STEVEN D. ALLISON

321 Steinhaus, Irvine, CA 92697 | (949) 824-2341 | allisons@uci.edu | https://allisonlab.bio.uci.edu

EDUCATION

Postdoctoral Scholar, Ecology and Evolutionary Biology/Earth System Science, University of California, Irvine	2005-2007
Ph.D. in Biological Sciences, Stanford University, Stanford, CA	2005
B.S. in Biology, chemistry minor, with honors in Entomology, Pennsylvania State University, University Park, PA	1999

APPOINTMENTS

Professor, Ecology and Evolutionary Biology and Earth System Science (adjunct), University of California, Irvine	2018-
Associate Professor, Ecology and Evolutionary Biology and Earth System Science (adjunct), University of California, Irvine	2013-2018
Assistant Professor, Ecology and Evolutionary Biology and Earth System Science (adjunct), University of California, Irvine	2007-2013

RESEARCH INTERESTS

My research explores the functional roles of microbes in ecosystems. Using theory, experiments, and mathematical models, I analyze microbial feedbacks to environmental change and the consequences for life on Earth.

PUBLICATIONS

Google Scholar: https://scholar.google.com/citations?user=EVaBxPAAAAAJ&hl=en
137 peer-reviewed (P), 6 book chapters (B), 10 other (O)
#Postdoc advisee; *PhD advisee; †Undergrad advisee

P153. Lennon, J. T., R. Z. Abramoff, **S. D. Allison**, R. M. Burckhardt, K. M. DeAngelis, J. P. Dunne, S. D. Frey, P. Friedlingstein, C. V. Hawkes, B. A. Hungate, S. Khurana, S. N. Kivlin, N. M. Levine, S. Manzoni, A. C. Martiny, J. B. H. Martiny, N. K. Nguyen, M. Rawat, D. Talmy, K. Todd-Brown, M. Vogt, W. R. Wieder, and E. J. Zakem. 2024. Priorities, opportunities, and challenges for integrating microorganisms into Earth system models for climate change prediction. mBio 0:e00455-24.

P152. Shi#, Z., F. M. Hoffman, M. Xu, U. Mishra, **S. D. Allison**, J. Zhou, and J. T. Randerson. 2024. Global-Scale Convergence Obscures Inconsistencies in Soil Carbon Change Predicted by Earth System Models. AGU Advances 5:e2023AV001068.

P151. Wijas, B., H. Flores-Moreno, **S. D. Allison**, L. Chavez Rodriguez, A. W. Cheesman, L. A. Cernusack, R. A. Clement, W. K. Cornwell, E. S. Duan, P. Eggleton, M. Rosenfield, A. R. Yatsko, and A. E. Zanne. 2024. Drivers of Wood Decay in Tropical Ecosystems: Termites vs. Microbes Along Spatial, Temporal and Experimental Precipitation Gradients. Functional Ecology 38:546-559.

P150. Abs#, E., M. B. N. Albright, and **S. D. Allison**. 2024. Invasions eliminate the legacy effects of substrate history on microbial nitrogen cycling. Ecosphere in press.

P149. Kimball, S., J. Rath, J. Coffey, M. Perea-Vega, M. Walsh, N. M. Fiore, P. Ta, K. T. Schmidt, M. L. Goulden, and **S. D. Allison**. 2024. Long-term drought promotes invasive species by reducing wildfire severity. Ecology in press.

P148. Flores-Moreno, H., A. R. Yatsko, A. W. Cheesman, **S. D. Allison**, L. A. Cernusack, R. Cheney, R. A. Clement, W. Cooper, P. Eggleton, R. Jensen, M. Rosenfield, and A. E. Zanne. 2024. Shifts in internal stem damage along a tropical precipitation gradient and implications for forest biomass estimation. New Phytologist 241:1047-1061.

B147. Xie*, H. W., E. Duan, B. Chung, and **S. D. Allison**. 2024. Advancing Quantitative Models of Soil Microbiology, Ecology, and Biochemistry. *in* Soil Microbiology, Ecology and Biochemistry, 5th Edition. Elsevier.

P146. Chavez Rodriguez#, L., S. Parker, N. M. Fiore, **S. D. Allison**, and M. L. Goulden. 2023. Impact of Drought on Ecohydrology of Southern California Grassland and Shrubland. Ecosystems in press.

P145. Piton, G., S. D. Allison, M. Bahram, F. Hildebrand, J. B. H. Martiny, K. K. Treseder, and A. C. Martiny. 2023. Life history strategies of soil bacterial communities across global terrestrial biomes. Nature Microbiology 8:2093–2102.

P144. Martiny, J. B. H., A. C. Martiny, E. Brodie, A. B. Chase, A. Rodríguez-Verdugo, K. K. Treseder, and **S. D. Allison**. 2023. Investigating the eco-evolutionary response of microbiomes to environmental change. Ecology Letters 26:S81-S90.

P143. **Allison, S. D.** 2023. Microbial drought resistance may destabilize soil carbon. Trends in Microbiology 31:780-787.

P142. Hemming-Schroeder*, N. M., A. A. Gutierrez, **S. D. Allison**, and J. T. Randerson. 2023. Estimating Individual Tree Mortality in the Sierra Nevada Using Lidar and Multispectral Reflectance Data. Journal of Geophysical Research: Biogeosciences 128:e2022JG007234.

P141. Sorouri*, B., C. I. Rodriguez, B. S. Gaut, and **S. D. Allison**. 2023. Variation in *Sphingomonas* traits across habitats and phylogenetic clades. Frontiers in Microbiology 14.

P140. Law, S., H. Flores-Moreno, A. W. Cheesman, R. Clement, M. Rosenfield, A. Yatsko, L. A. Cernusak, J. W. Dalling, T. Canam, I. A. Iqsaysa, E. S. Duan, **S. D. Allison**, P. Eggleton, and A. E. Zanne. 2023. Wood traits explain microbial but not termite-driven decay in Australian tropical rainforest and savanna. Journal of Ecology 111:982–993.

P139. Püspök, J. F., S. Zhao, A. D. Calma, G. L. Vourlitis, **S. D. Allison**, E. L. Aronson, J. P. Schimel, E. J. Hanan, and P. M. Homyak. 2023. Effects of experimental nitrogen deposition on soil organic carbon storage in Southern California drylands. Global Change Biology 29:1660–1679.

O138. Abs#, E., A. B. Chase, and **S. D. Allison**. 2023. How do soil microbes shape ecosystem biogeochemistry in the context of global change? Environmental Microbiology 25:780–785.

P137. Hagerty, S. B., **S. D. Allison**, and J. P. Schimel. 2022. Testing microbial models with data from a ^{14}C glucose tracer experiment. Soil Biology and Biochemistry 172:108781.

P136. Sujono, D., H. W. Xie*, **S. Allison**, and E. B. Sudderth. 2022. Variational Inference for Soil Biogeochemical Models. 2nd AI4ScienceWorkshop at the 39th International Conference on Machine Learning (ICML).

P135. Alster, C. J., **S. D. Allison**, and K. K. Treseder. 2022. Trait relationships of fungal decomposers in response to drought using a dual field and laboratory approach. Ecosphere 13:e4063.

P134. Barbour, K. M., C. Weihe, **S. D. Allison**, and J. B. H. Martiny. 2022. Bacterial community response to environmental change varies with depth in the surface soil. Soil Biology and Biochemistry 172:108761.

P133. Evans, S. E., **S. D. Allison**, and C. V. Hawkes. 2022. Microbes, memory and moisture: Predicting microbial moisture responses and their impact on carbon cycling. Functional Ecology 36:1430–1441.

P132. Scales, N. C., A. B. Chase, S. S. Finks, A. A. Malik, C. Weihe, **S. D. Allison**, A. C. Martiny, and J. B. H. Martiny. 2022. Differential Response of Bacterial Microdiversity to Simulated Global Change. Applied and Environmental Microbiology 88:e02429-21.

P131. Wang#, B., and **S. D. Allison**. 2022. Climate-Driven Legacies in Simulated Microbial Communities Alter Litter Decomposition Rates. Frontiers in Ecology and Evolution 10:841824.

P130. Nugent*, A., and **S. D. Allison**. 2022. A framework for soil microbial ecology in urban ecosystems. Ecosphere 13:e3968.

P129. Sorouri*, B., and **S. D. Allison**. 2022. Microbial extracellular enzyme activity with simulated climate change. Elementa 10:00076.

P128. Alster, C. J., **S. D. Allison**, N. G. Johnson, and S. I. Glassman. 2021. Phenotypic plasticity of fungal traits in response to moisture and temperature. ISME Communications 1:43.

P127. Wang#, B., and **S. D. Allison**. 2021. Drought legacies mediated by trait tradeoffs in soil microbiomes. Ecosphere 12:e03562.

P126. Clement, R. A., H. Flores-Moreno, L. A. Cernusak, A. W. Cheesman, A. Yatsko, **S. D. Allison**, P. Eggleton, and A. E. Zanne. 2021. Assessing the Australian termite diversity anomaly: how habitat and rainfall affect termite assemblages. Frontiers in Ecology and Evolution 9:237.

P125. Alster, C. J., **S. D. Allison**, S. I. Glassman, A. Martiny, and K. Treseder. 2021. Exploring trait trade-offs for fungal decomposers in a Southern California grassland. Frontiers in Microbiology 12:665.

P124. Griffiths, H. M., P. Eggleton, N. Hemming-Schroeder, T. Swinfield, J. S. Woon, **S. D. Allison**, D. A. Coomes, L. A. Ashton, and C. L. Parr. 2021. Carbon flux and forest dynamics: Increased deadwood decomposition in tropical rainforest tree-fall canopy gaps. Global Change Biology 27:1601–1613.

P123. Finks, S. S., C. Weihe, S. Kimball, **S. D. Allison**, A. C. Martiny, K. K. Treseder, and J. B. H. Martiny. 2021. Microbial community response to a decade of simulated global changes depends on the plant community. Elementa: Science of the Anthropocene 9:124.

P122. Alster, C. J., **S. D. Allison**, and K. K. Treseder. 2020. Carbon budgets for soil and plants respond to long-term warming in an Alaskan boreal forest. Biogeochemistry 150:345-353.

P121. Nisson†, D. M., and **S. D. Allison**. 2020. Litter microbial respiration and enzymatic resistance to drought stress. Elementa: Science of the Anthropocene 8:45.

P120. Xie*, H. W., A. L. Romero-Olivares, M. Guindani, and **S. D. Allison**. 2020. A Bayesian Approach to Evaluation of Soil Biogeochemical Models. Biogeosciences 17:4043-4057.

P119. Malik#, A. A., T. Swenson, C. Weihe, E. W. Morrison, J. B. H. Martiny, E. L. Brodie, T. R. Northen, and **S. D. Allison**. 2020. Drought and plant litter chemistry alter microbial gene expression and metabolite production. ISME Journal 14:2236-2247.

P118. Shi#, Z., **S. D. Allison**, Y. He, P. A. Levine, A. M. Hoyt, J. Beem-Miller, Q. Zhu, W. R. Wieder, S. E. Trumbore, and J. T. Randerson. 2020. The age distribution of global soil carbon inferred from radiocarbon measurements. Nature Geoscience 13:555-559.

P117. Alster, C. J., J. C. von Fischer, **S. D. Allison**, and K. K. Treseder. 2020. Embracing a new paradigm for temperature sensitivity of soil microbes. Global Change Biology 26:3221–3229.

P116. Malik#, A. A., J. B. Martiny, E. L. Brodie, A. C. Martiny, K. K. Treseder, and **S. D. Allison**. 2020. Defining trait-based microbial strategies with consequences for soil carbon cycling under climate change. ISME Journal 14:1-9.

O115. **Allison, S. D.**, and T. Miller. 2019. Why science needs the humanities to solve climate change. The Conversation, August 1, 2019, https://theconversation.com/why-science-needs-the-humanities-to-solve-climate-change-113832

P114. Ramin*, K. I., and **S. D. Allison**. 2019. Bacterial Tradeoffs in Growth Rate and Extracellular Enzymes. Frontiers in Microbiology 10:2956.

O113. **Allison, S. D.** 2019. Traits track taxonomy. Nature Ecology & Evolution 3:1001-1002.

O112. Wang#, B., P. E. Brewer, H. H. Shugart, M. T. Lerdau, and **S. D. Allison**. 2019. Building bottom-up aggregate-based models (ABMs) in soil systems with a view of aggregates as biogeochemical reactors. Global Change Biology 25:e6-e8.

P111. Wang#, B., and **S. D. Allison**. 2019. Emergent properties of organic matter decomposition by soil enzymes. Soil Biology and Biochemistry 136:107522.

P110. Isobe, K., **S. D. Allison**, B. Khalili, A. C. Martiny, and J. B. H. Martiny. 2019. Phylogenetic conservation of bacterial responses to soil nitrogen addition across continents. Nature Communications 10:2499.

P109. Malik#, A. A., J. Puissant, T. Goodall, **S. D. Allison**, and R. I. Griffiths. 2019. Soil microbial communities with greater investment in resource acquisition have lower growth yield. Soil Biology and Biochemistry 132:36–39.

B108. Ramin*, K. I., and **S. D. Allison.** 2019. Carbon Cycle Implications of Soil Microbial Interactions. Pages 1–29 *in* C. J. Hurst, editor. Understanding Terrestrial Microbial Communities. Springer Nature Switzerland AG.

