

Curriculum Vitae Megan McNally Lawrence

Department of Geography
1251 University of Oregon
Eugene, Oregon 97403-1251
Office: (541) 346-4965
Email: mlawren5@uoregon.edu

EDUCATION

- 2011 PhD. University of Oregon, Geography. Dissertation: *Behavioral and Neurological Studies in Tactile Map Use and Training by Persons Who are Blind or Visually Impaired.*
- 2005 M.A. University of Oregon, Geography. Thesis: *The Neural Basis of Map Comprehension and Spatial Abilities.*
- 2002 B. A. (*summa cum laude*) California State University, Chico, Geography.

RESEARCH APPOINTMENTS

- 2009- 2011 ***Research Assistant in minimal GIS Visualization Tool Development.***
National Institution of Health (*NIH*) funded project that is developing and testing a minimal GIS visualization tool. The interactive visualization environment is being developed as a way to enhance spatial thinking skills in blind students and adults. This project consists of an interdisciplinary of professors and graduate students from Geography and Computer Science. Principle Investigator: Dr. Amy Lobben (University of Oregon).
- 2007- 2008 ***Research Assistant in Developing Methods for testing Navigational Map Use.***
National Institution of Health (*NIH*) funded project to develop tactile research instruments for laboratory and field testing. This project consisted of an interdisciplinary team of researchers from Geography, Psychology and Computer Science. Through this project I have developed close contact with multiple community organizations that provide supporting services for the blind and visually impaired though outreach and volunteer work. Under the direction of Co-Principle Investigator: Dr. Amy Lobben (University of Oregon).
- 2005-2007 ***Research Assistant in Tactile Map Production Software.***
National Science Foundation (*NSF*) funded project aimed at creating a freeware software package that will allow tactile maps to be made, stored, and recreated at educational institutions for the blind and visually impaired by teachers and instructor as well as at home by family, partners and friends of the blind map users. Under the direction of Principle Investigator: Dr. Amy Lobben (University of Oregon).

TEACHING APPOINTMENTS

- **Instructor:**

Map and Geospatial Concepts, GEOG 311 (spring 2009)

The Geography of US and Canada; GEOG 208 (summer 2006)

Global Environmental Change; GEOG 143 (summer 2004)

- **Instructor's Assistant**

The Natural Environment; GEOG 141 (two terms)

Global Environmental Change; GEOG143 (two terms)

Geography of Europe; GEOG 202

GRANTS AND RESEARCH SUPPORT-AWARDED

Lawrence, Megan. 2009. Summer Research Award. Geography Department, University of Oregon. \$400.

Lawrence, Megan. 2008. ASPRS Travel Grant for the International Tactile Graphics Conference: December 2008. Bermignam, UK. \$500.

Lobben, Amy and Lawrence, Megan. 2008. Neural Patterns Associated with Successful and Unsuccessful Real-World Map Reading and Navigation Tasks. Grant from University of Oregon Lewis Center for NeuroImaging. 10 scan hours for 10 subjects, \$5,000.

Lawrence, Megan (co-PI) and Amy Lobben (PI). 2008. DDRI: Neurological Studies of Tactile Map Use and Training by Persons Who are Blind or Visually Impaired. NSF-BCS-GRS. \$11,996. Project Period 2008-2009.

Lawrence, Megan. 2004. The Neural Basis of Map Comprehension and Spatial Abilities. Grant from University of Oregon Lewis Center for NeuroImaging. 12 scan hours for 12 subjects, \$6,000.

PUBLICATIONS

Lawrence, M., Martinelli, N. and R. Nahmer. 2009. A Haptic Soundscape Map of the University of Oregon. *Journal of Maps*. v2009: 19-29.

Lobben, A., **Lawrence, M., J. Olson.** 2009. The Relevance of fMRI in Human Subjects Research in Cartography. *Cartographica*. 44 (4): 159-169.

Lobben, A., **Lawrence**, M. 2009. in press. The Use of Environmental Features on Tactile Maps by Navigators who are Blind.

Lawrence, M., and Lobben, A. 2011. accepted. Thematic Tactile Mapping. *Journal of Blindness and Visual Impairment*.

Lobben, A., and **Lawrence**, M. 2011. in progress. Sightedness, Map Use and Navigation. *Cartographica*.

