Francesca Mia Hopkins, Ph.D.
Assistant Professor of Climate Change and Sustainability, Dept. of Environmental Sciences
216 Science Lab I, University of California, Riverside, CA 92521◆707.328.3135 ◆ fhopkins@ucr.edu

EDUCATION

UNIVERSITY OF CALIFORNIA, IRVINE, CA, USA, September 2007-March 2013
Ph.D., Earth System Science, 2013
M.S., Earth System Science, 2010
DISSERTATION TITLE: *"Warming and high substrate availability increase decomposition of decades-old carbon in temperate forest soils"*
DOCTORAL COMMITTEE: Susan Trumbore (chair), Steven Allison, Michael Goulden, James Randerson

UNIVERSITY OF CALIFORNIA, BERKELEY, CA, USA, August 2000-May 2005
B.A., May 2005, Environmental Sciences: Physical Science emphasis
B.A., May 2005, Spanish: Latin American Literature emphasis
SENIOR RESEARCH THESIS: *"Human Influence on the Carbon Cycle of Secondary Tropical Forests: Effects of Temperature and Nitrogen on CO_2 Respiration from Soils in Pasture and a Reforestation Chronosequence"*
RESEARCH ADVISORS: Professor Whendee Silver & Dr. Margaret Torn, Lawrence Berkeley Laboratory

PONTIFICIA UNIVERSIDAD CATOLICA, SANTIAGO, CHILE, Study Abroad, January-December 2003

AWARDS

Top 50 Graduate and Postdoctoral Scholar Alumni, UC IRVINE GRADUATE DIVISION, 2016

Postdoctoral Program Fellow, NASA, 2014

Brython Davis Fellow, UC IRVINE GRADUATE DIVISION, 2012

Scholar, ARCS FOUNDATION, 2009-2011

Ralph and Carol Cicerone Fellow, UCI DEPARTMENT OF EARTH SYSTEM SCIENCE, 2010

Graduate Research Fellow, U.S. NATIONAL SCIENCE FOUNDATION, 2007

Departmental Citation in Environmental Sciences, UC BERKELEY, 2005

Undergraduate Research Fellow, BERKELEY ATMOSPHERIC SCIENCES CENTER, 2004

Summer Undergraduate Research Fellow, UC BERKELEY COLLEGE OF LETTERS AND SCIENCE, 2004

Alumni Leadership Scholar, UC BERKELEY ALUMNI ASSOCIATION, 2002

PUBLICATIONS

C.C. Yáñez*, **F.M. Hopkins**, W.C. Porter (2020). Projected Impacts of Climate Change on Tourism in the Coachella Valley, California. *Climatic Change*. https://doi.org/10.1007/s10584-020-02843-x
underline denotes supervisee, * denotes undergraduate

A.R. Marklein, D. Meyer, M.L. Fischer, S. Jeong, T. Rafiq, M. Carr, **F.M. Hopkins** (2020). Facility scale inventory of dairy methane emissions in California: Implications for mitigation, *Earth Syst. Sci. Data Discuss*., https://doi.org/10.5194/essd-2020-133.

T. Rafiq, R.M. Duren, A.K. Thorpe, K. Foster, R. Patarasuk, C.E. Miller, **F.M. Hopkins** (*accepted*). Attribution of Methane Point Source Emissions using Airborne Imaging Spectroscopy and the Vista-California Methane Infrastructure Dataset. *Environmental Research Letters.* https://doi.org/10.1088/1748-9326/ab9af8.

R.R. Thiruvenkatachari, V. Carranza, F. Ahangar, A. Marklein, **F. Hopkins**, A. Venkatram (2020). Uncertainty in using dispersion models to estimate methane emissions from manure lagoons in dairies. *Agricultural and Forest Meteorology,* https://doi.org/10.1016/j.agrformet.2020.108011

D.H. Cusworth, R.M. Duren, V. Yadav, A.K. Thorpe, K. Verhulst, S. Sander, **F. Hopkins**, T. Rafiq, C.E. Miller (2020). Synthesis of methane observations across scales: Strategies for deploying a multitiered observing network. *Geophysical Research Letters*, *47*, e2020GL087869. https://doi.org/ 10.1029/2020GL087869

