

# JEFF ATKINS

jeffatkins@virginia.edu

Virginia Commonwealth University  
Department of Biology  
1000 W. Cary St.  
Richmond, VA 23284  
atkinsjeff.github.io  
828.226.4753

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## EDUCATION

2016 *Doctor of Philosophy, Environmental Sciences, University of Virginia, Charlottesville, VA*  
2004 *Bachelor of Arts, English, Western Carolina University, Cullowhee, NC*

## APPOINTMENTS

- \* Post-Doctoral Scholar, Virginia Commonwealth University, Department of Biology
- \* Visiting Scholar, University of Virginia, Department of Environmental Sciences

## PUBLICATIONS

- \* **Atkins, JW**, HE Epstein, DL Welsch (2015) "Vegetation and elevation influence the timing and magnitude of soil CO<sub>2</sub> efflux in a humid, topographically complex watershed." *Biogeosciences*, 12, 2975-2994.

## PUBLICATIONS (IN REVIEW)

- \* **Atkins, JW**, HE Epstein, DL Welsch "Seasonal and inter-annual variability in litter decomposition and nitrogen cycling is influenced by elevation and vegetation in a Mid-Appalachian watershed." In review at *Plant and Soil*
- \* JA Walter, JC Neblett, **JW Atkins**, HE Epstein "Regional and watershed scale analysis of current and future suitable habitat for red spruce in the central Appalachian Mountains." In review at *Plant Ecology*

## PUBLICATIONS (IN REVISION)

- \* **Atkins, JW**, HE Epstein, DL Welsch "Characterization of understory shrub expansion in a West Virginia watershed from 1986 – 2011 using Landsat derived vegetation indices."

## EXTERNAL GRANTS AND FUNDING

- \* "Evaluating Carbon and Water Cycling in the Weimer Run Watershed, West Virginia" (**Coauthor**) Appalachian Stewardship Foundation, 2012, \$8,500 (PI: Howard E. Epstein, University of Virginia).

## INTERNAL GRANTS AND FUNDING

- \* VCU Post-Doctoral Travel Award, 2016, \$700
- \* Open Access Fund Award, University of Virginia Library, 2014, \$1,190
- \* Moore Award: "Methane and carbon cycling in a Virginia ephemeral wetland" Department of Environmental Sciences, University of Virginia, 2014, \$5,000.
- \* Robert J. Huskey Travel Fellowship, Graduate School of Arts and Sciences, University of Virginia (to attend AGU Fall Meeting in San Francisco) 2011, \$240.
- \* Exploratory Research Grant: "Mechanisms influencing surface soil CO<sub>2</sub> efflux in respect to elevation and vegetation gradients in a complex watershed," Department of Environmental Sciences, University of Virginia, 2011, \$1,500.

## INVITED TALKS

- \* "Carbon cycling in a humid watershed in West Virginia", 2016 Biology Seminar Series, Virginia Commonwealth University
- \* "Where you are on the land matters . . . at least some times," 2016 Ecological Society of America Annual Meeting in Ft. Lauderdale, FL special session "Up-Goer Five Challenge: Using Common Language to Communicate Science"  
Jeff Atkins CV (jeffatkins@virginia.edu)

