

**Curriculum Vitae**  
CHERYL WATERS-TORMEY  
Western Carolina University  
331 Stillwell Building  
+1 828-227-3696 (office)  
cherylwt@wcu.edu

**EDUCATION**

- Ph.D., Structural Geology, University of Wisconsin 1999-2004  
“Strain heterogeneity in lower continental crust: Mt. Hay region, Arunta Block, Central Australia”  
Advisor: Dr. Basil Tikoff
- M.S., Structural Geology, University of North Carolina 1997-1999  
“Mapping and related studies of pre-Alleghenian tectonic features within the Blue Ridge thrust complex of western North Carolina: Micaville Quadrangle”  
Advisor: Dr. Kevin Stewart
- B.S., Geology, Duke University 1991-1995  
Honors thesis: “Crystal Size Distribution Theory: Application to Chromitite from the Stillwater Complex, Montana”  
Advisor: Dr. Alan Boudreau

**PROFESSIONAL EXPERIENCE**

- Associate Professor, Western Carolina University 2010 to present  
Assistant Professor, Western Carolina University 2004-2010

**PUBLICATIONS**

- Latham, R.S., Wooten, R.M., Billington, N., Witt, A.C., Gillon, K.A., Douglas, T.J., Fuemmeler, S.J., Bauer, J.B., Kinner, D., *Waters-Tormey, C.*, 2011, The Hunters Crossing weathered-rock slide, Haywood County, North Carolina, USA. In: Calcaterra, D. (Ed.), *Weathering and landslides, Geological Society of London Engineering Geology Special Publication 23*, 149-166.
- Waters-Tormey, C.*, Stewart, K., 2010. Heterogeneous wrench-dominated transpression in the deep crust recorded by the Burnsville fault and related structures, Blue Ridge, North Carolina: Implications for the Acadian orogeny in the Southern Appalachians. In: Tollo, R.P., Bartholomew, M.J., Hibbard, J.P., and Karabinos, P.M. (Eds.), *From Rodinia to Pangea: The Lithotectonic Record of the Appalachian Region. Geological Society of America Memoir 206*.
- Waters-Tormey, C.*, Goodwin, L.B., Tikoff, B., Staffier, K., Kelso, P., 2009. A granulite facies normal shear zone exposed in the Arunta Inlier of central Australia: Implications for deep crustal deformation during oblique divergence. In: Miller, R.B., and Snoke, A.W. (Eds.), *Crustal cross sections from the western North American Cordillera and elsewhere: Implications for tectonic and petrologic processes. Geological Society of America Special Paper 456*, p. 267–286.

- Waters-Tormey, C.**, Tikoff, B., 2007. Characteristics of a kilometer-scale high strain zone in the lower continental crust: Mt. Hay block, central Australia. Journal of Structural Geology 29, 562-582.
- Trupe, C.H., Stewart, K.G., Adams, M.G., **Waters, C.L.**, Miller, B.V., Hewitt, L.K., 2003. The Burnsville fault: Evidence for the timing and kinematics of Acadian dextral transform tectonics in the southern Appalachians. Geological Society of America Bulletin 115, 1365-1376.
- Waters, C.**, Tikoff, B., Goodwin, L.B., Little, T.A., 2002. Ductile instabilities and structural heterogeneity in the lower continental crust. In: Goff, J.A., Holliger, K. (Eds.), Heterogeneity in the crust and upper mantle: nature, scaling and seismic properties, Kluwer, pp. 1-36.
- Tikoff, B., Teysier, C., **Waters, C.**, 2001. Clutch tectonics and the attachment of lithospheric layers. In: Bertotti, G., Schulmann, K., Cloetingh, S.A.P.L. (Eds.), Continental collision and the tectono-sedimentary evolution of forelands, European Geosciences Union Stephan Mueller Special Publication Series 1, pp. 57-73. (URL: <http://www.stephan-mueller-spec-publ-ser.net/1/index.html>)
- Waters, C. L.**, 1999. Mapping and related studies of pre-Alleghenian tectonic features within the Blue Ridge thrust complex of western North Carolina: Micaville Quadrangle. M.S. thesis with 7.5' geological map, University of North Carolina at Chapel Hill, 87 pp.
- Tivey, M.A., Johnson, H.P., Fleutelot, C., Hussenoeder, S., Lawrence, R.M., **Waters, C.**, Wooding, F.B., 1998. Direct measurement of magnetic reversal polarity boundaries in a cross-section of oceanic crust. Geophysical Research Letters 25, 3631.
- Waters, C.**, Boudreau, A.E., 1996, A reevaluation of crystal size distributions in chromite cumulates. American Mineralogist 81, 1452-1459.

