CURRICULUM VITAE

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RESEARCH INTERESTS

I am interested in understanding the mechanisms behind soil carbon and nutrient cycling processes across ecosystems. I focused on soil moisture and temperature dynamics early in my career, then moved towards a geochemical approach examining the influences of mineralogy and organic matter sources through spectroscopic techniques across a wide environmental gradient. More recently I have begun to appreciate the historical legacies of land acquisition, how that shapes our current agricultural food system, and how we will need to pivot given imminent climate change scenarios.

EDUCATION

2021	*Expected* Ph.D. in Soil Science, Oregon State University, OR.
2016	M.S. Sustainable Forest Management, Oregon State University, OR
2013	B.Sc. Soil Science, Geology Minor, California Polytechnic State University, CA

RESEARCH PROJECTS

2018-2019	Learning Innovation Grant through Oregon State University for 3D Landslide Model. Co-Author with Erin Rooney. $12,000
2017-2019	Effects on soil and aquatic organic matter in a southern Appalachian hardwood forest: A rapid assessment across the terrestrial-aquatic interface following the Great Smokey Mountains National Park fire of 2016. NSF – Macrosystems Biology.
2016-Present	A Continental scale assessment of the linkages between soil organic matter stabilization mechanisms, controls, and vulnerability. NSF – Macrosystems Biology.
2013-2016	Northwest Advanced Renewables Alliance (NARA): A new vista for green fuels, chemicals, and Environmentally Preferred Products (EPPs) USDA-AFRI.

POSITIONS HELD

2021 Spring	**Instructor of Record**. Forestry 206 - Forest Soils Lab for Intro to Soils Science & Forestry 208 – Forest Soils [Online offering]. Oregon State University
2020 Fall	**Graduate Teaching Assistant**. Soil 205 Intro to Environmental Science Lab. Oregon State University
2020 Summer	**Extension Communications Student Intern**. Oregon State University
2019/20 Winter	**Freelance Consultant: Scientific Blogs**. IndigoAg Inc. Charlestown, Massachusetts

2019 Fall	**Graduate Teacher's Assistant**. Forest Engineering 430/530 Watershed Processes
2019 Spring	**Instructor of Record**. Forestry 206 - Forest Soils Lab for Intro to Soils Science & Forestry 208 – Forest Soils [Online version]
2016-Present	**Graduate Research Assistant**. Dept. Crop and Soil Sciences, Oregon State University, OR
2013-2016	**Graduate Research Assistant**. Dept. Forest Engineering, Resources, and Management, Oregon State University, OR
2013 Fall & Winter	**Student instructor**. *Intro to Soil Science Lab – SOIL 121*. Natural Resource Management & Environmental Sciences (NRES) Dept. California Polytechnic State University, CA.
2012-2013	**Laboratory Manager**. Natural Resource Management & Environmental Sciences (NRES) Dept. California Polytechnic State University, CA.
2012 Summer	**Watershed Restoration Scientist**. USDA Forest Service & Geological Society of America. Cave Junction, OR.
2011 Summer	**Biological Science Technician of Natural Resources (Soils GS-5)**. USDA Forest Service. Craig, AK. *Award*
2010 Summer	**Biological Science Technician of Natural Resources (Soils GS-4)**. USDA Forest Service. Craig, AK.

PROFESSIONAL SERVICES

2015-2017	Executive Board Member for Oregon Society of Soil Scientists (OSSS) at Oregon State University
2015-2016	Executive Board Member for Association of Graduate Soil Scientists (AGSS) at Oregon State University.
2014-2016	Planning Committee for Western Forestry Graduate Research Symposium (WFGRS) at Oregon State University.
2013-Present	House Director for Phi Kappa Psi Fraternity at Oregon State University.

AWARDS

2019	Best Overall Student Presentation. Soil Chemistry Division. SSSA. San Antonio, TX.
2015	Best Overall Presentation. WFGRS. Corvallis, OR.
2014	Best Poster in Session – Wildand Soils Division. SSSA. Long Beach, CA.
2014	Rick Stratchan Graduate Research Fellowship. FERM Dept. Corvallis, OR.
2012	Professional Soil Scientist of the Year. NRES Dept. San Luis Obispo, CA
2011	Certificate of Outstanding Job Performance. USDA Forest Service. Craig, AK.
2011	Royce Lambert Undergraduate Scholarship. NRES Dept. San Luis Obispo, CA.
2008	Outstanding Senior Athlete of the Year. Deer Valley High School. Antioch, CA.

