

Walter A. (Bill) Sullivan

Department of Geology • Colby College • 5803 Mayflower Hill • Waterville, ME 04901
Phone: (207) 859-5803 • E-mail: wasulliv@colby.edu

AREAS OF SPECIALIZATION

Structural geology, plate tectonics, and the tectonic evolution of western North America

EDUCATION

Ph.D., University of Wyoming, Laramie, Wyo. (2007)
Adviser: Dr. Arthur W. Snoke

M.S., Virginia Polytechnical Institute and State University, Blacksburg, Va. (2003)
Adviser: Dr. Richard D. Law

B.S. *Summa Cum Laude*, Concord University, Athens, W. Va. (2001)
Adviser: Dr. Joseph L. Allen

TEACHING POSITIONS HELD

2014–Present: Associate Professor of Geology, Colby College
Courses taught: Earth and Environment, Structural Geology, Plate Tectonics, and Geology Seminar

2008–14: Assistant Professor of Geology, Colby College
Courses taught: Earth and Environment, Mineralogy, Structural Geology, Plate Tectonics, Mountain Belts, and Geology Seminar

2007–08: Visiting Assistant Professor of Geology, Colby College
Courses taught: Earth and Environment, Structural Geology, and Plate Tectonics

2003–07: Graduate Teaching Assistant, University of Wyoming
Laboratory sections taught: Physical Geology, Mineralogy, Structural Geology, and Geology Field Camp

2001–03: Graduate Teaching Assistant, Virginia Tech
Laboratory sections taught: Physical Geology and Resources Geology

PEER-REVIEWED PUBLICATIONS

Sullivan, W. A., *Boyd, A. S., and Monz, M. E.*, 2013, Strain localization in homogeneous granite near the brittle-ductile transition: A case study of the Kellyland fault zone, Maine, USA: *Journal of Structural Geology*, v. 56, p. 70–88.

Sullivan, W. A., and Beane, R. J., 2013, A new view of an old suture zone: Evidence for sinistral transpression in the Cheyenne belt: *Geological Society of America Bulletin*, v. 125, p. 1319–1337.

Sullivan, W. A., 2013, L tectonites: *Journal of Structural Geology*, v. 50, p. 161–175.

Sullivan, W. A., Beane, R. J., *Beck, E. N., *Fereday, W. H., and *Roberts-Pierel, A. M., 2011, Testing the transpression hypothesis in the western part of the Cheyenne belt, Medicine Bow Mountains, southeastern Wyoming: *Rocky Mountain Geology*, v. 46, p. 111–135.

Sullivan, W. A., and Beane, R. J., 2010, Asymmetrical quartz crystallographic fabrics produced during constrictional deformation: *Journal of Structural Geology*, v. 32, p. 1,430–1,443.

Sullivan, W. A., 2009, Kinematic significance of L tectonites in the footwall of a major terrane-bounding thrust fault, Klamath Mountains, California: *Journal of Structural Geology*, v. 31, p. 1,197–1,211.

Sullivan, W. A., 2008, Significance of transport-parallel strain variations in part of the Raft River shear zone, Raft River Mountains, Utah, USA: *Journal of Structural Geology*, v. 30, p. 138–158.

Sullivan, W. A., and Snoke, A. W., 2007, Comparative anatomy of core-complex development in the northeastern Great Basin, U.S.A.: *Rocky Mountain Geology*, v. 42, p. 1–29.

Sullivan, W. A., and Law, R. D., 2007, Strain path partitioning in the transpressional White Mountain shear zone, California and Nevada: *Journal of Structural Geology*, v. 29, p. 583–598.

Sullivan, W. A., 2006, Structural significance of L tectonites in the eastern-central Laramie Mountains, Wyoming: *Journal of Geology*, v. 114, p. 513–531.

*Denotes undergraduate student author

CONFERENCE ABSTRACTS

Sullivan, W. A., *Monz, M. E., and *Boyd, A. S., 2014, Evolution of an orogen-parallel, strike-slip fault system: A case study of the Kellyland fault zone, northern Appalachian orogen, U.S.A.: *Geological Society of America Abstracts with Programs*, v. 46, No. 5, p. 24.

*Monz, M. E., *Boyd, A. S., and Sullivan, W. A., 2013, Deformation mechanisms in three protoliths across the Kellyland fault zone, Washington County, Maine: *Geological Society of America Abstracts with Programs*, v. 45, no. 7, p. 598.

*Sperry, J. A., and Sullivan, W. A., 2013, Investigation of constriction in shear zones with transport-parallel linear asperities using numerical modeling: *Geological Society of America Abstracts with Programs*, v. 45, no. 7, p. 885.

*Bolger, A. J., and Sullivan, W. A., 2013, Analysis of dike and vein deformation in the Appleton Ridge Formation schist, Central ME: *Geological Society of America Abstracts with Programs*, v. 45, no. 1, p. 75.

Sullivan, W. A., *Boyd, A. S., and *Monz, M. E., 2013, Strain localization in homogenous granitic rocks at the brittle-plastic transition: A case study of the Kellyland fault zone, Washington County, Maine: *Geological Society of America Abstracts with Programs*, v. 45, no. 1, p. 88.

