

Rachel C. Glade

rcglade@gmail.com • <http://www.rachelglade.com>

EDUCATION

University of Colorado, Boulder, Boulder, Colorado, USA

- Ph.D. in Geology Aug 2014 – Present
 - Specialization: Geomorphology
 - Advisor: Robert S. Anderson
 - Focus: Hillslope evolution in heterogeneous lithology

University of Pennsylvania, Philadelphia, Pennsylvania, USA

- B.A. in Geology Aug 2010 – May 2014
 - Benjamin Franklin Scholar
 - Advisor: Douglas J. Jerolmack
 - Thesis: "Formation and morphology of aeolian coarse-grained ripples in White Sands, NM"

PUBLICATIONS

Peer-Reviewed

Glade, R.C., Anderson, R.S. (2018), Quasi-steady evolution of hillslopes in layered landscapes: An analytic approach, *JGR Earth Surface*, doi: 10.1002/2017JF004466

Glade, R.C., Anderson, R.S., and Tucker, G.E., (2017), Block-controlled hillslope form and persistence of topography in rocky landscapes, *Geology*, v. 45, p. 311-314, doi:10.1130/G38665.1

Other

Foster, M.A., Anderson, R.S., Rindfleisch, P.R., Birkeland, P.W., Redwine, J.R., Pitlick, J., and Glade, R.C., (2016), The 2016 Kirk Bryan field trip: Quaternary landslides, fluvial terraces, and recent geomorphic events along the Colorado Front Range, in Keller, S.M., and Morgan, M.L., eds., *Unfolding the Geology of the West: Geological Society of America Field Guide 44*, p. 267–289, doi:10.1130/2016.0044(12).

RESEARCH POSITIONS

Department of Geological Sciences, University of Colorado, Boulder

Aug 2015 – Present

- Graduate Research Assistant

West Valley Restoration Project, Erosion Working Group

Jan 2016 – Present

- Research Assistant
 - Numerical modeling of landscape evolution to aid environmental remediation of site contaminated with radioactive waste

NASA Student Airborne Research Program, Palmdale/Irvine, CA

May 2013 – Aug 2013

- Research Intern
 - Collected remote sensing data from DC-8 airplane
 - Produced high-resolution digital elevation models from airborne LiDAR

TEACHING

Department of Geological Sciences, University of Colorado, Boulder

Aug 2014 – May 2015

- Graduate Teaching Assistant
 - Taught 4 introductory geology lab courses with local field trips

Department of Earth and Environmental Science, University of Pennsylvania

Aug 2013 – Dec 2013

- Teaching Assistant
 - Introductory geology lab course

AWARDS & SCHOLARSHIPS

- GSA John T. and Carol G. McGill Research Award Recipient 2017
- NSF Graduate Research Fellowship Honorable Mention 2016
- NSF Research Grant EAR-1529284, "Blocky Hillslope: From Outcrops to Flatirons" Contributed to writing of grant application 2015
- Shell Research Grant 2015
- Delaware Valley Geo-Institute Scholarship 2013
- SEG/Anadarko Scholarship for Geoscience Studies 2010

PROFESSIONAL AFFILIATIONS & ACTIVITIES

Session Co-Convener

- “Heterogeneity in Geomorphic Systems: Driving Forces and Landscape Response” at *Geological Society of America Meeting*

Sep 2016

Society Membership

- American Geophysical Union (AGU)
- Geological Society of America (GSA)
- Community Surface Dynamics Modeling System (CSDMS)

CONFERENCE PROCEEDINGS

- Glade, R.C., Anderson, R.S. (2017), Steady evolution of hillslopes in layered landscapes: self-organization of a numerical hogback, Oral Presentation at *American Geophysical Union Fall Meeting*, New Orleans, LA.
- Glade, R.C., Anderson, R.S. (2017), Legions of lobes: Self-organization of solifluction features at Niwot Ridge LTER, Oral Presentation at *Geological Society of America Meeting*, Seattle, WA.
- Glade, R.C., Anderson, R.S., and Tucker, G.E., (2016), Hillslope evolution in landscapes dominated by layered rocks, Oral Presentation at *American Geophysical Union Fall Meeting*, San Francisco, CA.
- Glade, R.C., Anderson, R.S., and Tucker, G.E., (2016), Blocks control hillslope evolution in landscapes developed in layered rock, Oral Presentation at *Geological Society of America Annual Meeting*, Denver, CO.
- Glade, R.C., Anderson, R.S., and Tucker, G.E., (2016), Blocks control hillslope evolution in layered landscapes, Poster Presentation at *Community Surface Dynamics Modeling System- Sediment Experimentalists Network Meeting*, Boulder, CO.
- Glade, R.C., Anderson, R.S., (2015), Honoring the reality of blocky hillslopes: Case study of a vertical dike at Shiprock, New Mexico, Poster Presentation at *American Geophysical Union Fall Meeting*, San Francisco, CA.
- Glade, R.C., Jerolmack, D.J., and Pelletier, J.D., (2014), Formational mechanisms and morphology of windblown coarse-grained sand ripples at White Sands, New Mexico, Poster Presentation at *American Geophysical Union Fall Meeting*, San Francisco, CA.
- Glade, R.C., Grigsby, S., and Ustin, S.L., (2013), Relationships between topography and leaf area index in the Sierra Nevada Mountains, California, Poster Presentation at *American Geophysical Union Fall Meeting*, San Francisco, CA.

OUTREACH & SCIENCE COMMUNICATION

- CU Science Ambassador 2015 – Present
- Portal to the Public 2015
 - Participated in 6-week science communication workshop
 - Developed hands-on demonstration for “Meet a Scientist” event at Boulder Public Library
- Science Fair Judge for Boulder Valley School District 2016 – Present

OTHER EXPERIENCE

PIRE Mongolia Project

Climate change experiments conducted in Northern Mongolia to determine the effects of climate change on plant diversity

- Lab assistant, UPenn, Philadelphia, PA Aug 2011 – Mar 2013
 - Plant ecology lab work including sample prep, isotope analysis, image processing
- Field assistant, Dalbay Valley, Mongolia Jun 2011 – Aug 2011

CRB Geological and Environmental Services, Miami, FL

Jun 2012 – Aug 2012

- Groundwater and soil sampling, asbestos surveys, phase I and phase II reports

TECHNICAL SKILLS

Computational

Numerical modeling in MATLAB, Python; Git; GRASS GIS ArcGIS, QGIS; processing of raw LiDAR data; creation of high resolution digital elevation models; ImageJ

Data collection

Terrestrial LiDAR; drone operation for photogrammetry; topographic mapping using GPS and total station; Schmidt Hammer; geologic mapping; plant identification; river profiles and pebble counts