P107. Li, J., G. Wang, M. A. Mayes, **S. D. Allison**, S. D. Frey, Z. Shi, X.-M. Hu, Y. Luo, and J. M. Melillo. 2019. Reduced carbon use efficiency and increased microbial turnover with soil warming. Global Change Biology 25:900-910.

P106. Wang#, B., P. E. Brewer, H. H. Shugart, M. T. Lerdau, and **S. D. Allison**. 2019. Soil aggregates as biogeochemical reactors and implications for soil-atmosphere exchange of greenhouse gases-a concept. Global Change Biology 25:373-385.

P105. Aronson#, E. A, M. L. Goulden, and **S. D. Allison**. 2019. Greenhouse gas fluxes under drought and nitrogen addition in a Southern California grassland. Soil Biology and Biochemistry 131:19-27.

P104. Glassman, S. I., C. Weihe, J. Li, M. B. N. Albright, C. I. Looby, A. C. Martiny, K. K. Treseder, **S. D. Allison**, and J. B. H. Martiny. 2018. Decomposition responses to climate depend on microbial community composition. Proceedings of the National Academy of Sciences 115:11994–11999.

P103. Treseder, K. K., R. Berlemont, **S. D. Allison**, and A. C. Martiny. 2018. Drought increases the frequencies of fungal functional genes related to carbon and nitrogen acquisition. PLoS ONE 13(11):e0206441.

P102. Gundersen, C. B., T. Andersen, R. D. Vogt, and **S. D. Allison.** 2018. Growth response of environmental bacteria under exposure to nitramines from CO_2-capture. International Journal of Greenhouse Gas Control 79:248–251.

P101. Chase, A. B., Z. Gomez-Lunar, A. E. Lopez, J. Li, **S. D. Allison**, A. C. Martiny, and J. B. H. Martiny. 2018. Emergence of Soil Bacterial Ecotypes Along a Climate Gradient. Environmental Microbiology 20:4112-4126.

P100. Hagerty, S. B., **S. D. Allison**, and J. P. Schimel. 2018. Evaluating soil microbial carbon use efficiency explicitly as a function of cellular processes: implications for measurements and models. Biogeochemistry 269-283.

P99. **Allison, S. D.**, A. L. Romero-Olivares, Y. Lu, J. W. Taylor, and K. K. Treseder. 2018. Temperature acclimation and adaptation of enzyme physiology in *Neurospora discreta*. Fungal Ecology 35:78-86.

P98. Baker*, N. R., B. Khalili, J. B. H. Martiny, and **S. D. Allison.** 2018. Microbial decomposers not constrained by climate history along a Mediterranean climate gradient in southern California. Ecology 99:1441–1452.

P97. Liu, W., **S. D. Allison**, P. Li, J. Wang, D. Chen, Z. Wang, S. Yang, L. Diao, B. Wang, and L. Liu. 2018. The effects of increased snow depth on plant and microbial biomass and community composition along a precipitation gradient in temperate steppes. Soil Biology and Biochemistry 124:134–141.

P96. Treseder, K. K., R. Berlemont, **S. D. Allison**, and A. C. Martiny. 2018. Nitrogen enrichment shifts functional genes related to nitrogen and carbon acquisition in the fungal community. Soil Biology and Biochemistry 123:87-96.

P95. **Allison, S. D.**, A. L. Romero-Olivares, Y. Lu, J. W. Taylor, and K. K. Treseder. 2018. Temperature sensitivities of extracellular enzyme Vmax and Km across thermal environments. Global Change Biology 24:2884-2897.

O94. Crowther, T. W., M. B. Machmuller, J. C. Carey, **S. D. Allison**, J. M. Blair, S. D. Bridgham, A. J. Burton, F. A. Dijkstra, B. Elberling, M. Estiarte, K. S. Larsen, H. Laudon, M. Lupascu, S. Marhan, J. Mohan, S. Niu, J. J. Peñuelas, I. K. Schmidt, P. H. Templer, G. Kröel-Dulay, S. Frey, and M. A. Bradford. 2018. Crowther et al. reply. Nature 554:E7.

P93. Homyak#, P. M., **S. D. Allison**, T. E. Huxman, M. L. Goulden, and K. K. Treseder. 2017. Effects of drought manipulation on soil nitrogen cycling: A meta-analysis. Journal of Geophysical Research Biogeosciences 122, https://doi.org/ 10.1002/2017JG004146.

O92. **Allison, S. D.** 2017. UCI relies heavily on federal science funding threatened by Trump. Commentary in LA Times Daily Pilot, April 18, 2017.

P91. Baker*, N. R., and **S. D. Allison.** 2017. Extracellular enzyme kinetics and thermodynamics along a climate gradient in southern California. Soil Biology and Biochemistry 114:82-92.

P90. Romero-Olivares, A. L., **S. D. Allison**, and K. K. Treseder. 2017. Decomposition of recalcitrant carbon under experimental warming in boreal forest. PLoS ONE 12:e0179674.

B89. **Allison, S. D.** 2017. Building Predictive Models for Diverse Microbial Communities in Soil. Pages 141–166 *in* K. R. Tate, editor. Microbial Biomass: A Paradigm Shift in Terrestrial Biogeochemistry. World Scientific.

P88. Dolan, K. L., J. Peña, **S. D. Allison**, and J. B. H. Martiny. 2017. Phylogenetic conservation of substrate use specialization in leaf litter bacteria. PLoS ONE 12:e0174472.

P87. Martiny, J. B. H., C. Weihe, Y. Lu, R. Berlemont, E. L. Brodie, M. L. Goulden, K. K. Treseder, and **S. D. Allison**. 2017. Microbial legacies alter decomposition in response to simulated global change. ISME Journal 11:490-499.

P86. **Allison, S. D.**, and M. L. Goulden. 2017. Consequences of drought tolerance traits for microbial decomposition in the DEMENT model. Soil Biology and Biochemistry 107:104–113.

P85. Romero-Olivares, A. L., **S. D. Allison**, and K. K. Treseder. 2017. Soil microbes and their response to experimental warming over time: a meta-analysis of field studies. Soil Biology and Biochemistry 107:32–40.

P84. Evans#, S., J. B. H. Martiny, and **S. D. Allison**. 2017. Effects of dispersal and selection on stochastic assembly in microbial communities. ISME Journal 11:176-185.

P83. Crowther, T. W., K. E. O. Todd-Brown, C. W. Rowe, W. R. Wieder, J. C. Carey, M. B. Machmuller, B. L. Snoek, S. Fang, G. Zhou, **S. D. Allison**, J. M. Blair, S. D. Bridgham, A. J. Burton, Y. Carrillo, P. B. Reich, J. S. Clark, A. T. Classen, F. A. Dijkstra, B. Elberling, B. A. Emmett, M. Estiarte, S. D. Frey, J. Guo, J. Harte, L. Jiang, B. R. Johnson, G. Kröel-Dulay, K. S. Larsen, H. Laudon, J. M. Lavallee, Y. Luo, M. Lupascu, L. N. Ma, S. Marhan, A. Michelsen, J. Mohan, S. Niu, E. Pendall, J. Peñuelas, L. Pfeifer-Meister, C. Poll, S. Reinsch, L. L. Reynolds, I. K. Schmidt, S. Sistla, N. W. Sokol, P. H. Templer, K. K. Treseder, J. M. Welker, and M. A. Bradford. 2016. Quantifying global soil carbon losses in response to warming. Nature 540:104–108.

P82. Carey, J. C., J. Tang, P. H. Templer, K. D. Kroeger, T. W. Crowther, A. J. Burton, J. S. Dukes, B. Emmett, S. D. Frey, M. A. Heskel, L. Jiang, M. B. Machmuller, J. Mohan, A. Marie, P. B. Reich, S. Reinsch, X. Wang, **S. D. Allison**, C. Bamminger, S. Bridgham, S. L. Collins, G. De Dato, W. C. Eddy, B. J. Enquist, M. Estiarte, J. Harte, A. Henderson, B. R. Johnson, K. Steenberg, Y. Luo, S. Marhan, J. M. Melillo, J. Peñuelas, L. Pfeifer-meister, C. Poll, E. Rastetter, and A. Tietema. 2016. Temperature response of soil respiration largely unaltered with experimental warming. Proceedings of the National Academy of Sciences 113:13797-13802.

P81. Widder, S., R. J. Allen, T. Pfeiffer, T. P. Curtis, C. Wiuf, W. T. Sloan, O. X. Cordero, S. P. Brown, B. Momeni, W. Shou, H. Kettle, H. J. Flint, A. F. Haas, B. Laroche, J.-U. Kreft, P. B. Rainey, S. Freilich, S. Schuster, K. Milferstedt, J. R. van der Meer, T. Groβkopf, J. Huisman, A. Free, C. Picioreanu, C. Quince, I. Klapper, S. Labarthe, B. F. Smets, H. Wang, **Isaac Newton Institute Fellows**, and O. S. Soyer. 2016. Challenges in microbial ecology: building predictive understanding of community function and dynamics. ISME Journal 10:2557-2568.

P80. He#, Y., S. E. Trumbore, M. S. Torn, J. W. Harden, L. J. S. Vaughn, **S. D. Allison**, and J. T. Randerson. 2016. Radiocarbon constraints imply reduced carbon uptake by soils during the 21st century. Science 353: 1419-1424.

P79. Sistla#, S. A., A. B. Roddy, N. E. Williams, D. B. Kramer, K. Stevens, and **S. D. Allison**. 2016. Agroforestry practices promote biodiversity and natural resource diversity in Atlantic Nicaragua. PLoS One e0162529.

P78. Khalili, B., O. A. Ogunseitan, M. L. Goulden, and **S. D. Allison**. 2016. Interactive effects of precipitation manipulation and nitrogen addition on soil properties in California grassland and shrubland. Applied Soil Ecology 107:144–153.

P77. Vereecken, H., A. Schnepf, J. W. Hopmans, M. Javaux, D. Or, T. Roose, J. Vanderborght, M. Young, W. Amelung, M. Aitkenhead, **S. D. Allison**, S. Assouline, P. Baveye, M. Berli, N. Brüggemann, P. Finke, M. Flury, T. Gaiser, G. Govers, T. Ghezzehei, P. Hallett, and K. Lamorski. 2016. Modeling soil processes: review, key challenges and new perspectives. Vadose Zone Journal 15:doi:10.2136/vzj2015.09.0131.

P76. Liu, W., **S. D. Allison**, J. Xia, L. Liu, and S. Wan. 2016. Precipitation regime drives warming responses of microbial biomass and activity in temperate steppe soils. Biology and Fertility of Soils 52:469–477.

P75. Luo, Y., A. Ahlström, **S. D. Allison**, N. H. Batjes, V. Brovkin, N. Carvalhais, A. Chappell, P. Ciais, E. A. Davidson, A. Finzi, K. Georgiou, B. Guenet, O. Hararuk, J. W. Harden, Y. He, F. Hopkins, L. Jiang, C. Koven, R. B. Jackson, C. D. Jones, M. J. Lara, J. Liang, A. D. McGuire, W. Parton, C. Peng, J. T. Randerson, A. Salazar, C. A. Sierra, M. J. Smith, H. Tian, K. E. O. Todd-Brown, M. Torn, K. J. van Groenigen, Y. P. Wang, T. O. West, Y. Wei, W. R. Wieder, J. Xia, X. Xu, X. Xu, and T. Zhou. 2016. Toward more realistic projections of soil carbon dynamics by Earth system models. Global Biogeochemical Cycles 30:40–56.

P74. Amend, A. S., A. C. Martiny, **S. D. Allison**, R. Berlemont, M. L. Goulden, Y. Lu, K. K. Treseder, C. Weihe, and J. B. H. Martiny. 2016. Microbial response to simulated global change is phylogenetically conserved and linked with functional potential. ISME Journal 10:109-118.

O73. Wieder, W. R., **S. D. Allison**, M. A. Bradford, A. S. Grandy, E.-L. Hinckley, S. C. Reed, B. Stephens. 2015. Scaling soil processes with data from above and below: Using space-based and local observations to project carbon cycle-climate feedbacks. National Research Council white paper.

P72. Wieder, W. R., **S. D. Allison**, E. A. Davidson, K. Georgiou, O. Hararuk, Y. He, F. Hopkins, Y. Luo, M. Smith, B. Sulman, K. Todd-Brown*, Y.-P. Wang, J. Xia, and X. Xu. 2015. Explicitly representing soil microbial processes in Earth system models. Global Biogeochemical Cycles 29:1782–1800.

P71. Mouginot, C., A. E. Zimmerman, J. A. Bonachela, H. Fredricks, **S. D. Allison**, B. A. S. Van Mooy, and A. C. Martiny. 2015. Resource allocation by the marine cyanobacterium *Synechococcus* WH8102 in response to different nutrient supply ratios. Limnology and Oceanography 60:1634-1641.

P70. Hynson, N. A., **S. D. Allison**, and K. K. Treseder. 2015. Quantum dots reveal shifts in organic nitrogen uptake by fungi exposed to long-term nitrogen enrichment. PLoS One 10:e0138158.

P69. Matulich, K. L., C. Weihe, **S. D. Allison**, A. S. Amend, R. Berlemont, M. L. Goulden, S. Kimball, A. C. Martiny, and J. B. H. Martiny. 2015. Temporal variation overshadows the response of leaf litter microbial communities to simulated global change. ISME Journal 9:2477-2489.

