

# Daniel Rath

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## Education

2016-Present	Ph.D Candidate, Soils and Biogeochemistry, University of California, Davis, CA, USA
2015	M. Sc., Soil Science, University of Edinburgh, Edinburgh, UK. (Distinction)
2007-2010	B.A., Biology, Carleton College, Minnesota, USA. (Magna cum Laude)
2005-2007	A.Sc., Env. Science, Comp. Science and Math, Ecumenical College, Dangriga, Belize (Valedictorian)

## Peer-Reviewed Publications

2. **Rath, D.**, Bogie, N., Deiss, L., Parikh, S., Wang, D., Ying, S., Tautges, N., Berhe, A. A., and Scow, K.: Synergy between compost and cover crops leads to increased subsurface soil carbon storage, *SOIL Discuss.* [preprint], <https://doi.org/10.5194/soil-2021-19>, in review, **2021**.

1. Schaefer, M.V.; Bogie, N.A.; **Rath, D.**; Marklein, A.R.; Garniwan, A.; Haensel, T.; Lin, Y.; Avila, C.C.; Nico, P.S.; Scow, K.M.; Brodie, E.L.; Riley, W.J.; Fogel, M.L.; Berhe, A.A.; Ghezzehei, T.A.; Parikh, S.; Keiluweit, M.; Ying, S.C. Effect of Cover Crop on Carbon Distribution in Size and Density Separated Soil Aggregates. *Soil Syst.* **2020**, *4*, 6.

## Contributed Presentations

5. Karaoz U, Dubinsky EA, Schmidt R, **Rath D**, Scow K, Brodie E. Genomes and Metabolic Traits of Soil Microorganisms Enhanced by Organic Compost Amendment. In AGU Fall Meeting Abstracts 2020 Dec (Vol. 2020, pp. B002-0002).

4. **Rath, D.**, Bogie, N.A., Deiss, L., Parikh, S.J., Wang, D., Tautges, N., Berhe, A.A., Ghezzehei, T. and Scow, K.M., Synergy between Compost and Cover Crops Leads to Increased Subsurface Carbon Storage. In ASA, CSSA and SSSA International Annual Meetings Abstracts 2020 Nov, VIRTUAL. ASA-CSSA-SSSA.

3. **Rath D**, Bogie NA, Wang D, Schaefer MV, Parikh S, Ying SC, Berhe AA, Scow KM. Long and Short Term Impacts of Cover Cropping on Soil Microbial Community and Carbon Cycling. In SSSA International Soils Meeting Abstracts 2019 Jan, ASA-CSSA-SSSA.

2. **Rath D**, Bogie NA, Tautges N, Ghezzehei TA, Berhe AA, Scow K. Investigating Factors behind Subsurface Carbon Loss and Formation under Long-Term Agricultural Systems. In AGU Fall Meeting Abstracts 2019 Dec (Vol. 2019, pp. B21F-2387).

1. **Rath, D**; Bogie, N; Wang, D; Scow, K: Investigating Factors behind Subsurface Carbon Loss and Formation under Long-Term Agricultural Systems. In Soil Health Institute Annual Meeting Abstracts 2019 July, Sacramento, CA

## Fellowships, Grants and Awards

2021	Best Student Flash Talk Award, Washington Soil Health Conference (Virtual)
2021	<b>\$3000</b> : Lloyd Brown Award for Excellence in Soils and Biogeochemistry, UC Davis
2020-2022	<b>\$120,000</b> : AFRI Predoctoral Fellowship, National Institute for Food and Agriculture
2019	<b>\$100</b> : Best Student Flash Talk Award, Soil and Biogeochemistry Graduate Group, UC Davis
2018	Honourable Mention: Ford Foundation Fellowship
2018	<b>\$100</b> : Best Student Flash Talk Award, Soil and Biogeochemistry Graduate Group, UC Davis
2017-2020	<b>\$8500</b> : Henry A. Jastro Research Award, UC Davis
2016-2017	<b>\$29,150</b> : Soil and Biogeochemistry Graduate Program Fellowship, UC Davis
2015	<b>\$100</b> : Excellence in Soil Science Award, British Society of Soil Science, Edinburgh, UK
2015	Best Dissertation Award, Soil and Sustainability Program, University of Edinburgh
2007	<b>\$500</b> : CAPE Outstanding Performance Award, Caribbean Examinations Council
2005	<b>\$500</b> : CSEC Outstanding Performance Award, Caribbean Examinations Council
2005	CSEC Highest Score Award: Biology, Agriculture, Chemistry & Physics, Belize City, Belize
2005-2007	<b>\$1500</b> : Stann Creek Valedictory Scholarship, Ecumenical Junior College

