore Long Term Ecosystem Study