

Department of Geography
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University of North Carolina Greensboro
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MARY BEE HALL-BROWN

RESEARCH INTEREST

To utilize remote sensing and Geographic Information Science to study environmental changes caused by a warming climate.

- Hyperspectral/ Multispectral
- Spatio-temporal Analysis/ Modeling
- Land Use / Land Cover within Arctic landscapes (Vegetation, Geomorphology, Thermokarst)
- Arctic climate change

EDUCATION

- 2012** **Doctor of Philosophy, Geography**
University of North Carolina Greensboro, Greensboro, NC
- 2012** **Post-Baccalaureate Certificate in Geographic Information Science**
University of North Carolina Greensboro, Greensboro, NC
- 2001** **Master of Arts, Applied Geography**
University of North Carolina Greensboro, Greensboro, NC
Geographic Information Science and Remote Sensing
- 1998** **Bachelors of Science, Geology**
University of South Alabama, Mobile, AL
Minor: Combined Sciences

THESES

- Dissertation **The EO-1 Hyperion and Advanced Land Imager Sensors for use in Tundra Classification Studies within the Upper Kuparuk River Basin, Alaska.**
Advisor: Dr. Roy Stine, PhD, UNC-Greensboro
- MA Thesis **GIS evaluation for a field dissipation study in North Dakota, South Dakota, Minnesota and Montana: Identification of worst-case scenario for the application of herbicide X on Spring and Winter Wheat.**
Advisor: Dr. Roy Stine, PhD, UNC-Greensboro, NC

ACADEMIC EXPERIENCE

2001 – Present

Senior Lecturer (Faculty)

University of North Carolina Greensboro, Greensboro, NC

- **Teaching Load 4/4:** Taught 100 level Introduction to Earth Science and Introduction – 400 level GIS and Remote Sensing courses. Total students per semester: 260 students
- **Advising & Mentoring:** Advised undergraduate and graduate students on course selection, internship opportunities, Honors Projects, and Thesis Topics. Mentored undergraduate students to develop a desire to attend graduate school while enhancing probability for enrollment.
- **GIS Support:** Assist graduate and undergraduate students, as well as colleagues, with GIS questions, problems, or project planning.

PROFESSIONAL EXPERIENCE

2005

Consultant

Womble Carlyle Sandridge & Rice, Charlotte, NC

- GIS consultations for litigation concerning transmission corridor easements.

PUBLICATIONS

2010

Stine, R., Chadhuri, D., Ray, P., Pathak, P., **Hall-Brown, M.** Comparison of Digital Image Processing Techniques for Classifying Arctic Tundra. *GIScience and Remote Sensing*. V47:1, 78-98.

2006

Northington, R., and Hershey, A. Effects of stream restoration and wastewater treatment plant effluent on fish communities in urban streams. *Freshwater Biology*, V51, 1959-1973. (**Cartographer**).

2004

Hall-Brown, M., Stine, R., Phelps, W. GIS Evaluation for Field Dissipation in the Northern Wheat Belt. *World Minds. Kluwer Academic Publishers, Boston*. Pp. 553-558.

2000

Hawick, D., **Hall-Brown, M.**, Pheiffer, L. Smackover Reservoir Diagenesis in the Appleton Field, Escambia County, Alabama. *Gulf Coast Association of Geological Societies Transactions*. V50, 43-53.

PRESENTATIONS TO MEETINGS OF LEARNED SOCIETIES

- 2008 “Increasing multispectral classification accuracies by using hyperspectral satellite imagery in order to identify random and/or systematic changes within the vegetation of the Upper Kupperuk River Basin, Alaska: 1985 – 2007”. Presented at the Southeast Division of the Association of American Geographers Conference in Greensboro, NC.
- 2001 “GIS Evaluation for a Field Dissipation Study in North Dakota, South Dakota, Minnesota, and Montana (The Northern Wheat Belt). Presented at the North Carolina GIS Conference. Winston-Salem, NC.
- 2001 “GIS Evaluation for a Field Dissipation Study in North Dakota, South Dakota, Minnesota, and Montana (The Northern Wheat Belt).” Presentation. Presented at the Southeastern Division of the Association of American Geographers, Lexington, KY.
- 2001 “The Internship Program: The Partnership between UNCG and Syngenta Incorporated.” Presentation. Presented to the UNCG Scientific Advisory Board in Greensboro, NC.
- 1996 “Dolimitization and Dedolimitization of Calcite within the Smackover Formation of Lower Alabama.” Presentation. Presented at the Gulf Coast Science Academy.

RESEARCH EXPERIENCE

“The Geomorphic-Tropic Hypothesis (GTH) Research for Benthic-Pelagic Coupling in Arctic Lakes.” National Science Foundation. 2006-2008

AWARDS AND HONORS

- 2012 Senior Lecturer
- 2002 Gamma Theta Upsilon: Zeta Chapter, University of North Carolina at Greensboro
- 2001 G. Herbert Stout Award for Outstanding Paper (NCGIS)
- 1994 USA Geology Department Outstanding Junior
- 1994 Mayo Educational Foundation
- 1981 Air Force Good Conduct Award
- 1980 Air Force Meritorious Unit Award
- 1979 Air Force Commendation Award

ACKNOWLEDGEMENTS

2012	Charles Watson, Dissertation
2011	Lauren Phillips, Thesis
2010	Prasad Pathak, Dissertation
2010	Leanne Sulewski, Thesis
2009	Beth Walton, Dissertation
2008	Debasish Chaudhuri, Dissertation
2008	James Burke, Dissertation
2007	Joseph Owusu-Adjei, Dissertation