*Boyd, A. S., *Monz, M. E., and Sullivan, W. A., 2012, Origin of mylonites and ultramylonites in the Kellyland fault zone, Washington County, Maine: *Geological Society of America Abstracts with Programs*, v. 44, No. 7, p. 127.

Sullivan, W. A., and Beane, R. J., 2012, A study of contradictions: Lithology and strain-path partitioning in a complex high-strain zone: *NSF-funded Structural Geology and Tectonics Forum*.

Sullivan, W. A., and Beane, R. J., 2011, New evidence for sinistral transpression in the Cheyenne belt: *Geological Society of America Abstracts with Programs*, v. 43, no., 5, p. 34.

Sullivan, W. A., 2011, L tectonites: Why and how?: *Geological Society of America Penrose Conference, Deformation localization in rocks: New advances*.

- Sullivan, W. A., *Roberts-Pierel, A. M., *Beck, E. N., and Beane, R. J., 2010, Quartz crystallographic fabrics from the northern mylonite zone of the Cheyenne Belt, SE Wyoming: Geological Society of America Abstracts with Programs, v. 42, no. 5, p. 261.
- Sullivan, W. A., *Fereday, W., *Hunt, C. G., *Jadkowski, M., and *Schwarz, J. J., 2009, A kinematic reevaluation of the Cheyenne belt: Testing the transpression hypothesis: Geological Society of America Abstracts with Programs, v. 41, no. 7, p. 687.
- Sullivan, W. A., and Beane, R. J., 2009, Asymmetric quartz crystallographic fabrics produced during constrictional deformation: Geological Society of America Abstracts with Programs, v. 41, no. 3, p. 87.
- Sullivan, W. A., 2008, Rheologically driven strain partitioning in the footwall shear zone of a metamorphic core complex, Raft River Mountains, Utah: Geological Society of America Abstracts with Programs, v. 40, no. 6., p. 108.
- Sullivan, W. A., 2007, Structural significance of L tectonites in part of the western Hayfork terrane, Klamath Mountains, California: Geological Society of America Abstracts with Programs, v. 39, no. 6, p. 94.
- Sullivan, W. A., 2006, L tectonites in the eastern-central Laramie Mountains, Wyoming: EOS Transactions AGU, v. 87, no. 52, Abstract no. T53C-1618.
- Sullivan, W. A., and Law, R. D., 2003, Geometry kinematics and age of the northern half of the White Mountain shear zone: Extending the range and duration of Late Cretaceous dextral transpression along the western margin of North America: Geological Society of America Abstracts with Programs, v. 34, no. 7, p. 114.
- *Sullivan, W. A., and Allen, J. L., 2001, Stratigraphy of upper Hinton Formation sandstones in the Bluestone River Gorge, southern West Virginia: Geological Society of America Abstracts with Programs, v. 33, no. 2, p. 77.
- *Bierly L., *Sullivan, W., *Tibbits, M., *Natoli, J., *Csontos R., *Meyer, J., *Nettik, J., *Dean, R., *DeArmond, B., *Gerseny, M., *Lesmerises, M., *Pollock, M., Yurkovich, S., Savov, I., Peterson, V., Burr, J., Kruse, S., Schneider, J., Ryan J., 2001, Petrographic and field relations of a portion of the Carroll Knob Mafic/Ultramafic Complex, eastern, Blue Ridge, Macon Co., NC: Geological Society of America Abstracts with Programs, v. 33, no. 2, p. 69.
- *Denotes undergraduate student author

INVITED PRESENTATIONS

- 2011: *"A kinematic reevaluation of the Cheyenne belt suture zone: Testing the transpression hypothesis"*, University of Vermont Department of Geology seminar speaker
- 2010: *"Techniques and application of kinematic analyses in L and S tectonites"*, University of Tennessee, Knoxville Department of Earth and Planetary Sciences seminar speaker
- 2009: *"Significance of transport-parallel strain variations in part of the Raft River shear zone, Raft River Mountains, Utah, U.S.A."*, University of Maine, Orono Department of Earth Sciences seminar speaker

GRANTS

- 2014: *Division of Natural Sciences Grant*, Colby College, \$3,000.00
- 2013: *Division of Natural Sciences Grant*, Colby College, \$3,000.00
- 2012: *Division of Natural Sciences Grant*, Colby College, \$3,000.00

2011: *Division of Natural Sciences Grant*, Colby College, \$3,000.00

2010: *University of Wyoming School of Energy Resources Matching Funds*, University of Wyoming, joint award with Dr. Erin Campbell-Stone at the University of Wyo., \$3,000.00

2010: *Division of Natural Sciences Grant*, Colby College, \$3,000.00

2010: *CBB Mellon Foundation Collaborative Research and Development Grant*, Mellon Foundation, joint award with Dr. Rachel Beane at Bowdoin College, \$17,417.00

2009: *Division of Natural Sciences Grant*, Colby College, \$3,000.00

2008: *CBB Mellon Foundation Collaborative Research and Development Grant*, Mellon Foundation, joint award with Dr. Rachel Beane at Bowdoin College, \$5,058.00