P68. Baker*, N. R., and **S. D. Allison**. 2015. Ultraviolet photodegradation facilitates microbial decomposition of litter in a Mediterranean climate. Ecology 96:1994-2003.

P67. German#, D. P., and **S. D. Allison**. 2015. Drying and substrate concentrations interact to inhibit decomposition of carbon substrates added to combusted Inceptisols from a boreal forest. Biology and Fertility of Soils 51:525-533.

P66. Berlemont, R., **S. D. Allison**, C. Weihe, Y. Lu, E. L. Brodie, J. B. H. Martiny, and A. C. Martiny. 2014. Cellulolytic potential under environmental changes in microbial communities from grassland litter. Frontiers in Microbiology 5:639.

P65. **Allison, S. D.** 2014. Modeling adaptation of carbon use efficiency in microbial communities. Frontiers in Microbiology 5:571.

P64. Hagerty, S. B., K. J. van Groenigen, **S. D. Allison**, B. A. Hungate, E. Schwartz, G. W. Koch, R. K. Kolka, and P. Dijkstra. 2014. Accelerated microbial turnover but constant growth efficiency with warming in soil. Nature Climate Change 4:903-906.

P63. **Allison, S. D.**, S. S. Chacon†, and D. P. German#. 2014. Substrate concentration constraints on microbial decomposition. Soil Biology & Biochemistry 79:43-49.

P62. Mouginot, C., R. Kiwamura, K. Matulich, R. Berlemont, **S. D. Allison**, A. S. Amend, and A. C. Martiny. 2014. Elemental stoichiometry of Fungi and Bacteria strains from grassland leaf litter. Soil Biology & Biochemistry 76:278-285.

P61. **Allison, S. D.**, Y. Lu, A. G. Kent, and A. C. Martiny. 2014. Extracellular enzyme production and cheating in *Pseudomonas fluorescens* depend on diffusion rates. Frontiers in Microbiology 5:169.

P60. Todd-Brown*, K. E. O., J. T. Randerson, F. Hopkins, V. Arora, T. Hajima, C. Jones, E. Shevliakova, J. Tjiputra, E. Volodin, T. Wu, Q. Zhang, and **S. D. Allison**. 2014. Changes in soil organic carbon storage predicted by Earth system models during the 21st century. Biogeosciences 11:2341-2356.

P59. Zimmerman*, A. E., A. C. Martiny, M. W. Lomas, and **S. D. Allison**. 2014. Phosphate supply explains variation in nucleic acid allocation but not C:P stoichiometry in the Western North Atlantic. Biogeosciences 11:1599-1611.

P58. Li, J., G. Wang, **S. D. Allison**, M. A. Mayes, and Y. Luo. 2014. Soil carbon sensitivity to temperature and carbon use efficiency compared across microbial-ecosystem models of varying complexity. Biogeochemistry 119:67-84.

P57. Zimmerman*, A. E., **S. D. Allison**, and A. C. Martiny. 2014. Phylogenetic constraints on elemental stoichiometry and resource allocation in heterotrophic marine bacteria. Environmental Microbiology 16:1398-1410.

P56. Bach†, C. E., D. D. Warnock, D. J. Van Horn, M. N. Weintraub, R. L. Sinsabaugh, **S. D. Allison**, and D. P. German#. 2013. Measuring phenol oxidase and peroxidase activities with pyrogallol, l-DOPA, and ABTS: Effect of assay conditions and soil type. Soil Biology & Biochemistry 67:183-191.

P55. Wieder, W. R., G. B. Bonan, and **S. D. Allison**. 2013. Global soil carbon predictions are improved by modelling microbial processes. Nature Climate Change 3:909-912.

P54. McGuire, K. L., **S. D. Allison**, N. Fierer, and K. K. Treseder 2013. Ectomycorrhizal-dominated boreal and tropical forests have distinct fungal communities, but analogous spatial patterns across soil horizons. PLoS One 8:e68278.

P53. Aronson#, E, **S. D. Allison**, and B. R. Helliker. 2013. Environmental impacts on the diversity of methane-cycling microbes and their resultant function. Frontiers in Microbiology 4:225.

P52. Bonachela, J. A., **S. D. Allison**, A. C. Martiny, and S. A. Levin. 2013. A model for variable phytoplankton stoichiometry based on cell protein regulation. Biogeosciences 10:4341-4356.

P51. Alster†, C. J., D. P. German#, Y. Lu, and **S. D. Allison**. 2013. Microbial enzymatic responses to drought and to nitrogen addition in a southern California grassland. Soil Biology & Biochemistry 64:68-79.

P50. **Allison, S. D.**, Y. Lu, C. Weihe, M. L. Goulden, A. C. Martiny, K. K. Treseder, and J. B. H. Martiny. 2013. Microbial abundance and composition influence litter decomposition response to environmental change. Ecology 94:714-725.

P49. Zimmerman*, A. E., A. C. Martiny, and **S. D. Allison**. 2013. Microdiversity of extracellular enzyme genes among sequenced prokaryotic genomes. ISME Journal 7:1187-1199.

P48. Todd-Brown*, K. E. O., J. T. Randerson, W. M. Post, F. M. Hoffman, C. Tarnocai, E. A. G. Schuur, and **S. D. Allison**. 2013. Causes of variation in soil carbon simulations from CMIP5 Earth system models and comparison with observations. Biogeosciences 10:1717-1736.

P47. Shade, A., H. Peter, **S. D. Allison**, D. Baho, M. Berga, H. Buergmann, D. H. Huber, S. Langenheder, J. T. Lennon, J. B. Martiny, K. L. Matulich, T. M. Schmidt, J. Handelsman. 2012. Fundamentals of microbial community resistance and resilience. Frontiers in Microbiology 3:417.

P46. Folse#, H. J., III, and **S. D. Allison**. 2012. Cooperation, competition, and coalitions in enzyme-producing microbes: Social evolution and nutrient mineralization rates. Frontiers in Microbiology 3:338.

P45. **Allison, S.D**., Y. Chao, J. D. Farrara, S. Hatosy, and A. C. Martiny. 2012. Fine-scale temporal variation in marine extracellular enzymes of coastal southern California. Frontiers in Microbiology 3:301.

P44. Aronson#, E., and **S. D. Allison**. 2012. Meta-analysis of environmental impacts on nitrous oxide release in response to N amendment. Frontiers in Microbiology 3:272.

P43. **Allison, S. D**. 2012. A trait-based approach for modeling microbial litter decomposition. Ecology Letters 15:1058-1070.

P42. Todd-Brown*, K. E. O., F. M. Hopkins, S. N. Kivlin, J. M. Talbot, and **S. D. Allison**. 2012. A framework for representing microbial decomposition in coupled climate models. Biogeochemistry 109:19-33.

P41. German#, D. P., K. B. R. Marcelo†, M. M. Stone†, and **S. D. Allison**. 2012. The Michaelis-Menten kinetics of soil extracellular enzymes in response to temperature: a cross-latitudinal study. Global Change Biology 18:1468-1479.

P40. Stone†, M. M., M. S. Weiss, C. L. Goodale, M. B. Adams, I. J. Fernandez, D. P. German#, and **S. D. Allison**. 2012. Temperature sensitivity of soil enzyme kinetics under N-fertilization in two temperate forests. Global Change Biology 18:1173-1184.

O39. German#, D. P., M. N. Weintraub, A. S. Grandy, C. L. Lauber, Z. L. Rinkes, and **S. D. Allison**. 2012. Response to Steen and Ziervogel's comment on "Optimization of hydrolytic and oxidative enzyme methods to ecosystem studies" [Soil Biology & Biochemistry 43: 1387-1397]. Soil Biology & Biochemistry 48:198-199.

O38. German#, D. P., M. N. Weintraub, A. S. Grandy, C. L. Lauber, Z. L. Rinkes, and **S. D. Allison**. 2012. Corrigendum to "Optimization of hydrolytic and oxidative enzyme methods for ecosystem studies" [Soil Biol. Biochem. 43 (2011) 1387-1397]. Soil Biology & Biochemistry 44:151.

P37. German#, D. P., M. N. Weintraub, A. S. Grandy, C. L. Lauber, Z. L. Rinkes, and **S. D. Allison**. 2011. Optimization of extracellular enzyme assay methods for ecosystem studies. Soil Biology & Biochemistry 43:1387-1397.

P36. **Allison, S. D.** and K. K Treseder. 2011. Climate change feedbacks to microbial decomposition in boreal soils. Fungal Ecology 4:362-374.

P35. German#, D. P., S. S. Chacon†, and **S. D. Allison**. 2011. Substrate concentration and enzyme allocation can affect rates of microbial decomposition. Ecology 92:1471-1480.

P34. Martiny, J. B. H., J. A. Eisen, K. Penn, **S. D. Allison**, and M. C. Horner-Devine. 2011. Drivers of bacterial β-diversity depend on spatial scale. Proceedings of the National Academy of Sciences of the United States of America 108:7850-7854.

B33. **Allison, S. D.**, M. N. Weintraub, T. B. Gartner, and M. P. Waldrop. 2011. Evolutionary-economic principles as regulators of soil enzyme production and ecosystem function. pp. 229-243 *in* G. C. Shukla and A. Varma, editors. Soil Enzymology. Springer-Verlag.

B32. Wallenstein, M., **S. Allison**, J. Ernakovich, J. M. Steinweg, and R. Sinsabaugh. 2011. Controls on the temperature sensitivity of soil enzymes: A key driver of in-situ enzyme activity rates. pp. 245-257 *in* G. C. Shukla and A. Varma, editors. Soil Enzymology. Springer-Verlag.

P31. **Allison, S. D.**, K. L. McGuire, and K. K. Treseder. 2010. Resistance of microbial and soil properties to warming treatment seven years after boreal fire. Soil Biology & Biochemistry 42:1872-1878.

P30. McGuire, K. L., E. Bent, J. Borneman, A. Majumder, **S. D. Allison**, and K. K. Treseder. 2010. Functional diversity in resource use by fungi. Ecology 91:2324-2332.

P29. **Allison, S. D.**, M. D. Wallenstein, and M. A. Bradford. 2010. Soil-carbon response to warming dependent on microbial physiology. Nature Geoscience 3:336-340.

P28. **Allison, S. D.**, T. B. Gartner, M. C. Mack, K. L. McGuire, and K. K. Treseder. 2010. Nitrogen alters C dynamics during early succession in boreal forest. Soil Biology & Biochemistry 42:1157-1164.

P27. Cornwell, W. K., J. H. C. Cornelissen, **S. D. Allison**, J. Bauhus, P. Eggleton, C. M. Preston, F. Scarff, J. T. Weedon, C. Wirth, A. E. Zanne. 2009. Plant traits and wood fates across the globe—rotted, burned, or consumed? Global Change Biology 15:2431-2449.

P26. Bradford, M. A., M. D. Wallenstein, **S. D. Allison**, K. K. Treseder, S. D. Frey, B. W. Watts, C. A. Davies, T. R. Maddox, J. M. Melillo, J. E. Mohan, and J. F. Reynolds. 2009. Decreased mass specific respiration under experimental warming is robust to the microbial biomass method employed. Ecology Letters 12:E15-E18.

P25. **Allison, S. D.**, D. S. LeBauer, M. R. Ofrecio†, R. Reyes†, A.-M. Ta†, and T. M. Tran†. 2009. Low levels of nitrogen addition stimulate decomposition by boreal forest fungi. Soil Biology & Biochemistry 41:293-302.

P24. **Allison, S. D.**, and K. K. Treseder. 2008. Warming and drying suppress microbial activity and carbon cycling in boreal forest soils. Global Change Biology 14:2898-2909.

P23. Hanson, C. A., **S. D. Allison**, M. A. Bradford, M. D. Wallenstein, and K. K. Treseder. 2008. Fungal taxa target different carbon sources in forest soil. Ecosystems 11:1157-1167.

P22. Talbot, J. M., **S. D. Allison**, and K. K. Treseder. 2008. Decomposers in disguise: mycorrhizal fungi as regulators of soil C dynamics in ecosystems under global change. Functional Ecology 22:955-963.

P21. Sinsabaugh, R. L., C. L. Lauber, M. N. Weintraub, B. Ahmed, **S. D. Allison**, C. Crenshaw, A. R. Contosta, D. Cusack, S. Frey, M. E. Gallo, T. B. Gartner, S. E. Hobbie, K. Holland, B. L. Keeler, J. S. Powers, M. Stursova, C. Takacs-Vesbach, M. P. Waldrop, M. D. Wallenstein, D. R. Zak, and L. H. Zeglin. 2008. Stoichiometry of soil enzyme activity at global scale. Ecology Letters 11:1252-1264.

P20. Cornwell, W. K., J. H. C. Cornelissen, K. Amatangelo, E. Dorrepaal, V. T. Eviner, O. Godoy, S. E. Hobbie, B. Hoorens, H. Kurokawa, N. Perez Harguindeguy, H. M. Quested, L. S. Santiago, D. A. Wardle, I. J. Wright, R. Aerts, **S. D. Allison**, P. van Bodegom, V. Brovkin, A. Chatain, T. Callaghan, S. Díaz, E. Garnier, D. E. Gurvich, E. Kazakou, J. A. Klein, J. Read, P. B. Reich, N. A. Soudzilovskaia, M. V. Vaieretti, and M. Westoby. 2008. Plant species traits are the predominant control on litter decomposition rates within biomes worldwide. Ecology Letters 11:1065-1071.