A.K. Thorpe, R.M. Duren, S. Conley, K.R. Prasad, B.D. Bue, V. Yadav, K.T. Foster, T. Rafiq, **F.M. Hopkins**, M.L. Smith, M.L. Fischer, D.R. Thompson, C. Frankenberg, I.B. McCubbin, M.L. Eastwood, R.O. Green, C.E. Miller (2020). Methane emissions from underground gas storage in California. *Environmental Research Letters.* https://doi.org/10.1088/1748-9326/ab751d

R.M. Duren, A.K. Thorpe, K.T. Foster, T. Rafiq, **F.M. Hopkins**, V. Yadav, B.D. Bue, D.R. Thompson, S. Conley, N.K. Colombi, C. Frankenberg, I.B. McCubbin, M.L. Eastwood, M. Falk, J.D. Herner, B.E. Croes, R.O. Green, C.E. Miller (2019). California's Methane Super-Emitters. *Nature* 575, 180-185. https://doi.org/10.1038/s41586-019-1720-3.

L. Kuai, O.V. Kalashnikova, **F. Hopkins**, G. Hulley, H. Lee, M.J. Garay, R. Duren, J. Worden, S. Hook (2019). Quantification of ammonia emissions with high-resolution thermal infrared observations from the HyTES airborne instrument: Comparison of multiple sources including a wildfire. *Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, doi: 0.1109/JSTARS.2019.2918093.

V. Yadav, K. Mueller, K.R. Verhulst, R. Duren, T. Nehrkorn, J. Kim, R.F. Weiss, R. Keeling, S. Sander, M. Fischer, S. Newman, M. Falk, T. Kuwayama, **F. Hopkins**, T. Rafiq, J. Whetstone, C. Miller (2019*).* Spatio-temporally resolved methane fluxes from the Los Angeles Megacity. *Journal of Geophysical Research- Atmospheres*, doi: 10.1029/2018JD030062

Francesca Hopkins. (University of California, Riverside). 2018. Inland Deserts Summary Report. California's Fourth Climate Change Assessment. Publication number: SUM-CCCA4-2018-008. http://www.climateassessment.ca.gov/regions/docs/20180827-InlandDeserts.pdf

V. Carranza, T. Rafiq, I. Frausto-Vicencio, **F. Hopkins**, K.R. Verhulst, P. Rao, R.M. Duren, C.E. Miller (2018). Vista-LA: Mapping methane emitting infrastructure in the Los Angeles megacity. *Earth Syst. Sci. Data,* https://doi.org/10.5194/essd-2017-65*.*

K.R. Verhulst, A. Karion, J. Kim, P.K. Salameh, R.F. Keeling, S. Newman, J. Miller, C. Sloop, T. Pongetti, P. Rao, C. Wong, **F.M. Hopkins**, R.F. Weiss, R.M. Duren, C.E. Miller (2017). In Situ Carbon Dioxide and Methane Measurements from a Tower Network in the Los Angeles Megacity. *Atmos. Chem. Phys.,* doi:10.5194/acp-2016-850.

F.M. Hopkins, J.T. Randerson, S.E. Bush, C.T. Lai, Y.-K. Hsu, V. Carranza, J.R. Ehleringer (2016). Mitigation of methane emissions in cities: how new measurements and partnerships can contribute to emissions reduction strategies. *Earth's Future,* 4, 408-425, doi:10.1002/2016EF000381.

F.M. Hopkins, S.E. Bush, J.R. Ehleringer, C.T. Lai, E.A. Kort, D.R. Blake, J.T. Randerson (2016). Spatial patterns and source attribution of urban methane in the Los Angeles Basin. *Journal of Geophysical Research- Atmospheres,* 121, doi:10.1002/2015JD024429.

L. Kuai, J. Worden, K. Li, G. Hulley, **F. Hopkins**, C. Miller, S. Hook, R. Duren, A. Aubrey (2016). Characterization of anthropogenic methane plumes with the Hyperspectral Thermal Emission Spectrometer (HyTES): a retrieval method and error analysis. *Atmospheric Measurement Techniques,* 9, 3165-3173, doi: 10.5194/amt-9-3165-2016.

G.C Hulley, R. Duren, **F.M. Hopkins**, S.J. Hook, N. Vance, P. Guillevic, W.R. Johnson, G. Rivera, A. Aubrey, N. Malakar, C. Miller, J.M. Sanchez, B. Eng, J. Mihaly, V. Jovanovic, S. Chazanoff, Z. Staniszewski, K. Holmes (2016). High spatial resolution imaging of methane and other trace gas sources with the airborne Hyperspectral Thermal Emission Spectrometer (HyTES). *Atmospheric Measurement Techniques,* 9, 2393-2408, doi:10.5194/amt-9-2393-2016.