CONFERENCE PRESENTATIONS

Lawrence, M. 2010. "Tactile Mapping Training: Behavioral and Neurological Evidence for Improving Tactile Map Use." Presented at The Association of American Geographers. Washington DC.

Lawrence, M. and Lobben, A. 2010. "Tactile Mapping: Five Years of Research and Production." Western Association of Map Librarians. Eugene, Oregon.

Lawrence, M. and Lobben, A. 2008. "Tactile Map Training: Behavioral and Neurological Evidence." Presented at The International Tactile Graphics Conference. Birmingham, United Kingdom.

Lawrence, M. 2008. "How is Using Maps in O&M Useful?" Presented at the state meeting of The Association of Education and Rehabilitation of the Blind and Visually Impaired. Salem, Oregon

Lawrence, M. 2007. "Tactile Map Use and Spatial Abilities: A Neurological Approach." Presented at The Association of American Geographers. San Francisco, California.

Lawrence, M. 2007. "Remote Sensing of the Brain." Presented at: The American Society of Photogrammetry and Remote Sensing. Vancouver, Washington.

Lawrence, M. and Lobben, A. 2006. "Tactile Map Use during Laboratory and Navigational Exercises." Presented at: The North American Cartographic Information Society. Madison, Wisconsin.

Lawrence, M. and Lobben, A. 2006. "Tactile Map Use during Laboratory and Navigational Exercises." Presented at: The Association of Pacific Coast Geographers. Eugene, Oregon.

Lawrence, M., Lobben, A., and Kelly, M. 2006 "Creating a Tactile Map of the University of Oregon Campus." Presented at: The Association of American Geographers. Chicago, Illinois.

Lobben, A., **Lawrence**, M. 2006. "Hierarchy of Symbols Needed for Tactile Navigation Maps." Presented at: Cartography and Geographic Information Science, AutoCarto. Vancouver, Washington.

Lawrence, M. 2005. "Visualizing Map Comprehension and Spatial Abilities." Presented at: The Association of American Geographers. Denver, Colorado.

Lobben, A., **Lawrence**, M., Olson, J. 2005. "Images of the Geographical Brain: The use of functional Magnetic Resonance Imaging in the study of spatial tasks." Presented at: The Association of American Geographers. Denver, Colorado.

Lawrence, M. 2004. "Neural Basis of Map Comprehension and Spatial Abilities." Presented at: The North American Cartographic Information Society. Portland, Maine.

Lawrence, M. 2004. "Neural Basis of Map Reading." Presented at: The Association of American Geographers. Philadelphia, Pennsylvania.

Lawrence, M. 2003. "Brain Mapping: What does Cognition Look Like." Presented at: The North American Cartographic Information Society. Jacksonville, Florida.

PROFESSIONAL SERVICE

- 2009 Student representative to new faculty search committee
- 2008 Student representative to the Cartography Specialty Group, AAG
- 2007-2009 Student organizer of weekly colloquium series
- 2006-2008 President of the University of Oregon student chapter of American Society of Photogrammetry and Remote Sensing (*ASPRS*)

PROFESSIONAL MEMBERSHIPS

- Association of American Geographers
- Association of Education and Rehabilitation of the Blind and Visually Impaired
- North American Cartographic Information Society
- American Society of Photogrammetry and Remote Sensing (*ASPRS*)

COLLABORATIONS

- Functional equivalence in route vs. survey knowledge in blind and sighted populations. Collaborators: Dr. Dan Montello, Dr. Amy Lobben, Dr. Nick Guidice, Megan Lawrence

REFERENCES

Dr. Amy Lobben
Associate Professor
Department of Geography
Condon 153
1251 University of Oregon
Eugene, OR 97403
Phone: (541) 346-4566

Fax: (541) 346-2067
Email: lobben@uoregon.edu

Dr. Andrew Marcus
Professor
Department of Geography
Condon Hall 154
1251 University of Oregon
Eugene, OR 97403
Phone: (541) 346-5709
Fax: (541) 346-2067
Email: marcus@uoregon.edu

Dr. Michal Young
Professor
Department of Computer and Information Science
Deschutes Hall 239
1251 University of Oregon
Eugene, OR 97403
Phone: (541) 346-4140
Fax: (541) 346-5373
Email: michal@cs.uoregon.edu