P19. **Allison, S. D.**, and J. B. H. Martiny. 2008. Resistance, resilience, and redundancy in microbial communities. PNAS 105 (Suppl. 1):11512-11519.

P18. Treseder, K. K., C. I. Czimczik, S. E. Trumbore, and **S. D. Allison**. 2008. Uptake of an amino acid by ectomycorrhizal fungi in a boreal forest. Soil Biology & Biochemistry 40:1964-1966.

P17. **Allison, S. D.**, C. I. Czimczik, and K. K. Treseder. 2008. Microbial activity and soil respiration under nitrogen addition in Alaskan boreal forest. Global Change Biology 14:1156-1168.

P16. **Allison, S. D.**, C. A. Hanson, and K. K. Treseder. 2007. Nitrogen fertilization reduces diversity and alters community structure of active fungi in boreal ecosystems. Soil Biology & Biochemistry 39:1878-1887.

B15. **Allison, S. D.**, T. B. Gartner, K. Holland, M. Weintraub, and R. L. Sinsabaugh. 2007. Soil enzymes: linking proteomics and ecological process. pp 704-711, Manual of Environmental Microbiology, 3rd Edition. ASM Press.

P14. **Allison, S. D.** 2006. Brown ground: a soil carbon analog for the Green World Hypothesis? American Naturalist 167:619-627.

P13. **Allison, S. D.** 2006. Soil minerals and humic acids alter enzyme stability: implications for ecosystem processes. Biogeochemistry 81:361-373.

P12. **Allison, S. D.**, and J. D. Jastrow. 2006. Activities of extracellular enzymes in physically isolated fractions of restored grassland soils. Soil Biology & Biochemistry 38:3245-3256.

P11. **Allison, S. D.**, C. B. Nielsen, and R. F. Hughes. 2006. Elevated enzyme activities in soils under the invasive nitrogen-fixing tree *Falcataria moluccana*. Soil Biology & Biochemistry 38:1537-1544.

P10. **Allison, S. D.** 2005. Cheaters, diffusion, and nutrients constrain decomposition by microbial enzymes in spatially structured environments. Ecology Letters 8:626-635.

P9. **Allison, S. D**., and P. M. Vitousek. 2005. Responses of extracellular enzymes to simple and complex nutrient inputs. Soil Biology & Biochemistry 37:937-944.

O8. **Allison, S. D.** 2005. Tropical Forest Diversity and Dynamism - Book Review. Quarterly Review of Biology 80:262.

P7. **Allison, S. D.**, and J. C. Schultz. 2005. Biochemical responses of chestnut oak to a galling cynipid. Journal of Chemical Ecology 31:151-166.

P6. **Allison, S. D.**, and P. M. Vitousek. 2004. Rapid nutrient cycling in leaf litter from invasive species in Hawai'i. Oecologia 141:612-619.

P5. **Allison, S. D.**, and P. M. Vitousek. 2004. Extracellular enzyme activities and carbon chemistry as drivers of tropical plant litter decomposition. Biotropica 36:285-296.

P4. **Allison, S. D.**, and J. C. Schultz. 2004. Differential activity of peroxidase isozymes in response to wounding, gypsy moth, and plant hormones in northern red oak (*Quercus rubra* L.). Journal of Chemical Ecology 30:1363-1379.

P3. Pauw, A., S. A. Van Bael, H. A. Peters, **S. D. Allison**, J. L. C. Camargo, M. Cifuentes-Jara, A. Conserva, T. G. Restom, T. Heartsill-Scalley, S. A. Mangan, G. Nunez-Iturri, E. Rivera-Ocasio, M. Rountree, S. Vetter, and C. V. de Castilho. 2004. Physical damage in relation to carbon allocation strategies of tropical forest tree saplings. Biotropica 63:410-413.

P2. Vitousek, P. M., O. A. Chadwick, P. A. Matson, **S. Allison**, L. A. Derry, L. Kettley, A. Luers, E. Mecking, V. Monastra, and S. Porder. 2003. Erosion and the rejuvenation of weathering-derived nutrient supply in an old tropical landscape. Ecosystems 6:762-772.

P1. Vitousek, P. M., S. Hättenschwiler, L. Olander, and **S. Allison**. 2002. Nitrogen and nature. Ambio 31:97-101.

GRANTS

Carbon Loss In Plants, Soils and Oceans Project (CALIPSO). 9/1/2023-8/31/2028. $866,905. Role: Co-PI. Eric and Wendy Schmidt Fund for Strategic Innovation.

Community-engaged research to manage fire and water in California landscapes. 9/1/2023-8/31/2025. $5,538,309. Role: PI. University of California Office of Research & Innovation.

ORCC: Do multi-species biofilms accelerate microbial evolution under extreme warming? 7/1/2023-6/30/2026. $1,468,004. Role: Co-PI. NSF Organismal Responses to Climate Change.

Predicting post-fire N cycling through traits and cross-kingdom interactions. 9/1/2022-8/31/2025. $425,116. Role: Co-PI. DOE Genomic Sciences.

Implementation Grant: A Cultural, Learning, and Institutional Model to Accelerate Transformations for Environmental Justice (CLIMATE Justice). 1/1/2023-12/31/2027. $7,500,000. Role: Co-PI. NSF CTGC.

Biogeochemical consequences of microbial trait tradeoffs under drought, wildfire, and nitrogen addition. 10/1/2021-9/30/2023. $123,734 (*in kind*). Role: PI. EMSL User Grant.

REPS supplement to NSFDEB-NERC: Tropical deadwood carbon fluxes: Improving carbon models by incorporating termites and microbes. $27,858. 7/1/17-6/30/23. Role: PI. NSF Ecosystem Studies.

Planning Grant: Workshops to Build Capacity for Biological Field Research in Southern California Ecosystems. 2/1/2022-1/31/2023. $24,999. Role: PI. NSF DBI.

Using natural environmental GRADients to decipher the adaptation of soil microbial Communities to climATe CHange" (GRADCATCH). 3/1/21-2/28/22. $36,113. Role: PI. European Union/European Commission.

Collaborative Research: Microbes, memory, and moisture: leveraging DroughtNet to predict how microbial moisture responses will impact carbon cycling. $411,971 (UCI portion). 9/1/20-8/31/23. Role: PI. NSF Ecosystem Studies.

Microbial Carbon Cycling in Terrestrial Environments. $26,799. 7/1/20-9/30/20. Role: PI. Los Alamos National Laboratory.

Biogeochemical consequences of microbial evolution under drought. $2,699,278 (UCI portion). 9/15/19-9/14/22. Role: PI. DOE Genomic Sciences.

Excellence in Research: Mechanistic Prediction of Soil Microbial Response to Temperature Change. $243,020. 6/1/19-5/31/22. Role: Subcontract PI. NSF Ecosystem Studies.

Developing a center for microbiomes and global change. $125,000. 1/1/19-12/31/21. Role: PI. UCI Office of Research.

Complexity, Cooperation and Community in Cancer: Project 1: Patterned Heterogeneity in Colon Cancer. $2,406,360. 4/1/18-3/31/23. Role: co-I. NIH.

Increasing the relevance and social impact of climate research at UC Irvine. $15,000. 9/15/17-12/31/18. Role: PI. UCI Newkirk Center for Science and Society.

NRT: A training incubator for addressing urban environmental change from Ridge to Reef (R2R). $2,999,970. 9/1/17-8/31/22. Role: PI. NSF Division of Graduate Education.

NSFDEB-NERC: Tropical deadwood carbon fluxes: Improving carbon models by incorporating termites and microbes. $218,224 (UCI portion). 7/1/17-6/30/23. Role: PI. NSF Ecosystem Studies.

FORESTPRIME: Predicting carbon release from forest soils through priming effects. $30,000. 8/1/17-3/31/18. Role: PI. Subcontract from Lancaster University, UK.

A trait-based framework for linking microbial communities with carbon transformations under precipitation change. $2,874,285 (UCI portion). 8/15/16-8/14/19. Role: PI. DOE Genomic Sciences.

Climate Action Champion Grant. $25,000. 1/1/16-12/31/16. Role: PI. UC Office of the President.

Benchmarking and improving microbial-explicit soil biogeochemistry models. $195,494 (UCI portion). 8/1/15-7/31/18. Role: PI. DOE TES.

Collaborative research: Controls over decomposition by microbial communities under climate change. $839,807 (UCI portion). 8/15/15-7/31/19. Role: PI. NSF Ecosystem Studies.

Evolutionary trade-offs in the adaptation of decomposers to global warming: Implications for ecosystem C balance. $600,348 (UCI portion). 9/1/2013-8/31/2016. Role: Co-PI. NSF Ecosystem Studies.

Response of soil bacterial communities associated with native and exotic plant species to management, climate and pollution disturbances in a coastal grassland. $30,000. 1/1/12-12/31/12. Role: PI. UCI Center for Environmental Biology.

Dimensions: Collaborative research: Biological controls of the ocean C:N:P ratios. $1,037,957 (UCI portion). 1/1/11-12/31/16. Role: co-PI. NSF Dimensions of Biodiversity.

Can microbial functional traits predict the response and resilience of decomposition to global change? $2,383,120 (UCI portion). 7/1/10-6/30/15. Role: PI. DOE Biological and Environmental Research.

Applying social evolution theory in microbial ecosystems. $368,994. 9/1/09-8/31/12. Role: PI. NSF Advancing Theory in Biology.

MSB: Do cheaters ever win? Examining microbial competition and extracellular enzyme production. $135,001. 8/1/09-7/31/11. Role: PI. NSF Evolutionary Processes.

Workshop travel grant for Exploring Subseafloor Life with the Integrated Ocean Drilling Program. 10/3/06-10/5/06. Role: Participant. Vancouver, BC

Effects of increased nitrogen on ecosystem and microbial function across different biomes. $7670. 2005. Role: Co-PI. NSF-LTER workshop grant.

Student travel grant for Terrestrial Ecosystem Responses to Atmospheric and Climatic Change (TERACC) workshop. 2005. Ft. Myers, FL

Supercomputing grant. 1000h. Role: PI. NSF GRFP.

AWARDS AND HONORS

Fellow, American Academy of Microbiology	2024
Fellow, American Association for the Advancement of Science	2022
Highly Cited Researcher, Clarivate Analytics	2017-2022
Chancellor's Award for Excellence in Undergraduate Research Mentoring	2021
UC Irvine Climate Action Champion	2016
Selected as one of UCI's top 50 graduate and postdoctoral alumni	2016
Chancellor's Award for Excellence in Fostering Undergraduate Research	2015
Faculty Mentor of the Month (May)	2015
Early Career Fellow, Ecological Society of America	2013-2017
Golden Apple teaching award, UCI School of Biological Sciences	2009
Finalist, UC President's Postdoctoral Fellowship	2007
Postdoctoral Research Excellence Award, UCI School of Biological Sciences	2006
Outstanding Student Paper Award, 2004 AGU Fall Meeting	2005
NOAA Climate and Global Change Postdoctoral Fellowship	2005-2007
James W. Lyons Award for service to the Stanford community	2004
US DOE Marvin Wesely Fellow (1 per ~25 fellowship recipients)	2004
US Department of Energy Global Change Fellowship	2003
NSF Graduate Research Fellowship	2000-2002
Finalist, US EPA STAR Fellowship	1999
Morris K. Udall Scholarship for Excellence in Environmental Public Policy	1998

TEACHING EXPERIENCE

Certification in Culturally Aware Mentoring	2021
University Studies 3: Climate Justice, UC Irvine	2017-2021
Certified Active Learning Instructor, Active Learning Institute, UC Irvine	2017
EcoEvo 231: Communication Skills (graduate level), UC Irvine	2016-
Bio E106: Introduction to Ecology and Evolution, UC Irvine	2012-2016
Bio E118/ESS 164/ESS 264: Ecosystem Ecology, UC Irvine	2008-2023
Bio 2B, Freshman Seminar, Soils of Orange County, UC Irvine	2008-2010
ESS 280, Ecosystem Biogeochemistry (graduate level), UC Irvine	2006-2007
Ecosystem Ecology Teaching Assistant and Guest Lecturer, Stanford University	2001
Plant Ecology and Evolution Teaching Assistant and Field Instructor, Stanford University	2000

Introductory Biology Teaching Assistant, Stanford University	1999
Environmental Science Teaching Assistant, Penn State University	1998
Environmental Education Intern, Bucks County Audubon Society, PA	1996

GRADUATE TRAINEES

EJ Gonzalez (2022-); José Murúa Royo (2021-); Vanessa Machuca (2019-2021); Andie Nugent (2018-2023); Nicole Hemming-Schroeder (2018-2023); Bahareh Sorouri (2018-2023); Wally Xie (2016-2022); Kelly Ramin (2013-2018); Nameer Baker (2011-2016); Amy Zimmerman (2008-2013); Katherine Todd-Brown (2008-2013)

POSTDOCTORAL TRAINEES

Alonso Favela (2022-2023); Luciana Chavez Rodriguez (2021-); Brittni Bertolet (2021-); Brianna Finley (2020-2023); Elsa Abs (2019-2023); Zheng Shi (2018-2020); Bin Wang (2018-2020); Sasha Hararuk (2017-2018); Ashish Malik (2017-2019); Peter Homyak (2015-2016); Yujie He (2015); Seeta Sistla (2013-2015); Sarah Evans (2012-2014); Emma Aronson (2011-2013); Henri Folse (2011-2012); Donovan German (2009-2011)