## PRESENTATIONS

- \* **Atkins, JW**, CM Gough, P Buckaveckas, M Beck (2016) "Canopy complexity and chronic nitrogen amendments constrain the primary production of a Mid-Atlantic forest: A long-term study at the nexus of environmental and ecological change" Ecological Society of America Annual Meeting in Ft. Lauderdale, FL
- \* Gough, CM, RT Fahey, BS Hardiman, CM Scheuermann, **JW Atkins** (2016) "(Why) does physical complexity matter?: Forest physical structure and carbon cycling," INTERface workshop, 2016
- \* **Atkins, JW**, HE Epstein, DL Welsch (2015) "Characterization of understory shrub expansion in a West Virginia watershed from 1986 – 2011 using Landsat derived vegetation indices," American Geophysical Union Fall Meeting 2015, abstract #B53C-0572
- \* **Atkins, JW**, HE Epstein, DL Welsch (2015) "Decomposition varies spatially and temporally by vegetation cover and elevation in a West Virginia watershed," Ecological Society of America Annual Meeting, Baltimore, MD
- \* **Atkins, JW**, AM Riscassi (2015) "Impact of episodic acidification events on brook trout in Shenandoah National Park," Robert J. Huskey Research Exhibition, University of Virginia
- \* **Atkins, JW**, HE Epstein, DL Welsch (2014) "Carbon dioxide and methane fluxes from the transitional zone of a Virginia ephemeral wetland," American Geophysical Union Fall Meeting 2014, abstract #B13D-0210
- \* Ko, SM, HE Epstein, **JW Atkins** (2014) "Effects of elevation and vegetation interactions on the organic layer in Weimer Run watershed, West Virginia," Enviroday – Environmental Sciences Student Research Symposium, University of Virginia.
- \* Neblett, JC, JA Walter, **JW Atkins**, HE Epstein (2014) "Red spruce in the Weimer Run watershed, WV: suitability under current conditions," Enviroday – Environmental Sciences Student Research Symposium, University of Virginia.
- \* **Atkins, JW**, HE Epstein, DL Welsch (2013) "Impacts of vegetation heterogeneity and landscape position on carbon and water cycling in a complex, humid watershed in West Virginia," American Geophysical Union Fall Meeting 2013, abstract #B52A-06
- \* **Atkins, JW**, DL Welsch, HE Epstein (2013) "Inter-annual variation in precipitation affects the spatial heterogeneity of soil CO<sub>2</sub> efflux in a West Virginia watershed," Ecological Society of America Annual Meeting, Minneapolis, MN.
- \* **Atkins, JW** (2013) "Implications of fundamental state changes on red spruce restoration attempts in the central Appalachians," Robert J. Huskey Research Exhibition, University of Virginia.
- \* **Atkins JW**, DL Welsch, HE Epstein (2013) "Inter-annual variation in precipitation affects the spatial heterogeneity of soil CO<sub>2</sub> efflux in a West Virginia watershed," Penn State—Environmental Chemistry and Microbiology Student Symposium.
- \* **Atkins JW**, DL Welsch, HE Epstein (2013) "How the lateral redistribution of soil moisture within a humid, temperate watershed affects carbon cycling," Enviroday – Environmental Sciences Student Research Symposium, University of Virginia.
- \* **Atkins JW**, HE Epstein, DL Welsch (2012) "Mechanisms influencing surface soil CO<sub>2</sub> efflux in respect to elevation and vegetation gradients in a complex watershed," The Fourth Annual FREC Graduate Research Symposium, Department of Forest Resources and Environmental Conservation, Virginia Tech.
- \* **Atkins JW**, HE Epstein, DL Welsch (2012) "Evaluating the controls on carbon and water cycling in complex terrain: what goes in, must come out," Robert J. Huskey Research Exhibition, University of Virginia.
- \* **Atkins JW**, HE Epstein, DL Welsch (2012) "Evaluating the effects of complex terrain on carbon and water cycling in a forested watershed in West Virginia," Enviroday – Environmental Sciences Student Research Symposium, University of Virginia. (Poster)
- \* **Atkins JW**, HE Epstein, DL Welsch (2011) "Mechanisms influencing surface soil CO<sub>2</sub> efflux in respect to elevation and vegetation gradients in a complex watershed," American Geophysical Union Fall Meeting 2011, abstract #B33F-0525.
- \* **Atkins JW**, HE Epstein, DL Welsch (2011) "Carbon and water cycling in a high-altitude watershed in West Virginia," Enviroday – Environmental Sciences Student Research Symposium, University of Virginia.
- \* **Atkins JW** (2003) "Joseph Meeker and John Steinbeck: the importance of place in *Cannery Row*," National Conference on Undergraduate Research, University of Utah.