W.R. Wieder, 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, X. Xu (2015). Explicitly representing soil microbial processes in Earth system models. *Global Biogeochemical Cycles,* 29, 1782-1800.

Y. Luo, 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, et al. (2015). Towards more realistic projections of soil carbon dynamics by Earth System Models. *Global Biogeochemical Cycles,* doi: 10.1002/2015GB005239

S.E. Bush, **F.M. Hopkins**, J.T. Randerson, C.T. Lai, J.R. Ehleringer (2015). A mobile ground-based laboratory for continuous measurement of atmospheric trace-gas and criteria pollutant species: design and applications. *Atmospheric Measurement Techniques,* 8, 3481-3492.

A.J. Taylor, C.T. Lai, **F.M. Hopkins**, S. Wharton, K. Bible, X. Xu, J.T. Randerson, C. Phillips, S. Bush, J.R. Ehleringer (2015). Radiocarbon-based partitioning of soil respiration in an old-growth coniferous forest. *Ecosystems,* 18, 459-470.

F.M. Hopkins, T.R. Filley, G. Gleixner, M. Lange, S.M. Top, S.E. Trumbore (2014). Increased belowground carbon inputs and warming promote loss of soil organic carbon through complementary microbial responses. *Soil Biology & Biochemistry,* 76, 57-69.

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

F.M. Hopkins, M.A. Gonzalez-Meler, C.E. Flower, D.J. Lynch, C. Czimczik, J. Tang, J.-A. Subke (2013). Ecosystem-level controls on root-rhizosphere respiration. *New Phytologist,* 199, 339-351.

F.M. Hopkins, M.S. Torn, S.E. Trumbore (2012). Warming accelerates decomposition of decadal-cycling soil carbon. *Proceedings of the National Academy of Sciences,* 109, E1753-E1761.

C.A. Sierra, S.E. Trumbore, E.A. Davidson, S.D. Frey, K.E. Savage, **F.M. Hopkins** (2012). Predicting decadal trends and transient responses of radiocarbon storage and fluxes in a temperate forest soil. *Biogeosciences,* 9, 3013-3028.

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

R.T. Conant, M.G. Ryan, G.I. Ågren, H.E. Birge, M.A. Bradford, E.A. Davidson, P.E. Eliasson, S.E. Evans, S.D. Frey, C.P. Giardina, **F.M. Hopkins**, R. Hyvönen, M.U.F. Kirschbaum, J.M. Lavallee, J. Leifeld, W.J. Parton, J.M. Steinweg, M.D. Wallenstein, J.A.M. Wetterstedt (2011). Temperature and soil carbon decomposition – synthesis of current knowledge and a way forward. *Global Change Biol.,* 17, 3392-3404.

BOOK CHAPTERS

E.A.G. Schuur, M.S. Carbone, C.E. Hicks Pries, **F.M. Hopkins**, S.M. Natali (*2016*). Radiocarbon in terrestrial systems *in* Radiocarbon and Climate Change. E.A.G. Schuur et al., editors.

S. Trumbore, X. Xu, G.M. Santos, C.I. Czimczik, S. Beaupre, M.A. Pack, **F.M. Hopkins**, A. Stills, M. Lupascu, L. Ziolkowski (*2016*). Preparation for radiocarbon analysis *in* Radiocarbon and Climate Change. E.A.G. Schuur et al., editors.

RESEARCH EXPERIENCE

NASA Postdoctoral Program Fellow, JET PROPULSION LABORATORY, Pasadena, 11/14 – 12/16
(research advisor: Dr. Charles E. Miller)

- Develop strategy for anthropogenic methane hotspot detection in California using NASA assets
- Lead airborne and ground measurement campaigns in California's San Joaquin Valley and greater Los Angeles to detect and attribute methane emission hotspots to their sources
- Flight planning for the Hyperspectral Thermal Emission Spectrometer (Aliso Canyon campaign)
- Analyze data from ground, mobile, and airborne campaigns, including in situ CH_4 mole fractions and remotely sensed column CH_4
- Build a source database for California methane emissions with geoinformatic tools
- Collaborate with staff at the California Air Resources Board to gain the understanding needed to mitigate short-lived climate pollutants