OUTREACH & EXTRACURRICULAR ACTIVITIES

2018/9	Soil Matter Blog: Porous Pavement & Trail Erosion
2016	Soil Science Information Booth with OSSS at Oregon State Fair. Salem, OR.
2015-Present	FM Radio & Podcast Host on Science Communication in Graduate School. Inspiration Dissemination. Oregon State University 88.7 KBVR FM. See author list & podcast.

MEMBERSHIP IN ACADEMIC SOCIETIES

2015-Present	American Geophysical Union (AGU)
2015-Present	Northwest Forest Soils Council (NWFSC)
2013-Present	Oregon Society of Soil Scientists (OSSS)
2012-Present	Geological Society of America (GSA)
2011-2013	California Forest Soil Council (CFSC)
2009-2019	Crops Science Society of America (CSSA)
2009-2019	Agronomy Society of America (ASA)
2009-Present	Soil Science Society of America (SSSA)

PUBLICATIONS

In Prep	**A.C. Gallo**, J.A. Hatten, S. Holub, K. Lajtha, K. Littke, D. Maguire. Effects on soil temperature, moisture and soil respiration two years following intensive organic matter and compaction manipulations in the Oregon Cascades.
In Prep	**A.C. Gallo**, J.A. Hatten, S. Holub, K. Lajtha, K. Littke. Root carbon contributions are uniform across intensive biomass removal treatments resulting in soil carbon storage resiliency.
2021	L.E. Nave, M. Bowman, **A. Gallo**, J.A. Hatten, K.A. Heckman, L. Matosziuk, A.R. Possinger, M. SanClements, J. Sanderman, B.D. Strahm, T.L. Weiglein, C.W. Swanston. 2021. Patterns and predictors of soil organic carbon storage across a continental-scale network. Biogeochemistry. https://doi.org/10.1007/s10533-020-00745-9
2020*	Carter, T.L, L.L. Jennings, Y. Pressler, **A.C. Gallo**, A.A. Berhe, E. Marin-Spiotta, C. Shepard, T. Ghezzehei, K.L. Vaughan. 2020. Towards diverse representation and inclusion in soil science in the United States. Soil Science Society of America Journal. https://doi.org/10.1002/saj2.20210 **Invited Review*
2020	L.E. Nave, M. Bowman, **A. Gallo**, J.A. Hatten, K.A. Heckman, L. Matosziuk, A.R. Possinger, M. SanClements, J. Sanderman, B.D. Strahm, T.L. Weiglein, C.W. Swanston. 2020. Patterns and predictors of soil organic carbon storage across a continental-scale network. Biogeochemistry. https://doi.org/10.1007/s10533-020-00745-9
2020	Heckman, K.A., L.E. Nave, M. Bowman, **A. Gallo**, J.A. Hatten, L.M. Matosziuk, A.R. Possinger, M. SanClements, B.D. Strahm, T.L. Weiglein,

C. Rasmussen, C.W. Swanston. 2020. Divergent controls on carbon concentration and persistence between forests and grasslands of the conterminous US. Biogeochemistry. https://doi.org/10.1007/s10533-020-00725-z

2020 Littke, K., T. Harrington, R. Slesak, S. Holub, J. Hatten, **A. Gallo**, W. Littke, R. Harrison, E. Turnblom. 2020. Impacts of organic matter removal and vegetation control on nutrition and growth of Douglas-fir at three Pacific Northwestern Long-Term Soil Productivity sites. Forest Ecology and Management. 468:118176. https://doi.org/10.1016/j.foreco.2020.118176

2020 Matosziuk, L., **A. Gallo**, J. Hatten, K.D. Bladon, D. Ruud, M. Bowman, J. Egan, K. Heckman, M. SanClements, B. Strahm, T. Weiglein. 2020. Short-term effects of recent fire on the production and translocation of pyrogenic carbon in Great Smoky Mountains National Park. Frontiers in Forest and Global Change. https://doi.org/10.3389/ffgc.2020.00006

2020 M. SanClements, R.H. Lee, E. Ayres, K. Goodman, M. Jones, F. Furfen, K. Thibault, R. Zulueta, J. Roberti, C. Lunch, A. Gallo. Collaborating with NEON. BioScience. https://doi.org/10.1093/biosci/biaa005

2019 Nave, L.E., A. Covarrubias Ornelas, P.E. Drevnick, **A. Gallo,** J.A. Hatten, K.A. Heckman, L. Matosziuk, M. Sanclements, B.D. Strahm, T.J. Veverica, T.L. Weiglein, C.W. Swanston. 2019. Carbon-mercury interactions in Spodosols assessed through density fractionation, radiocarbon analysis, and soil survey information. Soil Science Society of America Journal. 83:190-202. https://doi.org/10.2136/sssaj2018.06.0227

CONFERENCE PRESENTATIONS (First Author)

2019 Roots to Regolith: Sources of organic matter across the National Ecological Observatory Network (NEON) soil plots. Oral Presentation. SSSA. San Antonio, TX.