## AWARDS AND RECOGNITIONS

2015 Graduate Student Association Award, Department of Environmental Sciences, University of Virginia  
2015 First place presentation, Biology and Biomedical Sciences, Robert J. Huskey Research Exhibition  
2014 Trout Unlimited Award, Trout Unlimited Virginia Area Council  
2012 Tomorrow's Professor Today, Teaching Resource Center, University of Virginia  
2012 Third place presentation, Physical Science and Math, Robert J. Huskey Research Exhibition  
1999 Founder's Scholarship, Honors College, Western Carolina University  
1994 Eagle Scout, Boy Scouts of America

## PROFESSIONAL SERVICE AND EXPERIENCE

- \* Peer Reviewer: Agricultural and Forest Meteorology, Biogeosciences, Global Change Biology, Forest Ecology and Management, JGR-Biogeosciences
- \* Primary Session Convener: American Geophysical Union Fall Meeting, 2015 and 2016: "Towards better understanding of climate variability: from ecosystem processes to agricultural adaptation and decision-making"
- \* Planting Science, Science Mentor
- \* Facilitator: University of Virginia Teaching Resource Center's August Teaching Workshop seminars "The First Days of Class," and "Troubleshooting Teaching Challenges" (2014, 2015)
- \* Facilitator: University of Virginia Center for Teaching Excellence Foundations of Scholarly Teaching Seminar (2015)
- \* Graduate Research Fellow, Blandy Experimental Farm (2014)
- \* Student Volunteer: American Geophysical Union Fall Meeting (2013)
- \* Session Presider: Ecological Society of America Annual Meeting (2013)
- \* Session Moderator: Enviroday – Environmental Sciences Student Research Symposium, University of Virginia (2013)
- \* Coldwater Conservation Research Initiative, Waynesboro, Virginia (2012)
- \* "Dr. Doughnuts," Graduate Student Association, University of Virginia (2011 – 2015)

## PROFESSIONAL MEMBERSHIPS

- \* American Geophysical Union
- \* Ecological Society of America

## PROFESSIONAL DEVELOPMENT

- \* Tomorrow's Professor Today; Teaching Resource Center, University of Virginia
- \* Conducting Open Science using R and DataONE: A Hands-on Primer (ESA 2013)
- \* Alan Alda Communicating Science Workshop
- \* Data Management Boot Camp (University of Virginia)
- \* NEON Data Institute, 2016
- \* Potsdam Flux Course, 2015
- \* International Geosphere-Biosphere Program (IGBP) Future Earth Early Career Workshop, 2015

## TEACHING

2017                    *Instructor of Record*  
                             BIO 475: Capstone Seminar in Biology: Science and Society

2015                    *Instructor*  
                             University of Virginia Center for Teaching Excellence FOSTer Seminar

2010 – 2015        *Graduate Teaching Assistant*, University of Virginia  
                             EVSC 1020: Practical Concepts in Environmental Sciences  
                             EVSC/BIO: 4559: Forest Sampling  
                             EVSC 5220: Terrestrial Ecology Lab

## EVSC 3600: Hydrology Lab

- 2010 – 2011     *Athletics Tutor*, University of Virginia – Athletic Academic Affairs Office  
Ecology, Environmental Sciences, Hydrology, Biology
- 2009 – 2010     *After-School Tutor*, Jackson County Public Schools  
Math, Science, English, History, Life Skills
- 2001 – 2004     *Writing Tutor*, University Writing Center – Western Carolina University  
Focus in History, Composition, Literature, Rhetoric

## RESEARCH EXPERIENCE

- 2011 – 2016     Field Scientist, Shenandoah Watershed Study-Virginia Trout Stream Sensitivity Study (SWAS-VTSSS)  
2012             Western Atlantic Climate Study (WACS), Seawater Aerosol Generator laboratory, NOAA Ron Brown,  
Research Assistant (Non-Deployment—Assembly Phase Only)
- 2011 – Pres     National Atmospheric Deposition Program (NADP), Station VA00

## OTHER EXPERIENCE

- 2015 – Pres     PLOS Ecology Community Site Editor
- 2015             Instructor for Introductory Environmental Science Class for 4 Star Summer Camps
- 2008 – 2010     Qualified Mental Health Professional, Jackson County Psychological Services, Sylva, NC.
- 2006 – 2008     Associate Mental Health Professional, Jackson County Psychological Services, Sylva, NC.
- 2004 – 2006     Direct Care Worker, Meridian Behavioral Health Services, Sylva, NC.
- 2003 – 2004     Features Editor, Copy Editor, Writer, Western Carolinian/WC Newsmagazine, Western Carolina  
University, Cullowhee, NC.
- 2002 – 2004     Editor, NOMAD literary magazine, Western Carolina University.