Postdoctoral Researcher, DEPARTMENT OF EARTH SYSTEM SCIENCE, UC IRVINE, 1/13 – 10/14
(research advisor: Professor James T. Randerson)

- Led urban greenhouse gas sampling campaign in Los Angeles to quantify emissions sources using a mobile laboratory system, including supervising field work by undergraduate researchers
- Coordinated with research team members at the Univ. of Utah (PI Professor J. Ehleringer and Dr. S. Bush) and San Diego State Univ. (Professor C.T. Lai) to compare emissions across cities
- Collaborated to measure ethane concentrations across the Los Angeles Basin (Professor E. Kort, Univ. of Michigan, and Professor D. Blake, UC Irvine)
- Developed data collection system and protocol for mobile greenhouse gas sampling campaign in Alaska, summer 2013 (with Professors C. Czimczik and J. Randerson, UCI)
- Co-advised San Diego State Univ. M.S. student (with Professor C.T. Lai) studying drought effects on soil respiration at the Wind River Experimental Forest using carbon isotope measurements

Doctoral Researcher, DEPARTMENT OF EARTH SYSTEM SCIENCE, UC IRVINE, 9/07 – 12/12
(research advisor: Professor Susan E. Trumbore, Max Planck Institute for Biogeochemistry)

- Investigated the effect of warming on soil carbon respiration losses using radiocarbon and stable carbon isotope analysis of soils from Free Air CO_2 Enrichment sites
- Studied the role of substrate availability and warming on the age of carbon vulnerable for decomposition using soil density fractions and radiocarbon modeling
- Conducted soil incubation experiments to determine the effect of nitrogen additions on heterotrophic respiration from soils

Visiting Graduate Student Researcher, DEPARTMENT OF BIOGEOCHEMICAL PROCESSES, MAX PLANCK INSTITUTE FOR BIOGEOCHEMISTRY, Jena, Germany, 4-6/10, 10-11/10, 4-5/11, 10-11/11

- Investigated of effect of warming and substrates on soil microbial communities using $\delta^{13}C$ Conducted phospholipid fatty acid analysis in the laboratory of Dr. Gerd Gleixner

Post-Baccalaureate Fellow, LAWRENCE BERKELEY NATIONAL LABORATORY, November 2005-July 2007

- Measured trace gas (CH_4, CO_2, N_2O) fluxes from grassland experiment (PI Professor Mary Firestone) using soil and whole-ecosystem chambers
- Preparation of soil, vegetation, and microbial samples for elemental and isotopic analyses
- Coordinated laboratory for Dr. Margaret Torn

Research Assistant, DEPARTMENT OF INTEGRATED BIOLOGY, UC BERKELEY, 7-9/05

- Assisted in field data collection on a Smithsonian Tropical Research Institute seedling dynamics project led by Dr. Margaret Metz in the Ecuadorian Amazon (Yasuní National Park)

Bilingual Interviewer, CHILDHOOD LEUKEMIA STUDY, SCHOOL OF PUBLIC HEALTH, UC BERKELEY, 1/04-6/05

- Conducted telephone interviews in Spanish and English of study participants to determine effects of environment on childhood leukemia

TEACHING EXPERIENCE: UNIVERSITY LEVEL

Assistant Professor, DEPARTMENT OF ENVIRONMENTAL SCIENCES, UC RIVERSIDE, 1/17-present

- Introduction to the Atmosphere (ENSC 102)
- Soil Ecology (ENSC 120)
- Biogeochemistry (ENSC 232)
- Professional Development for Graduate Students (ENSC 475)
- Department of Environmental Sciences Seminar Series (ENSC 201)
- Professional Development for Environmental Sciences (ENSC 191)

Teaching Assistant, DEPARTMENT OF EARTH SYSTEM SCIENCE, UC IRVINE, 9/08-6/09

- Taught laboratory component of introductory geology course (ESS 7)
- Led discussion section and lectured in Introduction to Oceanography (ESS 3)
- Taught laboratory component of Earth System Science Field Methods (ESS 114)