2019 Sources of organic matter: A latitudinal assessment of carbon contributions down soil profiles. Oral Presentation. San Diego.

2019 The morphology of burnt dirt: A pedologic investigation of fire history across ecosystems. Poster Presentation. SSSA. San Diego. **Best Poster in Student Session.**

2018 Root carbon contributions are uniform across intensive biomass removal treatments in a western Oregon Douglas-fir forest. North American Forest Soils Council Meeting. Poster Presentation. Quebec City, Quebec.

2017 Root carbon contributions are uniform across intensive biomass removal treatments in a Western Oregon Douglas-fir forest. SSSA. Oral Presentation. Tampa, FL.

2016 Does root carbon from harvest trees replace mineral carbon? Oral Presentation. AGU. San Francisco, CA.

2016 Does Root Carbon from Harvested Trees Replace Mineral Carbon? Effects of LTSP Treatments in a Western Oregon Douglas-fir Forest. Presentation. SSSA. Phoenix, AZ.

2015	Soil Organic Matter Dynamics in an Intensively Managed Douglas-fir Forest. Poster Presentation. SSSA. Minneapolis, MN.
2015	Soil Organic Matter Dynamics in an Intensively Managed Douglas-fir Forest. Poster Presentation. Annual NARA Conference. Spokane, WA
2015	Biophysical responses in soil following intensive biomass and compaction treatments. Oral Presentation. WFGRS. Corvallis, OR. ***Best Overall Presentation.***
2015	Immediate response mechanisms to account for sustained tree growth following intensive biomass removal on LTSP sites. Northwest Forest Soils Council. Oral Presentation. Hood River, Oregon.
2014	Immediate response mechanisms to account for sustained tree growth following intensive biomass removal on long-term soil productivity (LTSP) sites. Poster Presentation. SSSA. Long Beach, CA. **Best Poster in Session.**
2014	Immediate response mechanisms to account for sustained tree growth following intensive biomass removal on long-term soil productivity (LTSP) sites. Poster Presentation. WFGRS. Corvallis, OR.
2014	Biophysical response in soil following intensive biomass and compaction treatments. Poster Presentation. Northwest Advanced Renewables Alliance (NARA) Annual Meeting. Seattle, WA.

<u>SELECT CONFERENCE PRESENTATIONS (Co-Authored)</u>

2019	Impact of freeze-thaw cycles on porosity in permafrost affected soils. Erin Rooney. SSSA. Oral Presentation. San Antonio, TX.
2019	Predictors of soil organic matter vulnerability to decomposition in mineral horizons from a continental-scale sample set. Tyler Weiglein. Oral Presentation. SSSA. San Antonio, TX.
2019	Linking nominal oxidation state of carbon from extracted soil organic matter to cumulative respiration from climate change incubations at a continental scale. Maggie Bowman. Oral Presentation. SSSA. San Antonio, TX.
2019	Linking carbon and nitrogen speciation with soil organic matter persistence at the continental scale. Angela Possinger. Oral Presentation. SSSA. San Antonio, TX.
2019	Fire effects on soil organic matter in a southern Appalachian hardwood forest: movement of fire-altered organic matter in soil and aquatic systems. Jeff Hatten. Oral Presentation. SSSA. San Diego, CA.
2017	Assessing soil organic C stability at the continental scale: An analysis of soil C and radiocarbon profiles across the NEON sites. Katherine Heckman. Oral Presentation. AGU. New Orleans, LA.
2017	Forest and rangeland soil and the carbon cycle. USFS National Soils Assessment. Jeff Hatten. Boise, ID.
2016	An assessment of soil organic matter stabilization mechanisms on a continental scale. Macrosystem Biology PI Meeting. Katherine Heckman. Poster Presentation. Washington, D.C.

2011 Heavy metals as indicators of Serpentenitic soils. Oral Presentation. SSSA. Laurie Fraser. San Antonio, TX.