## Professional Experience

2012-2015	Restaurant and Bar Manager, Pelican Beach Resort, Dangriga, Belize
2013	Integrated Science Substitute Teacher, Stann Creek Ecumenical High, Dangriga, Belize
2010-2012	Agricultural Project Manager, Mana Organics Ltd., Kolkata, India
2010	Naturalist, Aullwood Audubon Nature Center, Dayton, OH

## Teaching Experience

### Teaching Assistant

2021	Designed and organized Remote Lab, Soil Microbiology, UC Davis (Instructor: Jorge Rodrigues)
2020	Rivers of California, UC Davis (Instructor: Sarah Yarnell)
2018 - 2020	Soil Microbiology, UC Davis (Instructor: Kate Scow)

## Guest Lectures

2019- 2020	Soil Microbiology, UC Davis (Instructor: Kate Scow)
2018	Edible Landscape Internship Program, UC Davis

## Mentorship

### Undergraduate

2021	Katherine Woodworth, UC Davis
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### Research Assistants

2018-2020	Brian Pimental, UC Davis
2019	Andrew Kielak, UC Davis
2018 - 2019	Chelsea Supawit, UC Davis
2017-2018	Alexandria Gallizioli, UC Davis

## Professional Development

2020	Multiscale Microbial Dynamics Summer School, Pacific Northwest National Lab (Virtual)
2018	Tri-Institutional Microbiome Project, Lawrence Berkeley National Lab, CA
2017	Farm Foundation Cultivator Program, Tarrytown, NY
2016	Soil, Wines and Vines Congressional Outreach Program, Washington DC
2016	Foundations in Teaching Workshop Series, Center for Educational Effectiveness, UC Davis
2013	Goal-oriented Management and Leadership, Fire Management Consultants, Belize
2013	Tropical Plant Identification, Ya'axche Conservation Trust, Belize
2011	Fundamentals of Biodynamic Agriculture, Ecopro Agricultural Consulting, India

## Outreach

### Organized Seminars, Workshops and Outreach

2021	Basics of Soil Science Workshop, Toledo, Belize
2020	Soil Testing and Advice at the Farmer's Market, Davis, CA
2017-2019	Soil and Biogeochemistry Picnic Day Exhibit, UC Davis
2017	Teaching Soil Health Workshop, UC Davis

## Invited Seminars and Presentations

2021	Digging deeper into soil microbes, Healthy Soils Demonstration Workshop (Virtual)
2021	Building Healthy Soils Webinar, Solano RCD (Virtual)
2018	Awareness into Action Day, Drew School, San Francisco, CA
2018	San Jose Master Composter's Group, San Jose, CA
2018, 2019	Russell Ranch Field Day, Russell Ranch Sustainable Agricultural Facility
2017	Farmer's Guild-Raising, UC Davis Student Farm, CA
2017	TEDx Belmopan, Belmopan, Belize
2017	Soil Biology Primer Workshop, Russell Ranch Sustainable Agricultural Facility, UC Davis, CA

## Diversity, Equity and Inclusion

2021	Seminar Organizer, Justice, Equity, Diversity and Inclusion in the Geosciences, UC Davis (Virtual)
2018-2020	Undergraduate Mentor, Minorities in Agriculture, Natural Resources and Related Science, UC
2017-2018	Mentee, Graduate Students of Color Mentorship Program, UC Davis
2008-2010	Co-Chair, International Student Organization, Carleton College, MN
2008-2010	Mentor, Men Of Color Retreat, Carleton College, MN

## Professional Service

### Institutional Service

2020	Student Feedback Coordinator, Professor of Biophysics Search Committee, UC Davis
2018	Admissions Committee Member, Soil and Biogeochemistry Graduate Group, UC Davis
2017-2020	Seminar Organizer, Soil and Biogeochemistry Graduate Group, UC Davis
2017-2019	Graduate Student Association Representative, Soil and Biogeochemistry Graduate Group, UC Davis
2014-2015	Graduate Student Representative, Soils and Sustainability Program, University of Edinburgh

### Journal Reviewer

Geoderma

Agronomy

Journal of Archaeological Science

## Professional Memberships

Soil Science Society of America

Agronomic Society of America

Crop Science Society of America

American Geophysical Union

Professional Soil Science Society of California

Soil Ecology Society

## Languages

Belizean Kriol	Native Speaker
Spanish	Intermediate
Hindi	Basic