Guest Lecturer, UCI EARTH SYSTEM SCIENCE 15: CLIMATE CHANGE, 7/25/13;
WHITTIER COLLEGE: BIOLOGY AND ENVIRONMENTAL SCIENCE DEPARTMENT, "The case of the missing methane: greenhouse gas sampling in Los Angeles," 3/13/13;
UCI EARTH SYSTEM SCIENCE 172: SCIENCE COMMUNICATION AND OUTREACH, "Teaching about the terrestrial carbon cycle," 2/26/13

Workshop Leader, UCI EARTH SYSTEM SCIENCE RESEARCH EXPERIENCE FOR UNDERGRADUATES, 7/3/13

Laboratory Instructor and Guest Lecturer, SHORT COURSE IN RADIOCARBON IN ECOLOGY AND EARTH SYSTEM SCIENCE, UNIVERSITY OF CALIFORNIA, IRVINE, 7/08, 7/09, 7/11, 7/19

Workshop Coordinator, UCI EARTH SYSTEM SCIENCE, "K to Gray: Communicating Science to Students of All Ages," with Professor Charlie Zender, 1/30/12

Mentor, UC IRVINE PHYSICAL SCIENCES UNDERGRADUATE MENTORING PROGRAM, 9/13 – 5/16

Mentor, NASA DEVELOP PROGRAM, 6/15 – 8/15; 6/17-present

OTHER TEACHING EXPERIENCE

Founding Member, CLEAN EDUCATION, 2/08 – 10/14

- Founded a 501(c)3 organization to teach about climate change in grades K-12
- Develop global climate change curriculum based on California state science standards
- Present climate change lessons at local schools, including the OC Water District children's water festival and various schools in Orange and Los Angeles counties
- Developed a course for UC Irvine graduate students to learn how to effectively present science to the public, held winter quarter 2012 (ESS 280A, Professor Charlie Zender)
- Developed a course for UC Irvine undergraduate students to learn about opportunities for science communication, held winter quarter 2013 (ESS 172, Professor Charlie Zender)

Teaching Assistant, DEPARTMENT OF EARTH SYSTEM SCIENCE, UC IRVINE, 7/12

- Designed and led lectures and hands-on activities to teach carbon cycle and water sources
- Assisted with lectures and laboratory activities for a two week residential program for 40 American Indian high school students at UCI and the La Jolla Band of Luiseño Indians Reservation (Pauma Valley, California)

Presenter, EXPANDING YOUR HORIZONS (SONOMA COUNTY), 3/06, 4/07, 4/08

- Led a workshop on climate change and the carbon cycle to 7th and 8th grade girls aimed to encourage the participation of more women in the sciences

SELECTED PRESENTATIONS

Oral Presenter, AMERICAN GEOPHYSICAL UNION FALL MEETING 2019, "*Methane Point Source Emissions from California Dairy Farms,"* 12/11/19

Invited Speaker, THIRD CO_2 URBAN SYNTHESIS & ANALYSIS (CO_2 USA) WORKSHOP, "*Vista-CA Methane Inventory,"* 10/8/19

Invited Speaker, AIR QUALITY RESEARCH IN THE WESTERN US (AQUARIUS) WORKSHOP, "*Sources and solutions: Linking atmospheric measurements of greenhouse gas and air quality emissions from agriculture at regional scales,"* 9/25/19

Invited Panelist, CONGRESSMAN ADAM SCHIFF TOWN HALL MEETING, CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, "Climate Change," 4/21/17

Showcase on Innovation Presenter, JET PROPULSION LABORATORY DIRECTOR'S REVIEW AND DISCUSSION, "California Methane Emissions Monitoring," 2/1/16

Invited Oral Presenter, AMERICAN GEOPHYSICAL UNION FALL MEETING, SAN FRANCISCO, "Anthropogenic Methane Emissions in California's San Joaquin Valley: Characterizing Large Point Source Emitters," 12/14/15

Poster Presenter, AMERICAN GEOPHYSICAL UNION FALL MEETING, SAN FRANCISCO, "Detecting methane emission sources in California: a case-study of scientist/decision-maker interactions," 12/14/15

Oral Presenter, GOLDSCHMIDT CONFERENCE 2015, "*Sinks to Sources: Soil carbon dynamics with warming in elevated CO_2 experiments,"* 8/21/15

Poster Presenter, GORDON CONFERENCE ON ATMOSPHERIC CHEMISTRY, "*Characterization of methane super-emitters in the southern San Joaquin Valley of California,"* 8/4/15