PROFESSIONAL AND COMMUNITY SERVICE

Member, Biology Subcommittee for DOE BERAC Unified Data Infrastructure	2023
Member, Task Force for Graduate Education, UCI Department of Ecology and Evolutionary Biology	2023
Member, Climate Change and Environmental Sustainability Work Group convened by Provost to develop a strategic plan for UCI to build on its leadership in climate change and environmental sustainability	2022
Director, Newkirk Center for Science & Society	2021-
Member, Department of Ecology and Evolutionary Biology Anti-Racism, Diversity, Equity, and Inclusion Council	2021-
Chair, Ad-hoc committee on forming an Academic Senate Committee on Climate Change	2021
Chair, Committee of Visitors review of the Biological Systems Science Division (BSSD) of the US Department of Energy Office of Science	2021
Commissioner, City of Irvine Sustainability Commission	2023-
Member, City of Irvine Green Ribbon Committee (Vice Chair 2022-2023)	2021-2023
Chair, City of Irvine Green Ribbon Subcommittee on Climate and Energy	2021-
Member, Environmental Advisory Team for Irvine Vice Mayor Tammy Kim	2020-
Faculty Affiliate, Newkirk Center for Science and Society	2020-2021
Editor-in-Chief, *Elementa* Ecology and Earth Systems Domain	2020-
Chair, Biogeosciences Section of the Ecological Society of America	2020-2022
Climate Solutions Summit: I was the lead organizer of a summit at UC Irvine with over 200 attendees from agencies, legislative offices, non-profits, academia, and industry	2018

who came together to discuss needs for climate solutions in the Orange County, CA, region	
I directed the Ridge to Reef NSF graduate research traineeship which aims to train the next generation of environmental problem solvers. Program goals include 1) Improve trainee scientific skills; 2) Improve trainee career and professional skills; 3) Build capacity for community-engaged scholarship with external partners; 4) Broaden participation in training programs and careers to reflect national demographics	2017-2023
Climate advocacy: I meet regularly with elected officials at local to federal levels to advocate for environmental research funding and science-based climate policy	2017-
Ecological Society of America Nominations Committee member	2017
Advocacy training: I teach a communication skills course that trains graduate students to communicate with broad audiences including policy makers. I also mentor graduate students to meet with their elected officials	2016-
I created and directed the Climate Action Training Program to prepare graduate students from diverse disciplines for careers related to climate change. I developed workshops and curriculum on climate science and solutions, communication skills, and data analysis. All trainees completed at least 100 hours of internship experience with partner organizations	2016-2017
Review panelist for the UC President's Postdoctoral Fellowship program which aims to promote inclusive excellence among the postdocs and faculty of the UC system	2014-2022
Associate Editor for *Ecology*, the flagship journal of the Ecological Society of America	2014-2019
Subject Editor for *Soil Biology and Biochemistry*, a top soils journal	2012-2019
Executive Committee member for School of Biological Sciences; led a task force on gender pay equity among School faculty	2012-2014
Proposal review panelist for multiple NSF and DOE programs	2008-
Grader for UC Irvine Test of Oral English Proficiency	2008-2019
Consulting Editor for *Plant and Soil*	2008-2011
UC Irvine Campuswide Honors Program Board	2008-2011
Mentor for underrepresented minority (URM) undergraduates through the California Alliance for Minority Participation, NSF REU programs, the UC Irvine Minority Science Program, and the UC Irvine Undergraduate Research Opportunities Program	2007-
Ad-hoc reviewer for 3-5 federal and/or international grant proposals per year	2007-
Reviewer for 1-2 manuscripts per month from scientific journals	2007-2020
Judge for student presentations and papers through the Ecological Society of America and American Geophysical Union Biogeosciences Section	2007-
Graduate Student Council Chair, Stanford University - Chaired an organization with a $160K budget that represents 7500 students	2003-2004
Board of Trustees, Stanford University - Student representative to the Committee on Land and Buildings	2002-2003

Participated in 6 two-week modules of 3M Course in Comparative Tropical Ecology, a Mellon Foundation-funded course to facilitate multi-site, multi-investigator field research in tropical ecosystems	2001-2002
Freshman and Sophomore Academic Adviser, Stanford University	2000-2004
Member of Ecological Society of America, American Geophysical Union, and American Association for the Advancement of Science	2000-

MEDIA COVERAGE

Changement climatique: la sécheresse pourraitdéstabiliser les puits de carbone terrestres. 2023. Le Monde. Based on Trends in Microbiology article on soil carbon and drought.

Participated in a media event with the US Secretary of Energy Jennifer Granholm and Congresswoman Katie Porter on residential building electrification to address climate change, hosted by the Building Decarbonization Coalition. 2022.

Interviewed for Creative Process - One Planet podcast by Mia Funk on microbiome research and climate change. 2022. https://www.creativeprocess.info/interviews-podcast/steven-allison-mia-funk

Featured on the University of Arizona's "Biosphere 2 Podcast" to discuss microbiomes, climate change, and how my lab group studies microbial communities in a variety of field sites across California with a focus on climate and drought. 2021. https://open.spotify.com/episode/1hFR1Y5dgbm3OUXK7Mu6ud

TED Talk on "Earth's original inhabitants -- and their role in combating climate change." Delivered for TEDxUCI and selected for publishing on the TED platform. 2020. 1.3M views

Radio interview with KJZZ News (NPR Phoenix), August 8, 2019. https://kjzz.org/content/1177891/academics-combine-science-and-humanities-combat-climate-change

Radio interview with Living Lab Radio, August 8, 2019. https://www.capeandislands.org/post/living-lab-radio-august-12th-2019

Radio interview on "The Attitude with Arnie Arnesen", August 3,2019. http://www.blueshighwayradio.com/nhnewsviewsblues/ArnieArnesen/AAA_190807.mp3

Radio interview with Claudia Shambaugh of KUCI's "Ask a Leader" program, November 28, 2017. http://askaleader.com/?p=1186

Radio interview with Claudia Shambaugh of KUCI's "Ask a Leader" program, May 20, 2017. http://askaleader.com/?p=1007

"Soil carbon storage not the climate change fix it was thought, research finds": The Guardian, September 22, 2016.

"Microbes and global carbon": News and Views piece by Josh Schimel in Nature Climate Change, October 2013, p. 867-868

Radio interview with Mike DeLeonardis of KPFT 90.1 in Houston regarding Weider et al. 2013 Nature Climate Change paper, August 2013

"Shrooms shrivel": Anna Barnett, Nature Reports Climate Change, published online November 13, 2008, doi:10.1038/climate.2008.120

"In Alaska's Forests, Dried Mushrooms to the Rescue?": NSF Research Highlights, published online November 2, 2008, release 08-193

Evaluation of "Brown Ground" paper: Andrew Hector, Faculty of 1000 Biology, Sep 13, 2006, http://www.f1000biology.com/article/id/1040289/evaluation

"Why is most ground brown?" Steven Allison, Scientific American, July 2006, p. 104.

"Verde o café, lo que usted pisa es por algo." Ramiro Velásquez Gómez, El Colombiano. May 23, 2006.

"Why the ground is brown." Corey Binns, LiveScience.com. Posted April 10, 2006.

PRESENTATIONS

Glassman, S. I., **S. D. Allison**, E. Sari, D. J. Enright, J. B. Emerson, P. M. Homyak, M. J. Wilkins. 2023. Predicting post-fire N cycling through traits and cross-kingdom interactions. DOE Genomic Sciences PI Meeting.

Hemming-Schroeder, N. M., A. A. Gutierrez, **S. D. Allison**, J. T. Randerson. 2022. Estimating individual tree mortality in the Sierra Nevada in response to the 2012-2015 California drought and subsequent wildfire using high-resolution lidar data and aerial imagery. American Geophysical Union Fall Meeting, Chicago.

Finley, B. K., K. K. Treseder, J. B. H. Martiny, A. C. Martiny, A. Rodriguez Verdugo, M. L. Goulden, E. Brodie, and **S. D. Allison**. 2022. Biogeochemical Consequences of Dispersal and Drought on Semi-Arid Litter Decomposer Microbial Communities. American Geophysical Union Fall Meeting, Chicago.

Sorouri, B., N. C. Scales, B. S. Gaut, and **S. D. Allison**. 2022. Sphingomonas Clade Distribution Varies Across a Southern California Climate Gradient. American Geophysical Union Fall Meeting, Chicago.

Sorouri, B., N. C. Scales, B. S. Gaut, and **S. D. Allison**. 2022. *Sphingomonas* Distribution Across a Southern California Climate Gradient. Southern California Microbiome Symposium, Irvine, CA.

Allison, S. D. 2022. (Invited). Trait-based strategies and drought response in microbial communities. Connections Across Borders microbiome conference, Mexico City.

Sorouri, B., N. C. Scales, B. S. Gaut, S. D. Allison. 2022. *Sphingomonas* Distribution Across a Southern California Climate Gradient. Southern California Microbiome Symposium, Irvine, CA.

Murúa Royo, J. M., B. Bertolet, L. Chavez Rodriguez, and **S. D. Allison**. 2022. Tradeoffs on traits that deal with elemental imbalance led to differences in decomposition rates. Connections Across Borders microbiome conference, Mexico City.

Bertolet, B. L., and **S. D. Allison**. 2022. Emergent effects of microbial community interactions in leaf litter degradation – understandings from mathematical modeling. Connections Across Borders microbiome conference, Mexico City.

Chavez Rodriguez, L., U. Karaoz, A. A. Malik, E. Brodie, and **S. D. Allison**. 2022. Integrating omics data into trait-based models for litter decomposition. Connections Across Borders microbiome conference, Mexico City.

Nugent, A., N. Fiore, M. L. Goulden, and **S. D. Allison**. 2022. Soil Microbial Community Response to Drought and Nitrogen Fertilization in a California Grassland Ecosystem. Ecological Society of America Annual Meeting, Montreal, Canada.

Sorouri, B., C. I. Rodriguez, B. S. Gaut, and **S. D. Allison**. 2022. Variation in bacterial traits across habitats and phylogenetic clades. Ecological Society of America Annual Meeting, Montreal, Canada.

Malik, A. A., A. Ribeiro, P. O. Sheridan, C. Weihe, J. B. H. Martiny, S. Wang, Z. Hao, E. L. Brodie, and **S. D. Allison**. 2022. Trait-based microbial scaling from individuals to the ecosystem during decomposition under drought. International Society for Microbial Ecology Meeting, Vienna, Austria.

Weihe, C., J. Capocchi, **S. D. Allison**, and J. B.H. Martiny. 2022. The composition and functioning of microbial communities are affected by their past. International Society for Microbial Ecology Meeting, Vienna, Austria.

Püspök, J., E. L. Aronson, E. J. Hanan, J. P. Schimel, **S. D. Allison**, G. L. Vourlitis, and P. M. Homyak. 2022. Microbial and Abiotic Effects of Experimental Nitrogen Deposition on Dryland Soil Organic Carbon Storage. European Geophysical Union General Assembly.

Finley, B. K., B. Sorouri, K. Treseder, J. Martiny, A. Martiny, A. Rodriguez Verdugo, M. L. Goulden, S. Wang, E. Brodie, and **S. D. Allison**. 2022. Litter Microbial Trait-Based Strategies in Response to Drought. DOE Genomic Sciences PI Meeting.

Barbour, K. M., C. Weihe, **S. D. Allison**, E. L. Brodie, M. L. Goulden, A. C. Martiny, K. K. Treseder, and J. B. H. Martiny. 2022. Bacterial Community Response to Environmental Change Varies With Depth in the Surface Soil. DOE Genomic Sciences PI Meeting.

Allison, S. D., A. A. Malik, T. Swenson, C. Weihe, E. Morrison, J. B. H. Martiny, E. L. Brodie, T. R. Northen. 2022. (Invited). Trait-based strategies and drought response in microbial communities. University of Hamburg.

Sorouri, B, C. I. Rodriguez, and **S. D. Allison**. 2021. Variation in bacterial traits across phylogenetic clades and environments. American Geophysical Union Fall Meeting, New Orleans.

Cheney, R., H. Flores-Moreno, A. Cheesman, L. A. Cernusak, **S. D. Allison**, P. Eggleton, S. Laurance, and A. Zanne. 2021. Experimental Drought Modifies Termite Wood Decomposition in a Tropical Rainforest. American Geophysical Union Fall Meeting, New Orleans.

Shi, Z., F. Hoffman, M. Xu, U. Mishra, **S. D. Allison**, and J. Randerson. 2021. Soil carbon-climate feedback during 21st century. American Geophysical Union Fall Meeting, New Orleans.

Yatsko, A., A. Cheesman, **S. D. Allison**, L. Cernusak, R. Cheney, R. Clement, P. Eggleton, and A. Zanne. 2021. Higher internal stem damage in trees in dry compared to wet tropics has implications for forest biomass estimates. American Geophysical Union Fall Meeting, New Orleans.

Hemming-Schroeder, N., **S. D. Allison**, and J. T. Randerson. 2021. Modeling Tree Mortality in the Sierra Nevada Under Drought Conditions. American Geophysical Union Fall Meeting, New Orleans.

Clement, R., H. Flores-Moreno, L. Cernusak, A. Cheesman, **S. D. Allison**, P. Eggleton, and A. Zanne. 2021. The Australian Termite Diversity Anomaly's Effect on Termite Mound Abundance and Dead Wood Occupancy. American Geophysical Union Fall Meeting, New Orleans.