2008: *Division of Natural Sciences Grant*, Colby College, \$3,030.00

2005: *Geological Society of America Grant in Aid of Research*, Geological Society of America, \$2,000.00

2004: *J. David Love Foundation Grant in Aid of Research*, J. David Love Foundation, \$500.00

2004: *Gregg Ranch Foundation Grant in Aid of Research*, Gregg Ranch Foundation, \$500.00

2003: *Sigma Xi Grant in Aid of Research*, Sigma Xi Scientific Society, \$600.00

2002: *White Mountain Research Station Fellowship*, University of California, San Diego, \$2,000.00

2002: *David R. Wones Scholarship*, Virginia Tech Department of Geosciences, \$500.00

AWARDS

2009: *Journal of Structural Geology Student Author of the Year Award*, Best student paper submitted in 2007, Awarded for: Sullivan, W. A., 2008, Significance of transport-parallel strain variations in part of the Raft River shear zone, Raft River Mountains, Utah

CAPSTONE AND HONORS PROJECTS SUPERVISED

2012–14: Ariana Boyd ('14) "Deformation Mechanisms in Mylonites at Fletcher Peak, Washington County, ME"

2012–14: Morgan Monz ('14) "Deformation Mechanisms in the Metasedimentary Rocks within the Kellyland Fault Zone, Washington County, Maine"

2012–13: Justin Sperry ('14-J) "Investigation of Constriction in Deformation Zones with Complex Boundary Conditions"

2012–13: Allison Bolger ('13) "An Estimation of the Vorticity of Flow for Strain Indicators in the Appleton Ridge Formation, Maine"

2011–12: Emma Beck ('12) "Examination of Spatial Variations in Recrystallization Mechanisms in Quartz"

2010: Wyatt Fereday ('11) "Quantification of shear sense indicators in thin-sections of rocks of the northern mylonite zone of the Cheyenne belt, A-Bar-A Ranch, Wyoming"

2010: Samuel Mathes ('10) "Evaluation of quartz fabrics in part of the northern mylonite zone, Cheyenne belt, Wyoming"

2009–10: Andrew McCarthy ('10) "Assessing deformation symmetry by comparing grain-shape and crystallographic fabrics in quartzite mylonites"

- 2008–09: Caroline Hunt ('09) "Testing the transpression hypothesis: Using a systematic approach to assess qualitative microstructural observations"
- 2008–09: Jacob Schwarz ('09) "Reconnaissance fabric analyses of quartz mylonites, Medicine Bow Mountains, Cheyenne Belt, Southeastern Wyoming"

SERVICE TO THE GEOSCIENCES COMMUNITY

- 2014: Co-convenor of four sessions at the Geological Society of America Cordilleran-Rocky Mountain section meeting
- 2011: Session chair at the Geological Society of America national meeting
- 2010–Present: Campus representative for the Geological Society of America
- 2008–09: Organizational committee member for 2009 Geological Society of America Northeastern Section Meeting
- 2007–Present: Referee for *Geology*, *Geological Society of America Bulletin*, *Journal of Structural Geology*, *Rocky Mountain Geology*, the *International Journal of Earth Sciences*, *Precambrian Research*, and the NSF

COLLEGE SERVICE

- 2012–13: Member of two Geology search committees; Panelist in discussion about learning difference at Colby
- 2011–12: Member of Independent Study Committee; Member of Geology search committee; Member of Science Division Facilities Planning Committee; Panelist in faculty workshop on responding to student writing
- 2010–11: Member of Geology search committee
- 2009–10: Chair of Information Technology Committee; Member of Geology search committee; Member of Biology search committee
- 2008–09: Member of Information Technology Committee; Member of Dismissal Proceedings Committee; Organizer of weekly Faculty Mumble meetings

PROFESSIONAL DEVELOPMENT

- 2012: Participant in the NSF-funded Structural Geology and Tectonics Forum, June 12–17: This is an informal conference designed to improve collusion in the structural geology community
- 2011: Geological Society of America fieldtrip: *Structural Geology of the Subprovince Boundaries in the Archean Superior Province of Northern Minnesota and Adjacent Ontario*, October 5–8, 2011.
- 2011: Geological Society of America Penrose Conference: *Deformation Localization in Rocks: New advances*, June 27–July 2, 2011 in Cadaques, Spain
- 2008: *Starting out in Undergraduate Research and Education: A Professional Development Workshop for Young Faculty*, Cosponsored by Council on Undergraduate Research and National Association of Geoscience Teachers, held at the Geological Society of America national meeting
- 2008: *Workshop in Texture and Microstructural Analysis using Computer Integrated Polarizing Microscopy*, Presented by Dr. Renee Heilbronner, held at Massachusetts Institute of Technology

2006: *Integrated Solid Earth Sciences (ISES) Summer School in Rheology of Earth Materials*,
Organized by Dr. Basil Tikoff and Dr. Christine Sidoway, held at Colorado College

2003: *University of Wyoming Graduate Teaching Assistant Orientation*, University of Wyoming

2001: *Virginia Tech Graduate Teaching Assistant Workshop*, Virginia Tech