Invited Speaker, DEPT. OF GEOLOGY, UNIVERSITY OF CINCINNATI, "*A tiered observational approach for detecting anthropogenic methane emissions,"* 2/20/15

Poster Presenter, AMERICAN GEOPHYSICAL UNION FALL MEETING, SAN FRANCISCO, "Mitigation of methane emissions in cities: how new measurements and partnerships can contribute to emissions reduction strategies," 12/12/14

Invited Speaker, DEPT. OF EARTH, ATMOSPHERIC AND PLANETARY SCIENCES, PURDUE UNIVERSITY, "*Fingerprints of human impact: isotopic insight into carbon emissions from soils to cities,"* 3/24/14

Invited Speaker, CALIFORNIA METHANE MONITORING MEETING, SPONSORED BY JET PROPULSION LABORATORY GLOBAL CHANGE & ENERGY OFFICE, "Urban methane studies at UC Irvine," 12/9/13

Poster Presenter, AMERICAN GEOPHYSICAL UNION FALL MEETING, SAN FRANCISCO, "Methane Hotspots in the Los Angeles Megacity," 12/13

Invited Seminar Speaker, UNIVERSITY OF CALIFORNIA, IRVINE, DEPARTMENT OF MECHANICAL ENGINEERING ADVANCED POWER AND ENERGY GROUP, "Pre-combustion emissions from natural gas-fired power plants," 10/11/13

Oral Presenter, AMERICAN GEOPHYSICAL UNION MEETING, SAN FRANCISCO, "Long-term temperature sensitivity of soil carbon in a prairie warming experiment," 12/3/12

Invited Speaker, SAN DIEGO STATE UNIVERSITY: BIOLOGY SEMINAR, "Warming and high substrate availability increase decomposition of decades-old carbon in temperate forest soils," 10/22/12

Invited Oral Presenter, AMERICAN GEOPHYSICAL UNION MEETING, SAN FRANCISCO, "Measuring priming using ^{14}C of respired CO_2: effects on respiration sources and interactions with warming," 12/6/11

Oral Presenter, AMERICAN GEOPHYSICAL UNION MEETING, SAN FRANCISCO, "Temperature sensitivity of different ages of soil C: Insights from the FACE sites," 12/6/11

Invited Speaker, GRAND CHALLENGES IN EARTH SYSTEM SCIENCE FOR THE 21ST CENTURY, IRVINE, "Grand challenge: Improve the public's understanding of Earth System Science," 9/15/11

Seminar Speaker, MAX PLANK INSTITUTE BIOGEOCHEMICAL PROCESSES DEPARTMENT, JENA, "Using incubations and C isotopes to examine the temperature sensitivity of soil C loss," 5/20/11

Invited Speaker, NORTHERN INSTITUTE OF APPLIED CARBON SCIENCE WORKSHOP, "Warming the FACE Sites: Using a Dual Isotope Label to Investigate Climate Response of Older Soil C," 7/14/10

Invited Panelist, RIVERSIDE COMMUNITY COLLEGE, "Women in STEM Disciplines," 3/11/10

Invited Seminar Speaker, UNIVERSITY OF CALIFORNIA, SANTA BARBARA, GEOGRAPHY DEPARTMENT BIOGEOCHEMISTRY SEMINAR, "Microbial Controls on Decadal Soil Carbon Cycling," 2/26/10

Invited Speaker, OREGON STATE UNIVERSITY DEPARTMENT OF CROP AND SOIL SCIENCE SEMINAR, "Temperature Dependence of Soil Organic Matter Decomposition," 4/27/09

Invited Speaker, MAX PLANK INSTITUTE BIOGEOCHEMICAL MODEL DATA INTEGRATION GROUP, "Does warming affect older soil carbon? Results from an incubation of FACE soils," 3/25/09

Poster Presenter, AMERICAN GEOPHYSICAL UNION FALL MEETING, SAN FRANCISCO, "Human Influence on the Carbon Cycle of Secondary Tropical Forests: the Effects of Temperature and Nitrogen on CO_2 Respiration from Soils under Pasture and an Afforestational Chronosequence," 12/04

PROFESSIONAL ACTIVITIES

Member of AMERICAN GEOPHYSICAL UNION (AGU):

AGU 2011 Fall Meeting Session Convener: "Soil Carbon and Nitrogen Cycles: Scaling Processes from Observations to Models"