Wang, X., Lahiru Gamage, P. Areeveso, S. Jian, J. de Koff, D. Hui, **S. D. Allison**, and Jianwei Li. 2021. A newly established soil warming experiment revealed contrasting warming effects on soil respiration in a switchgrass cropland in middle Tennessee USA. American Geophysical Union Fall Meeting, New Orleans.

Wang, B. and **S. D. Allison**. 2021. Legacy of microbial composition matters in simulating climate-driven litter decomposition. American Geophysical Union Fall Meeting, New Orleans.

Shi, Z., F. Hoffman, M. Xu, U. Mishra, **S. D. Allison**, and J. Randerson. 2021. Soil carbon-climate feedback during 21st century. 11th International Conference on Ecological Informatics 2020+1.

Allison, S. D., A. A. Malik, T. Swenson, C. Weihe, E. Morrison, J. B. H. Martiny, E. L. Brodie, T. R. Northen. 2021. (Invited). Trait-based strategies and drought response in microbial communities. University of Illinois Urbana Champaign.

Allison, S. D., E. Duan, H. Flores-Moreno, A. Cheesman, L. Cernusak, P. Eggleton, A. Zanne. 2021. Enzymatic mechanisms of wood decomposition in tropical Australia. Ecological Society of America Annual Meeting.

Allison, S. D., M. L. Goulden, A. C. Martiny, J. B. H. Martiny, and K. K. Treseder. 2021. Microbial ecology and climate change in Southern California. Irvine Ranch Conservancy summer seminar series.

Allison, S. D. 2021. (Invited). Trait-based strategies and drought response in microbial communities. Swiss Federal Institute for Forest, Snow and Landscape Research.

Allison, S. D. 2021. Even Covid can't stop us from saving the environment. Panel moderator for UCI Homecoming event.

Morrison, E. W., J. B. H. Martiny, **S. D. Allison**, M. L. Goulden, A. B. Chase, Z. Gomez Lunar, C. Weihe, and A. C. Martiny. 2021. Differential Response of Microdiversity to Simulated Global Change Within a Bacterial Genus. DOE Genomic Sciences PI Meeting.

Scales, N. C., A. B. Chase, S. Finks, C. Weihe, **S. D. Allison**, and J. B. H. Martiny. 2021. Differential Response of Microdiversity to Simulated Global Change Within a Bacterial Genus. DOE Genomic Sciences PI Meeting.

Allison, S. D. 2021. Key lessons learned in establishing NRT curriculum. Annual NRT PI meeting.

Allison, S. D. 2021. Anti-racist strategies for NRTs. Annual NRT PI meeting.

Allison, S. D., A. A. Malik, C. Weihe, J. B. H. Martiny, S. Wang, Z. Hao, and E. L. Brodie. 2020. Microbial community succession and trait changes during decomposition under drought. American Geophysical Union Fall Meeting.

Allison, S. D. 2020. How microbiomes can help us deal with climate change. TEDx UC Irvine.

Sorouri, B. and **S. D. Allison**. 2020. Microbial extracellular enzyme activity along a climate gradient. SACNAS.

Allison, S. D. 2020. (Invited). Earth's drying skin: how microbiomes on the soil surface respond to drought. University of North Carolina, Charlotte.

Nugent, A., **S. D. Allison**, and N. M. Fiore. 2020. Impacts of drought and nitrogen on soil bacterial communities in a grassland ecosystem. Ecological Society of America Annual Meeting.

Alster, C. J., **S. D. Allison**, S. I. Glassman, A. C. Martiny, and K. K. Treseder. 2020. Fungal Trait Tradeoffs in a Southern Californian Grassland. Ecological Society of America Annual Meeting.

Allison, S. D. and B. Wang. 2020. Modeling soil microbiome responses to drought. Ecological Society of America Annual Meeting.

Allison, S. D. 2020. (Invited). Scientific research policy. Science Policy & Advocacy for STEM Scientists. UC Irvine.

Allison, S. D. 2020. (Invited). Microbial Ecology Journal Club. Oak Ridge National Laboratory.

Allison, S. D. 2020. (Invited). Microbial strategies for drought response in surface soils. Georgia Tech.

Malik, A., Griffiths, R., and **S. D. Allison.** 2020. Linking microbial communities to soil carbon cycling under anthropogenic change using a trait-based framework. European Geophysical Union General Assembly.

Duan, E. and **S. D. Allison**. 2020. Characterizing extracellular microbial activity of tropical deadwood decay in Australia. UCI Excellence in Research Symposium, Irvine, CA.

Allison, S. D., M. L. Goulden, A. Martiny, J. Martiny, K. Treseder, E. Brodie. 2020. (Invited). 5 big questions leading to Biogeochemical consequences of microbial evolution under drought. DOE Genomic Sciences PI Meeting, Washington, DC.

Finks, S. S., C. Weihe, E. L. Brodie, M. L. Goulden, A. C. Martiny, K. K. Treseder, J. B. H. Martiny, and **S. D. Allison.** 2020. Prolonged drought alters plant-litter decomposition via changes in bacterial communities and substrate availability. DOE Genomic Sciences PI Meeting, Washington, DC.

Allison, S. D. 2020. (Invited). Welcome to "Be the Change". Be the Change: Climate Solutions for a New Decade. Orange Coast College, CA.

Sorouri, B. and **S. D. Allison.** 2019. Microbial Communities Exhibit Resilient Extracellular Enzyme Activity Along a Climate Gradient. American Geophysical Union Fall Meeting, San Francisco, CA.

Allison, S. D., A. A. Malik, T. Swenson, C. Weihe, E. Morrison, J. B. H. Martiny, E. L. Brodie, and T. Northen. 2019. Microbial Strategies for Drought Response Revealed by Transcriptomics and Metabolomics. American Geophysical Union Fall Meeting, San Francisco, CA.

Hararuk, O., **S. D. Allison**, and E. Sayer. 2019. Identifying mechanisms of soil carbon dynamics at a tropical site: a data-model fusion approach. American Geophysical Union Fall Meeting, San Francisco, CA.

Wang, B. and **S. D. Allison.** 2019. A Trait- and Individual-based Microbial Modelling Framework—DEMENTpy. American Geophysical Union Fall Meeting, San Francisco, CA.

Shi, Z, **S. D. Allison**, J. T. Randerson, Y. He, P. A. Levine, A. M. Hoyt, and S. E. Trumbore. 2019. The age of global soil carbon and implications for sequestration potential. American Geophysical Union Fall Meeting, San Francisco, CA.

Abs, E. A., S. R. Saleska, R. Ferriere, and **S. D. Allison.** 2019. Implications of Microbial Trait Evolution For Soil Carbon-Climate Feedbacks At Local And Global Scales. American Geophysical Union Fall Meeting, San Francisco, CA.

Hemming-Schroeder, N., **S. D. Allison**, and J. Randerson. 2019. Toward an improved estimate of the carbon pool in coarse woody debris and its representation in Earth system models. American Geophysical Union Fall Meeting, San Francisco, CA.

Allison, S. D. 2019. (Invited). Building communication skills for the 21st century. Annual NRT PI Meeting, Northwestern University.

Allison, S. D. 2019. (Invited). Solving climate change with the humanities and sciences. Black Holes and Beyond Symposium, UC Irvine.

Malik, A. A., T. Swenson, J. B. H. Martiny, E. L. Brodie, A. Martiny, K. Treseder, T. Northen, and **S. D. Allison**. 2019. Inferring trait-based physiological strategies of leaf litter microbial communities along a precipitation gradient. Soil Organic Matter Conference, Adelaide, Australia.

Hoyt, A., C. A. Sierra, C. R. Lawrence, H. Metzler, P. A. Levine, Z. Shi, J. Beem-Miller, S. Stoner, B. Ahrens, Q. Zhu, W. J. Riley, G. Monroe, **S. D. Allison**, J. T. Randerson, S. Trumbore. 2019. Radiocarbon as a

constraint on global soil carbon cycling. American Geophysical Union Chapman Conference, San Diego, CA.

Siah, K. and **S. D. Allison**. 2019. Changes in microbial enzymatic activity in response to precipitation change in shrubland and grassland ecosystems. UCI Excellence in Research Symposium, Irvine, CA.

Pham, T. and **S. D. Allison**. 2019. Phylum-level comparison of extracellular enzyme activity of bacteria from California grassland litter. UCI Excellence in Research Symposium, Irvine, CA.

Faiola, C., J. Pratt, and **S. D. Allison.** 2019. (Invited). What does decolonization mean for conservation and restoration ecology? Center for Environmental Biology Workshop, UC Irvine.

Malik, A. A., T. Swenson, C. Weihe, E. Morrison, J. B. H. Martiny, E. L. Brodie, T. Northen, and **S. D. Allison**. 2019. Physiological adaptations of leaf litter microbial communities to drought reduce decomposition rates. DOE Genomic Sciences PI Meeting, Washington, DC.

Sorouri, B. and **S. D. Allison**. 2019. Microbial Communities Exhibit Resilient Extracellular Enzyme Activity Along a Climate Gradient. DOE Genomic Sciences PI Meeting, Washington, DC.

Alster, C. J., S. I. Glassman, **S. D. Allison**, A. C. Martiny, and J. B. H. Martiny. 2019. Fungal Trait Tradeoffs in a Southern Californian Grassland. DOE Genomic Sciences PI Meeting, Washington, DC.

Allison, S. D. and V. A. Olson. 2019. (Invited). The social impact of UCI climate research. Newkirk Center, UCI.

Allison, S. D. 2019. (Invited). Improving climate models with microbial ecology. Hawaii Ecosystems Symposium. Waimea, HI.

Alster, C. J., S. I. Glassman, J. B. H. Martiny, **S. D. Allison**, and K. K. Treseder. 2018. Fungal trait response to climate change in Southern California and consequences for biogeochemical cycling. Annual Meeting of the American Geophysical Union, Washington, DC.

Xie, H. W., and **S. D. Allison**. 2018. A Bayesian Approach to Soil Biogeochemical Model Comparison. Annual Meeting of the American Geophysical Union, Washington, DC.

Wang, B., and **S. D. Allison**. 2018. Reverse Michaelis-Menten kinetics derived from scaling forward kinetics. Annual Meeting of the American Geophysical Union, Washington, DC.

Levine, P. A., J. T. Randerson, Q. Zhu, W. J. Reilly, A. Hoyt, S. Trumbore, Z. Shi, S. D. Allison, and F. M. Hoffman. Global carbon-14 observations constrain rates of soil organic matter decomposition in the Energy Exascale Earth System Model. Annual Meeting of the American Geophysical Union, Washington, DC.

Isobe, K., **S. D. Allison**, B. Khalili, and J. B. H. Martiny. 2018. Phylogenetic conservation of soil microbial responses to nitrogen addition across continents. International Society for Microbial Ecology Meeting, Leipzig, Germany.

Malik, A. A., J. Puissant, T. Goodall, N. Jehmlich, G. Gleixner, R. I. Griffiths, and **S. D. Allison**. 2018. Microbial control over soil carbon storage is dependent on tradeoffs among traits linked to resource acquisition, stress tolerance and growth yield. International Society for Microbial Ecology Meeting, Leipzig, Germany.

Glassman, S. I., C. Weihe, **S. D. Allison**, A. C. Martiny, K. K. Treseder, J. B. H. Martiny. 2018. Fungal and bacterial communities vary in their carbon cycling response to climate. International Society for Microbial Ecology Meeting, Leipzig, Germany.

Allison, S. D., Glassman, S. I., B. Sorouri, C. Weihe, M. L. Goulden, A. C. Martiny, K. K. Treseder, J. B. H. Martiny. 2018. Microbial enzymatic and decomposition responses to climate change in Southern California. Annual Meeting of the Ecological Society of America, New Orleans, LA.

Glassman, S. I., C. Weihe, **S. D. Allison**, A. C. Martiny, K. K. Treseder, J. B. H. Martiny. 2018. Fungal and bacterial communities vary in their carbon cycling response to climate. 11th International Mycological Congress, San Juan, PR.

Ramin, K. I., S. M. Theroux, M. A. Sutula, and **S. D. Allison**. 2018. Shifting microbial diversity and function related to nutrient inputs. American Society for Limnology and Oceanography Meeting, Victoria, BC.

Nisson, D., and **S. D. Allison.** 2018. Metabolic response of desert microorganisms to drought and moisture stress. UCI Excellence in Research Symposium, Irvine, CA.

Allison, J., and **S. D. Allison.** 2018. Resilience of microbial enzyme activity in response to changes in climate. UCI Excellence in Research Symposium, Irvine, CA.

Morrison, E. W., J. B. H. Martiny, **S. D. Allison**, M. L. Goulden, Z. Gomez-Lunar, C. Weihe, and A. C. Martiny. 2018. Investigation of diel variation in microbial decomposition processes. JGI User Meeting, San Francisco, CA.

Malik, A. A., and **S. D. Allison**. 2018. (Invited). Microbial trait distribution and decomposition response to drought: an in-situ litter study. DOE Genomic Sciences PI Meeting, Tysons Corner, VA.

Glassman, S. I., C. Weihe, M. L. Goulden, A. C. Martiny, K. K. Treseder, J. B. H. Martiny, and **S. D. Allison**. 2018. Fungal and Bacterial Communities Vary in their Carbon Cycling Response to Climate. DOE Genomic Sciences PI Meeting, Tysons Corner, VA.