#### **SELECTED CONFERENCE PRESENTATIONS** (undergraduate co-authors indicated by \*)

- \*Savitsky, L., **Waters-Tormey, C.**, Kinner, D., Campbell, T., 2011. Groundwater flow through fractures in crystalline rock in the Coweeta group at Coweeta Hydrologic Laboratory, North Carolina. Geological Society of America Abstracts with Programs 43, p. 6.
- \*Stillwagon, M. D., Till, J. L., Moskowitz, B. M., **Waters-Tormey, C.**, 2010. The effects of magnetic interactions and magnetic particle concentration on remanent magnetization and magnetic fabrics. Eos Trans. AGU Fall Meet. Suppl., Abstract GP41A-1031.
- Waters-Tormey, C.**, \*Liner, T., Miller, B., Kelso, P.R., 2010. Image analysis using reflected light: an underutilized tool for interpreting magnetic fabrics. Eos Trans. AGU Fall Meet. Suppl., Abstract GP41A-1036.
- Waters-Tormey, C.**, 2010. The deep crustal root of an extensional shear zone: Capricorn ridge, Mt. Hay block, central Australia. Geological Society of America Abstracts with Programs 42, p. 239.
- Waters-Tormey, C.**, Stewart, K.G., 2010, Heterogeneous wrench-dominated transpression in the deep crust recorded by the Burnsville fault and related structures, Blue Ridge, North Carolina: Implications for the Acadian orogeny in the southern Appalachians. Geological Society of America Abstracts with Programs 42, p. 128.
- Waters-Tormey, C.**, Kelso, P., White, R., \*Wepasnick, K., 2009, Magnetic fabric as a strain marker in polydeformed granulites? An example from the Mt. Hay block, central Australia. Eos Trans. AGU Fall Meet. Suppl. 90, 52, Abstract GP43A-0839.
- Kinner, D., **Waters-Tormey, C.**, Latham, R., Douglas, T., Wooten, R., \*Jacobsen, Preston, 2009, Development, Mass Movement and Weathering Profiles: A Slow Moving Weathered Rock

Slide in Western North Carolina. Geological Society of America Abstracts with Programs 41, p. 626.

\*Liner, T., *Waters-Tormey, C.*, 2009, Reflected light image analysis method: application to magnetic mineral SPO measurements. Geological Society of America Abstracts with Programs 41, p. 667.

*Waters-Tormey, C.*, 2008, Kinematic constraints within a deep crustal, granulite facies, normal shear zone: Mt. Hay block, central Australia. Geological Society of America Abstracts with Programs 40, p. 514.

*Waters-Tormey, C.*, \*Wepasnick, K. (*presenter*), 2007. Strain marker shape preferred orientation across a strain gradient in a granulite facies normal shear zone. Mt. Hay block, central Australia. Geological Society of America Abstracts with Programs 39, p. 232.

\*Watrous, K., and *Waters-Tormey, C.*, 2006, Meadow Fork and Rector Branch mylonite zones, southwest of the Hot Springs window, western NC. Geological Society of America Abstracts with Programs 38, p. 75.

### **COURSES TAUGHT**

Investigations in Environmental Geology (Geol 140; each semester)

1<sup>st</sup>-year seminar: Geology, Landscapes and the Human Psyche (Geol 191; irregular)

Structural Geology (Geol 371; alternate years)

Geophysics (Geol 330 and 393; alternate years)

Tectonics (Geol 471; alternate years)

Topics in geology seminars (Geol 491; irregular) – field trips (NC Blue Ridge and Piedmont, Appalachian Basin (WV and TN); Careers in Geology

Undergraduate research (Geol 495 and 499; yearly) – research seminar and/or senior thesis

### **UNDERGRADUATE RESEARCH CAPSTONE PROJECTS SUPERVISED**

“Bedrock structures relating to the water budget in a hillslope hollow and implications for debris flow initiation in the southern Appalachians: Coweeta Hydrological Laboratory, NC”, (Savitsky)	2010-2011
“Using geospatial tools to assess mineral grain spacing in two dimensions” (Stillwagon)	Jan.-May 2011
“The effect of the shape-preferred orientations in polymineralic magnetic mineral assemblages on the anisotropy of magnetic susceptibility (AMS): implications for airborne magnetic data” (Liner)	2009-2010
“Mineral shape preferred orientations in granulites of a lower crustal fault zone: Mt. Hay block, central Australia” (Wepasnick)	2006-2007
“Investigation of a Slow-Moving Landslide: Hunter’s Crossing Subdivision Waynesville, NC” (senior research seminar, 5 students)	Jan.-May 2007
“Meadow Fork and Rector Branch mylonite zones, southwest of the Hot Springs window, western NC” (Watrous)	2005-2006

### **MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS**

Geological Society of America (and Southeastern section)

1997-present

American Geophysical Union

1994-present