AGU 2010 Fall Meeting Session Convener: "Integrating Recent Knowledge of Soil Carbon to Help Develop Process-Based Soil Carbon Models"

Journal Reviewer: *Biogeosciences*, *Ecosystems, Environmental Pollution, Environmental Science & Technology, European Journal of Soil Science, Global Biogeochemical Cycles, Global Change Biology, Journal of Geophysical Research, Nature Climate Change, PLOS ONE, Proceedings of the National Academy of Sciences, Science of the Total Environment*

Proposal Reviewer: *NASA/USDA Carbon Cycle Science, 2016; Fonds de Recherche du Québec – Nature et Technologies Research Support Program for New Academics, 2019; NOAA AC4, 2020*

WORKSHOPS AND TRAINING

THIRD CO_2 URBAN SYNTHESIS & ANALYSIS (CO_2 USA) WORKSHOP, **BOSTON UNIVERSITY,** 10/19: *Invited speaker*

AIR QUALITY RESEARCH IN THE WESTERN US (AQUARIUS) WORKSHOP, UNIVERSITY OF UTAH, 9/19: *Invited speaker*

1ST ANNUAL SCIENTIFIC SUMMIT ON DAIRY METHANE MANAGEMENT RESEARCH, UC DAVIS, 6/19: *Invited speaker*

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY ADVANCING URBAN GHG INVENTORY DEVELOPMENT FOR SCIENCE AND MITIGATION MANAGEMENT NEEDS, 9/17: *Invited speaker*

JET PROPULSION LABORATORY MEDIA TRAINING, 7/29/16: *Invited participant*

JET PROPULSION LABORATORY CARBON-CLIMATE SCIENCE A-TEAM STUDY, 2/16: *Invited participant*

KECK INSTITUTE FOR SPACE STUDIES WORKSHOP: EXPLORING NEW MULTI-INSTRUMENT APPROACHES TO OBSERVING TERRESTRIAL ECOSYSTEMS AND THE CARBON CYCLE FROM SPACE, 10/15: *Invited participant*

ACCESS XIII: THIRTEENTH ATMOSPHERIC CHEMISTRY COLLOQUIUM FOR EMERGING SENIOR SCIENTISTS, 7-8/15: *Invited participant*

RCN FORECAST WORKSHOP: REPRESENTING SOIL CARBON DYNAMICS IN GLOBAL LAND MODELS TO IMPROVE FUTURE IPCC ASSESSMENTS, 6/14: *Invited participant*

ELECTRICAL POWER RESEARCH INSTITUTE WORKSHOP ON NATURAL GAS ELECTRICITY GENERATION AND AIR QUALITY, 8/13: *Participant*

MYSTERIES OF THE DEEP: UNDERSTANDING THE WHOLE SOIL RESPONSE TO GLOBAL ENVIRONMENTAL CHANGE, LAWRENCE BERKELEY NATIONAL LABORATORY, 5/3/13: *Invited Participant*

THE OP-ED PROJECT SEMINAR, 4/12: *Participant in op-ed writing workshop; received merit scholarship*

US DEPARTMENT OF ENERGY WORKSHOP: STRATEGIES TO PROMOTE INTEGRATED EXPERIMENT-MODEL APPROACHES TO TERRESTRIAL ECOSYSTEM STUDY, 3/12: *Invited Student Participant*

US DEPARTMENT OF ENERGY WORKSHOP: **SCALING ROOT PROCESSES**, 3/12: *Invited Student Participant*

INTEGRATED NETWORK FOR TERRESTRIAL ECOSYSTEM RESEARCH ON FEEDBACKS TO THE ATMOSPHERE AND CLIMATE, 1st Meeting, 3/11: *Invited Student Participant, Rapporteur*

NORTHERN INSTITUTE OF APPLIED CARBON SCIENCE WORKSHOP ON TEMPERATURE SENSITIVITY OF SOIL CARBON DECOMPOSITION, 7/10: *Invited Participant*

TECHNICAL UNIVERSITY OF MUNICH SOIL ORGANIC MATTER WORKSHOP, 3/09: *Participant*

UC IRVINE SHORT COURSE IN RADIOCARBON IN ECOLOGY AND EARTH SYSTEM SCIENCE, 7/06: *Participant*

UNIVERSITY OF UTAH STABLE ISOTOPE ECOLOGY SHORT COURSE, 6/06: *Participant*