## PRESS

- \*"Under the Canopy: Measuring Light," Virginia Commonwealth University Nature Walks  
<https://vcu.exposure.co/nature-walks>
- \* "Carbon Fluxes from Mountainous Soil," Environmental Sciences at the University of Virginia 2013-14 Annual Report  
[http://www.evsc.virginia.edu/wp-content/uploads/UVAES\\_2015annualreport\\_lores.pdf](http://www.evsc.virginia.edu/wp-content/uploads/UVAES_2015annualreport_lores.pdf)
- \* "U.Va.'s Long-Term Mountain Stream Studies Reveal Changing Conditions," UVA Today  
<http://news.virginia.edu/content/uva-s-long-term-mountain-stream-studies-reveal-changing-conditions>

## COMMUNITY SERVICE

- \* Judge, 32<sup>nd</sup> Virginia Piedmont Regional Science Fair (Environmental Management, NOAA "Taking the Pulse of the Environment Award," and Association of Women Geoscientists, "Women in Geoscience Award") (2013)
- \* Garden Committee, Venable Elementary School, Charlottesville, Virginia (2012 – 2013)
- \* Youth Soccer Coach (U8 and U10), Soccer Organization of Charlottesville/Albemarle (2014 – 2016)

## STUDENT SUPERVISION

### MSc Committee

- 2016             Michael Beck (VCU) "Nitrogen cycling at the VCU Rice Rivers Center"

### Undergraduate Supervision

- 2015             Molly Siebers (B.S. Student), "Rhododendron expansion and change in winter NDVI in the Weimer Run watershed"

2015	Emily Salle (B.S. Student), "Spatial variation in methane fluxes from an ephemeral wetland using soil incubations"
2014	Henry Hoffman (B.S. Student), "Effects of episodic storm events on brook trout in SNP"
2014	Jorge Ruiz (REU program Blandy Experimental Farm) Project: "Spatio-temporality of the earthworm community in Lake Arnold"
2013-2014	Sang Mee Ko (B.A. Student), Thesis: "Effects of elevation and vegetation interactions on the organic layer in Weimer Run Watershed, West Virginia"
2013-2014	Jessica Neblett (B.A. Student), Thesis: "Red spruce: current and future suitability in the Weimer Run watershed, West Virginia," Department of Environmental Sciences, University of Virginia (Co-Mentored with Jon Walter).
2013	Sarah Friedlander (B.A. Student), Thesis: "Variable flow relationships with Cl <sup>-</sup> concentrations in four mountain catchments," Department of Environmental Sciences, University of Virginia (Co-Mentored with Rick Webb).

## RESEARCH MENTORS

Post-Doctoral – Chris Gough (Virginia Commonwealth University)

Ph.D. – Howard Epstein (University of Virginia)

Post-Baccalaureate – Kevin Moorhead (University of North Carolina—Asheville)

Undergraduate – Terry Nienhuis (Western Carolina University)

## REFERENCES

Chris Gough (cmgough@vcu.edu)

Howard E. Epstein (hee2b@virginia.edu)

Todd Scanlon (tms2v@virginia.edu)

Ami Riscassi (alr8m@virginia.edu)

## CODE AND DATASETS

\* [github.com/atkinsjeff](https://github.com/atkinsjeff)

\* [figshare.com/authors/Jeff\\_Atkins/665669](https://figshare.com/authors/Jeff_Atkins/665669)

## SKILLS AND TRAINING

\* Software and programming: R and R Studio, ArcGIS, Matlab, Campbell Scientific Loggernet and CRBasic, and SAS