Allison, S. D., M. L. Goulden, A. C. Martiny, J. B. H. Martiny, and K. K. Treseder. 2018. (Invited). Microbial ecology and climate change in Southern California. UC Irvine Emeriti Association, Irvine, CA.

Frederick, A. R., K. I. Ramin, and **S. D. Allison**. 2018. Training tomorrow's climate leaders: UC Irvine's Climate Action Training Program. Pacific Climate Change Conference, Wellington, NZ.

Xie, H. W., A. L. Romero-Olivares, M. Guindani, and **S. D. Allison**. Bayesian Evaluation of Dynamical Soil Carbon Models Using Soil Carbon Flux Data. Annual Meeting of the American Geophysical Union, New Orleans, LA.

Baker, N. R., B. Khalili, J. B. H. Martiny, and **S. D. Allison**. 2017. Microbial decomposers not constrained by climate history along a Mediterranean climate gradient. Annual Meeting of the American Geophysical Union, New Orleans, LA.

Allison, S. D., A. L. Romero-Olivares, Y. Lu, J. Taylor, and K. K. Treseder. 2017. Temperature Sensitivities of Extracellular Enzyme Vmax and Km Across Thermal Environments. Annual Meeting of the American Geophysical Union, New Orleans, LA.

Allison, S. D. 2017. (Invited). Microbes and a changing climate in Southern California. Orange County Society for Conservation Biology Conservation Café, Newport Beach, CA.

Xie, H. W., A. L. Romero-Olivares, M. Guindani, and **S. D. Allison**. Bayesian Evaluation of Soil Carbon Models. Global Soil Biodiversity Conference, Nanjing.

Allison, S. D., A. L. Romero-Olivares, Y. Lu, J. Taylor, and K. K. Treseder. 2017. (Invited). Testing biogeochemical theory on the temperature response of soil enzymes. Global Soil Biodiversity Conference, Nanjing.

Glassman, S. I., C. Weihe, **S. D. Allison**, E. L. Brodie, A. C. Martiny, K. K. Treseder, and J. B. H. Martiny. 2017. Investigating decomposer bacterial communities along an elevation gradient. Annual Meeting of the Ecological Society of America, Portland, OR.

Allison, S. D. 2017. (Invited). Overcoming challenges in trait-based global modeling. Annual Meeting of the Ecological Society of America, Portland, OR.

Allison, S. D., A. L. Romero-Olivares, Y. Lu, J. Taylor, and K. K. Treseder. 2017. Trait-driven models of microbial decomposition: enzyme temperature sensitivity. Annual Meeting of the Ecological Society of America, Portland, OR.

Allison, S. D., E. L. Brodie, M. L. Goulden, A. C. Martiny, J. B. H. Martiny, K. K. Treseder, A. Amend, R. Berlemont, Y. Lu, K. Dolan, and C. Weihe. 2017. (Invited). Microbial resilience to climate change in Southern California. UCI Minority Science Program, Irvine, CA.

Allison, S. D. 2017. (Invited). Predicting the future of soil carbon with Earth system models. Geophysical Fluid Dynamics Laboratory, Princeton, NJ.

Allison, S. D. 2017. (Invited). Incorporating soil microbes into climate change predictions. American Society for Microbiology, New Orleans, LA.

Glassman, S. I., C. Weihe, **S. D. Allison**, E. L. Brodie, A. C. Martiny, K. K. Treseder, and J. B. H. Martiny. 2017. Investigating decomposer bacterial communities along an elevation gradient. American Society for Microbiology, New Orleans, LA.

Allison, S. D., E. L. Brodie, M. L. Goulden, A. C. Martiny, J. B. H. Martiny, K. K. Treseder, A. Amend, R. Berlemont, Y. Lu, K. Dolan, and C. Weihe. 2017. (Invited). Resilience of microbial communities and carbon cycling to drought. UCI Center for Environmental Biology Symposium, Irvine, CA.

Nisson, D., and **S. D. Allison.** 2017. Adaptive Metabolic Response of Desert Microorganisms to Drought and Moisture Pulses. UCI Undergraduate Research Opportunity Program Symposium, Irvine, CA.

Barajas, G., E. Stogner, and **S. D. Allison.** 2017. Effect of Climate Change on Microbial Communities Across the Southern California Gradient. UCI Undergraduate Research Opportunity Program Symposium, Irvine, CA.

Stogner, E., and **S. D. Allison.** 2017. Microbial communities exhibit resilience under environmental change. UCI Excellence in Research Symposium, Irvine, CA.

Allison, S. D. 2017. (Invited). Resilience of microbial communities and carbon cycling to drought. Lawrence Berkeley National Lab, Berkeley, CA.

Allison, S. D., J. B. H. Martiny, A. C. Martiny, R. Berlemont, K. K. Treseder, M. L. Goulden, and E. L. Brodie. 2017. Trait-based approaches for linking metagenomic data with microbial carbon cycling under drought conditions. DOE Genomic Sciences PI meeting, Crystal City, VA.

Sistla, S., A. B. Roddy, N. E. Williams, D. Kramer, K. Stevens, and **S. D. Allison**. 2016. Traditional agroforestry practices in Atlantic Nicaragua promote biodiversity and natural resource diversity. Annual Meeting of the American Geophysical Union, San Francisco.

Allison, S. D., J. B. H. Martiny, A. C. Martiny, R. Berlemont, K. K. Treseder, M. L. Goulden, and E. L. Brodie. 2016. Recovery of microbial communities and carbon cycling processes following drought manipulation in southern California. Annual Meeting of the American Geophysical Union, San Francisco.

Abarca, V. and **S. D. Allison**. 2016. Shifts in β-glucosidase activity of *Neurospora* genotypes due to warming temperatures. Southern California Conferences for Undergraduate Research, UC Riverside.

Espejo, S., H. W. Xie, and **S. D. Allison**. 2016. Using temperature-based soil respiration models to compare the temperature sensitivity of seasonal soil respiration rates. HENAAC Conference, Anaheim.

Allison, S. D. 2016. Trait-based approaches for linking metagenomic data with microbial carbon cycling under drought conditions. International Society for Microbial Ecology Meeting, Montreal.

Abarca, V. and **S. D. Allison**. 2016. Evolutionary Shifts in *Neurospora* Genotypes due to Warming Temperatures. Summer Undergraduate Research Fellowship program symposium, Irvine.

Allison, S. D. 2016. An interdisciplinary Climate Action Training program for graduate students at UC Irvine. California Higher Education Sustainability Conference, Fullerton.

Allison, S. D. 2016. An interdisciplinary Climate Action Training program for graduate students at UC Irvine. UC Carbon Slam, Palo Alto.

Allison, S. D. 2016. Trait-based models of soil microbial responses to environmental change. International Soil Modeling Consortium, Austin.

Allison, S. D. 2015. Using traits to predict soil microbial responses to environmental change. Annual Meeting of the British Ecological Society, Edinburgh.

Todd-Brown, K., **S. D. Allison**, and J. T. Randerson. 2015. Causes of variation in soil carbon simulations from Earth system models. Annual Meeting of the British Ecological Society, Edinburgh.

He, Y., J. T. Randerson, **S. D. Allison**, M. S. Torn, J. W. Harden, L. J. Smith, T. van der Voort, and S. Trumbore. 2015. The Global Turnover Time Distribution of Soil Carbon Derived from a Meta-analysis of Radiocarbon Profiles. Annual Meeting of the American Geophysical Union, San Francisco.

Baker, N. R. and **S. D. Allison.** 2015. Constraints Placed by Community Diversity on the Enzymatic Response of Microbial Decomposer Communities to Climate Change in Southern California. Annual Meeting of the American Geophysical Union, San Francisco.

Ramin, K. and **S. D. Allison.** 2015. Tradeoffs between growth and enzyme production in bacteria strains from plant litter. Annual Meeting of the Ecological Society of America, Baltimore.

He, Y., J. T. Randerson, **S. D. Allison**, S. E. Trumbore, J. W. Harden, M. S. Torn, and L. Smith. 2015. Radiocarbon constraints imply reduced carbon uptake by soils during the 21st century. Annual Meeting of the Ecological Society of America, Baltimore.

Baker, N. R. and **S. D. Allison.** 2015. Sensitivity of enzyme kinetics to temperature across five biomes in southern California. Annual Meeting of the Ecological Society of America, Baltimore.

Allison, S. D. 2015. (Invited). Why Earth system modelers should care about microbial ecology. Annual Meeting of the Ecological Society of America, Baltimore.

Allison, S. D. and Aronson, E. 2015. (Invited). Modeling microbial responses to drying and rewetting. Annual Meeting of the Ecological Society of America, Baltimore.

Allison, S. D. 2015. (Invited). Incorporating microbial processes into global-scale models. UC Irvine Minority Science Program.

Allison, S. D. 2015. (Invited). Incorporating microbial processes into global-scale models. University of Arizona.

Allison, S. D. 2014. (Invited). Predicting microbial community function based on physiological traits. UC Irvine Microbiome Connections.

Allison, S. D. 2014. (Invited). Microbial processes in global change models. Oxford, UK.

Allison, S. D. 2014. (Invited). Microbial processes in global change models. Isaac Newton Institute, Cambridge, UK.

Allison, S. D. 2014. (Invited). Representing microbial communities in Earth system models. Microsoft Research, Cambridge, UK.

Allison, S. D. 2014. (Invited). Microbial processes in global change models. Society for General Microbiology Focused Meeting, Loughborough, UK.

Martiny, J. B. H., C. Weihe, Y. Lu, R. Berlemont, M. Goulden, A. C. Martiny, K. K. Treseder, and **S. D. Allison**. 2014. The resilience of microbial composition and its functioning in response to global change manipulations. Annual Meeting of the Ecological Society of America, Sacramento.

Evans S. E., J. B. H. Martiny, and **S. D. Allison.** 2014. Factors influencing the relative contribution of stochastic and deterministic processes in microbial community assembly: results from a trait-based model. Annual Meeting of the Ecological Society of America, Sacramento.

Aronson, E., and **S. D. Allison**. 2014. Drought and N addition control soil GHG flux and microbial composition. Annual Meeting of the Ecological Society of America, Sacramento.

Allison, S. D. 2014. (Invited). Microbial feedbacks to climate change on local to global scales. Annual Meeting of the Ecological Society of America, Sacramento.

Hatosy, S. M., C. Mouginot, **S. D. Allison**, and A. C. Martiny. 2014. Fine-scale temporal variability in marine cyanobacteria at Newport Beach, CA. Gordon Conference, Waltham MA.

Allison, S. D. 2014. (Invited). New models based on microbial control over soil carbon. Research Coordination Network Workshop, Breckenridge CO.

Zimmerman, A. E., A. C. Martiny, M. W. Lomas, and **S. D. Allison**. 2014. Phosphate supply explains variation in nucleic acid allocation but not C:P stoichiometry in the western North Atlantic. AGU Ocean Science Meeting, Honolulu.

Bonachela, J. A., **S. D. Allison**, A. C. Martiny, and S. A. Levin. 2014. Dynamic model for phytoplankton stoichiometry based on protein regulation. AGU Ocean Science Meeting, Honolulu.

Curran, M., Y. Lu, J. Taylor, and **S. D. Allison**. 2013. The temperature response of fungal enzyme kinetics. Annual Meeting of the American Geophysical Union, San Francisco.

Wieder, W. R., G. B. Bonan, E. S. Hinckley, and **S. D. Allison**. 2013. (Invited). Scaling microbial physiology in global models. Annual Meeting of the American Geophysical Union, San Francisco.

Baker, N. R., and **S. D. Allison.** 2013. Dry-season ultraviolet radiation primes litter for wet season decomposition in a Mediterranean grassland. Annual Meeting of the American Geophysical Union, San Francisco.

Todd-Brown, K. E. O., J. T. Randerson, F. Hopkins, V. Arora, T. Hajima, C. Jones, E. Shevliakova, J. Tjiputra, E. Volodin, T. Wu, Q. Zhang, and **S. D. Allison**. 2013. (Invited). Changes in soil organic carbon storage predicted by Earth system models during the 21st century. Annual Meeting of the American Geophysical Union, San Francisco.

Allison, S. D., S. E. Evans. 2013. (Invited). Scaling up microbial responses to climate change. Annual Meeting of the American Geophysical Union, San Francisco.

Allison, S. D. 2013. (Invited). Incorporating microbial traits into Earth system models. Annual Meeting of the Ecological Society of America, Minneapolis.

Allison, S. D., C. J. Alster, Y. Lu, and D. P. German. 2013. (Invited). Resilience of extracellular enzymes to environmental change. Annual Meeting of the Ecological Society of America, Minneapolis.

Young, D., A. Milo, B. Oberle, **S. D. Allison**, and A. Zanne. 2013. A "snapshot" of microbial lignocellulolytic enzyme activities in decaying wood: heterogeneity across plant species and environmental conditions. Annual Meeting of the Ecological Society of America, Minneapolis.

Aronson, E. L., and **S. D. Allison.** 2013. Increased N deposition in a grassland stimulates soil N2O release while drought decreases Nitrospirae abundance. ICoN3 conference.

Allison, S. D. 2013. (Invited). Predicting the function of microbial communities in response to global change. Penn State University.

Allison, S. D. 2013. (Invited). Predicting the function of microbial communities in response to global change. UC Riverside.

Aronson, E. L., and **S. D. Allison.** 2012. Season drives precipitation and N deposition impacts on nitrous oxide, methane and carbon dioxide emissions in a CA grassland. Annual Meeting of the American Geophysical Union, San Francisco.

Allison, S. D. 2012. (Invited). Integrating microbial traits into ecosystem models. Annual Meeting of the American Geophysical Union, San Francisco.

Todd-Brown, K. E., J. T. Randerson, W. M. Post, and **S. D. Allison.** 2012. Evaluating soil carbon in global climate models: benchmarking, future projections, and model drivers. Annual Meeting of the American Geophysical Union, San Francisco.

Allison, S. D. 2012. Predicting the function of microbial communities in response to global change. Department seminar, UC Irvine.

Nyyssönen, M., C. Weihe, M. L. Goulden, K. K. Treseder, J. B.H. Martiny, A. C. Martiny, **S. D. Allison**, and Eoin L. Brodie. 2012. Reconciling phylogeny and function during plant litter decomposition by high-throughput functional metagenomics. International Society for Microbial Ecology Meeting, Copenhagen.

Lu., Y., and **S. D. Allison.** 2012. Cheater-producer interactions in protease-producing populations of *Pseudomonas fluorescens*. International Society for Microbial Ecology Meeting, Copenhagen.

Zimmerman, A. E., **S. D. Allison**, and A. C. Martiny. 2012. Phylogenetic diversity of cellular stoichiometry among marine bacteria. International Society for Microbial Ecology Meeting, Copenhagen.

Aronson, E., and **S. D. Allison**. 2012. Soil microbial diversity and greenhouse gas emissions in California grassland under precipitation and N deposition manipulation. International Society for Microbial Ecology Meeting, Copenhagen.

Beasley, S. and **S. D. Allison**. 2012. Extracellular enzymatic response to drought and nitrogen deposition in southern California. NSF REU program in Earth System Science, UC Irvine.

Folse, H. J., III, and **S. D. Allison**. 2012. Emergent spatial structure in a community of extracellular enzyme-producing microbes. Annual Meeting of the Ecological Society of America, Portland.

Todd-Brown, K, J. Randerson, W. Post, and **S. D. Allison**. 2012. Evaluating soil carbon in global climate models: How good are the models and what drives model variability? Annual Meeting of the Ecological Society of America, Portland.

Allison, S. D., and Y. Lu. 2012. Evolutionary and spatial controls on bacterial enzyme production. Annual Meeting of the Ecological Society of America, Portland.

Todd-Brown, K. E., Y. Lu, and **S. D. Allison**. 2012. Starting small: an extracellular-enzyme driven model of a microbial microcosm. Enzymes in the Environment Workshop, Fort Collins.

Allison, S. D. 2012. (Outreach). Cheating your neighbor in microbial ecosystems. MSP, UC Irvine.

Allison, S. D., and A. C. Martiny. 2012. (Outreach). Microbial ecology and ocean science. Program for transfer students, UC Irvine.

Allison, S. D. 2012. (Invited). Linking microbial enzyme genes with community responses to drought and nitrogen. US DOE Contractors and Grantees Workshop, Bethesda, MD.

Todd-Brown, K. E., F. M. Hoffman, J. T. Randerson, W. M. Post, and **S. D. Allison**. 2011. Assessing variability in belowground carbon for CMIP-5 models. Annual Meeting of the American Geophysical Union, San Francisco.

Allison, S. D. 2011. (Invited). Trait-based modeling of microbial decomposition. Annual Meeting of the Ecological Society of America, Austin.

Zimmerman, A. E., A. C. Martiny, and **S. D. Allison**. 2011. Cellular stoichiometry of the marine Roseobacter lineage. Annual Meeting of the Ecological Society of America, Austin.

German, D. P., and **S. D. Allison**. 2011. The interaction of substrate concentration and moisture level in decomposition. Annual Meeting of the Ecological Society of America, Austin.

Todd-Brown, K., and **S. D. Allison**. 2011. Microbial cost of carbon degrading extracellular enzymes: A microcosm and mechanistic modeling approach. Annual Meeting of the Ecological Society of America, Austin.

Allison, S. D. 2011. (Invited). Measuring and modeling the temperature response of soil enzyme activities. 3rd International Symposium on Soil Organic Matter, Leuven, Belgium.

Allison, S. D., E. L. Brodie, M. Goulden, Y. Lu, A. Martiny, J. B. H. Martiny, M. J. Nyyssonen, K. K. Treseder,

C. Weihe. 2011. Can microbial functional traits predict the response and resilience of decomposition to global change? US DOE Contractors and Grantees Workshop, Crystal City, Washington DC.

Allison, S. D. 2011. (Invited). Linking ecosystem processes with microbial evolution and physiological adaptation. San Diego State University.

Stone, M., M. Weiss, C. Goodale, D. German, and **S. Allison.** 2010. The effect of N-fertilization on enzymatic decomposition in two northeastern forests. Annual Meeting of the American Geophysical Union, San Francisco.

Allison, S. D. 2010. (Invited). Linking ecosystem processes with microbial evolution and physiological adaptation. UC Merced.

Allison, S. D. 2010. (Invited). Linking ecosystem processes with microbial evolution and physiological adaptation. Brown University.

Allison, S. D. 2010. (Invited). Climate change: the debate. UC Irvine NSF GK-12 Program, Irvine

Allison, S. D. 2010. (Invited). Implications of exoenzyme cheaters for biogeochemical processes. International Society for Microbial Ecology Meeting, Seattle.

Zimmerman, A. E., and **S. D. Allison.** 2010. Distribution of enzyme-encoding genes among microbial taxa: Alkaline phosphatase. International Society for Microbial Ecology Meeting, Seattle.

Allison, S. D. 2010. (Invited). Integrating microbial community data with ecological theory. Annual Meeting of the Ecological Society of America, Pittsburgh.

Dooley, S. R., **S. D. Allison**, and K. K. Treseder. 2010. Forest fires alter soil fungal communities in boreal ecosystems: implications for carbon cycling. Annual Meeting of the Ecological Society of America, Pittsburgh.

Allison, S. D. and A. C. Martiny. 2010. Microbial ecology and ocean science. UC Irvine FOCUS outreach program.

Allison, S. D. 2010. (Invited). Microbial enzyme links to biogeochemical processes and global change. Cornell University.

Allison, S. D. 2010. Social interactions and cheating in the microbial world. GK-12 Program, UC Irvine.

Allison, S. D. 2010. (Invited). Public goods in microbial ecosystems. UC Irvine.

Todd-Brown, K. E. and **S. D. Allison.** 2009. Modeled carbon respiration of microbial communities with explicit enzyme representation. Annual Meeting of the American Geophysical Union, San Francisco.

Wiedenbeck, J. K., V. Neino, **S. D. Allison**, and A. Martiny. 2009. Ectoenzyme activity in coastal marine waters: response to temperature and metal ion availability. Annual Meeting of the American Geophysical Union, San Francisco.

Allison, S. D. 2009. (Invited). Cheating, heating, and substrate constraints on microbial decomposition. UC Santa Barbara.

Allison, S. D. 2009. (Invited). Cheating, heating, and substrate constraints on microbial decomposition. Duke University.

Allison, S. D. 2009. (Invited). Cheating, heating, and substrate constraints on microbial decomposition. UC San Diego.

Allison, S. D. 2009. (Invited). Integration of microbial communities into large-scale ecosystem models. Annual Meeting of the Ecological Society of America, Albuquerque.

Allison, S. D. 2009. (Invited). Microbial feedbacks to environmental change in Alaskan boreal forest. University of Colorado.

Todd-Brown, K., and **S. D. Allison.** 2008. Optimizing micro-scale models of soil enzyme diffusion. Annual Meeting of the American Geophysical Union, San Francisco.

Allison, S. D. 2008. (Invited). Incorporating microbes into large-scale biogeochemical models. Annual Meeting of the American Geophysical Union, San Francisco.

Allison, S. D. 2008. (Invited). Global warming: The debate. Newport Beach (CA) Rotary Club.

Allison, S. D., D. S. LeBauer, M. R. Ofrecio, R. Reyes, T. M. Tran. 2008. Nitrogen addition stimulates decomposition by boreal forest fungi. Annual Meeting of the Ecological Society of America, Milwaukee.

Treseder, K. K., A. Majumder, E. Bent, J. Borneman, **S. D. Allison**, C. A. Hanson. 2008. (Invited). Controls over fungal communities and consequences for nutrient cycling. Annual Meeting of the Ecological Society of America, Milwaukee.

McGuire, K. L., **S. D. Allison**, K. K. Treseder. 2008. Spatial segregation of ectomycorrhizal and saprotrophic fungi in boreal and tropical forest soils. Annual Meeting of the Ecological Society of America, Milwaukee.

Allison, S. D. 2008. (Invited). Microbial feedbacks to environmental change in Alaskan boreal forest. UC Riverside.

Treseder, K. K., A. Majumder, E. Bent, J. Borneman, **S. D. Allison**, C. A. Hanson. 2007. (Invited). Controls over fungal communities and consequences for nutrient cycling. Annual Meeting of the American Geophysical Union, San Francisco.

Allison, S. D. 2007. (Invited). Microbial feedbacks to global change in Alaskan boreal forest. University of Alaska, Fairbanks.

Allison, S. D., M. C. Mack, and K. K. Treseder. 2007. Nitrogen alters carbon cycling and microbial activity in a recently-burned boreal ecosystem. Annual Meeting of the Ecological Society of America, San Jose.

Allison, S. D. 2007. (Invited). Extracellular enzyme production as an optimal foraging strategy for microbes and plants. Enzymes in the Environment: Activity, Ecology and Applications, Viterbo, Italy.

Allison, S. D. 2007. (Invited). Microbial communities as regulators of global change feedbacks to ecosystem processes. American Society for Microbiology, Toronto, Canada.

Allison, S. D. 2006 (Invited). Microbial strategies and environmental change: implications for ecosystem processes. CEA-CREST seminar series, Cal State LA.

Allison, S. D. 2006 (Invited). Microbial enzymes and communities under environmental change: implications for ecosystem processes. Department of Ecology and Evolutionary Biology, University of Arizona.

Allison, S. D. 2006 (Invited). Microbial strategies and environmental change: implications for ecosystem processes. Department of Ecology and Evolutionary Biology, UC Irvine.

Allison, S. D., C. I. Czimczik, and K. K. Treseder. 2006. Links among warming, fungal communities, and carbon fluxes in boreal forest ecosystems. American Geophysical Union Fall Meeting, San Francisco.

Allison, S. D. 2006 (Invited). Microbial strategies and environmental change: implications for ecosystem processes. School of Biology, Georgia Tech.

Allison, S. D. 2006 (Invited). Microbial feedbacks to global change in boreal ecosystems. Department of Ecology and Evolution, Stony Brook University.

Allison, S. D. 2006 (Invited). Fungal communities and global change in boreal ecosystems. Department of Ecology and Evolutionary Biology, Rice University.

Allison, S. D. 2006. Microbial competition in spatially structured environments (Poster). Integrated Ocean Drilling Program Subseafloor Biosphere Workshop, Vancouver, Canada.

Allison, S. D., C. Hanson, C. Czimczik, and K. K. Treseder. 2006. Nitrogen alters fungal communities but not carbon cycling in boreal forest soils. Annual Meeting of the Ecological Society of America, Memphis.

Allison, S.D. 2006 (Invited). Brown Ground and the Black Box: assessing paradigms for the soil carbon cycle. Crop and Soil Science Department, Oregon State University.

Allison, S. D., K. K. Treseder, and C. Czimczik. 2006 (Invited). Rethinking the "Black Box": How microbes and enzymes drive biogeochemical processes. National Center for Ecological Analysis and Synthesis, Santa Barbara.

Allison, S. D., K. K. Treseder, and C. Czimczik. 2005. Nitrogen alters fungal communities in boreal forest soil: implications for carbon cycling. American Geophysical Union Fall Meeting, San Francisco.

Allison, S.D. 2005 (Invited). Soils as a test bed for ecological theory from the plant world. Biology Department, Washington University in St. Louis.

Allison, S.D. 2005 (Invited). Soils as a test bed for ecological theory from the plant world. Earth System Science Seminar Series, University of California, Irvine.

Allison, S. D. 2005. Constraints on soil enzymes and microbial biomass: implications for decomposition. Annual Meeting of the Ecological Society of America, Montreal.

Allison, S. D., and J. D. Jastrow. 2004. Microbial enzyme activity and carbon cycling in grassland soil fractions. American Geophysical Union Fall Meeting, San Francisco.

Allison, S. D., and P. M. Vitousek. 2004. Brown ground: a soil carbon analog for the Green World. Annual Meeting of the Ecological Society of America, Portland.

Allison, S. D., and P. M. Vitousek. 2003. Soil microbial and enzymatic responses to complex and labile nutrient inputs. American Geophysical Union Fall Meeting, San Francisco.

Allison, S. D., and P. M. Vitousek. 2003. Decomposition and nutrient dynamics in native and exotic Hawaiian understory plant litter. Annual Meeting of the Ecological Society of America, Savannah.

Allison, S. D., H. Farrington, and P. M. Vitousek. 2001. Substrate quality, nutrient availability, and enzymatic controls over litter decomposition rates. Annual Meeting of the Ecological Society of America, Madison.

Allison, S. D., and J. C. Schultz. 2000. Turning the tides: gall-insects benefit from plant defense biochemistry. Annual Meeting of the Ecological Society of America, Snowbird.