

## CURRICULUM VITAE

**Lee, Xuhui**  
(update January 2022)

### CONTACT INFORMATION

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Address School of the Environment, Yale University, 195 Prospect Street, New Haven, CT  
06511 USA  
Email [xuhui.lee@yale.edu](mailto:xuhui.lee@yale.edu)  
Tel 203-432-6271  
Website <https://xleelab.sites.yale.edu/>

### EDUCATION

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PhD Soil Science, University of British Columbia, Canada  
M.Sc. Meteorology, Nanjing Institute of Meteorology, China  
B.Sc. Meteorology, Nanjing Institute of Meteorology, China

### POSITIONS

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2012-present Sara Shallenberger Brown Professor, School of the Environment, Yale University  
2018-present Professor (secondary appointment), Department of Earth and Planetary Sciences, Yale University  
2002-2012 Professor, School of the Environment, Yale University  
1999-2002 Associate Professor, School of the Environment, Yale University  
1994- 1999 Assistant Professor, School of the Environment, Yale University  
1992-1994 Research Associate, University of British Columbia  
1988-1992 Graduate Assistant, University of British Columbia  
1986-1988 Research Scientist and Lecturer, Nanjing Institute of Meteorology

### AWARDS AND HONORS

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2018 Award for Excellence in Basic Research in Meteorology, Chinese Meteorological Society  
2017 Lifetime Achievement Award, ChinaFLUX  
2015 Award for Outstanding Achievement in Biometeorology, American Meteorological Society  
2003 Outstanding Overseas Young Investigator Award, Natural Science Foundation of China  
1999 Award for Excellence in Teaching, School of the Environment, Yale University  
1996 US National Science Foundation Career Award  
1988-1992 University of British Columbia Graduate Fellowship, Full Support

## **PROFESSIONAL AFFILIATIONS**

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American Meteorological Society  
American Geophysical Union  
Ecological Society of China

## **PROFESSIONAL SERVICES**

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2019 Panelist, Center for Urban Resilience and Environmental Sustainability Connection Workshop, Discovery Partners Institute, Chicago  
2018 Carbon Cycle Review Panel, NASA  
2016 Member, Program Review Committee, School of Forestry and Resource Conservation, National University of Taiwan, Taiwan  
2013-2015 Member, Scientific Steering Committee, Joint Center on Global Change Studies, Beijing Normal University, China  
2009-2013 Board of Trustees, Great Mountain Forest Corporation, Connecticut  
2009-2012 Member, Scientific Steering Committee on Earth Science Initiative, Tsinghua University, China  
2008-2019 Editor-in-Chief, Agricultural and Forest Meteorology  
2007-present Guest Professor, Nanjing University of Information, Science and Technology, Nanjing, China  
2006 Panel Member, National Institute for Climate Change Research, Department of Energy  
2005 Panel Member, LBA Program, NASA  
2004-2016 Member of Advisory Committee, Ameriflux Science Team  
2003-2008 Member of Editorial Board, Agricultural and Forest Meteorology  
2001-2010 Guest Professor, Chinese Academy of Sciences, Beijing, China  
2000-2002 Member, Expert Advisory Panel, Metal in the Environment Research Network, Canada  
2000 Panel Member, Terrestrial Carbon Program, Department of Energy  
2000 Member of Program Committee, 24<sup>th</sup> American Meteorological Society Conference on Agricultural and Forest Meteorology  
1999-2001 Chair, American Meteorological Society Committee on Agricultural and Forest Meteorology  
1998-2003 Regional Editor for North America, Agricultural and Forest Meteorology  
1998 Member of Program Committee, 23<sup>rd</sup> American Meteorological Society Conference on Agricultural and Forest Meteorology  
1997-1999 Member, American Meteorological Society Committee on Agricultural and Forest Meteorology  
1996-1998 Rapporteur, Commission of Agricultural Meteorology, World Meteorological Organization

## **CHAIR OF PROFESSIONAL MEETINGS AND CONFERENCES**

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2017 Chair, 4<sup>th</sup> Chinese Symposium on Isotope Ecology, Nanjing, China  
2016 Session Chair, 32<sup>nd</sup> American Meteorological Society Conference on Agricultural and Forest Meteorology, Salt Lake City, USA

- 2015 Co-Chair, Workshop on Urban Climate: From Science to Solutions, Yale Beijing Center, Beijing China (with Peng Gong and Karen Seto)
- 2014 Chair, 11<sup>th</sup> Chinese Symposium on Boundary-Layer Meteorology, Nanjing, China
- 2007 Co-Chair, Session on Investigation of Carbon and Water Cycle Processes Using Isotopes – New Techniques, Data, and Analyses, American Geophysical Union Fall Meeting (with Tim Griffis and Kevin Tu)
- 2007 Co-Chair, Session on Ecosystem Scale Isotope Fluxes, Annual Ameriflux Science Meeting (with David Bowling)
- 2002 Co-Chair, Workshop on Standardization of Flux Diagnostics and Analysis Guidelines, Corvallis, Oregon (with Bill Massman)
- 1998 Session Chair, 23<sup>rd</sup> American Meteorological Society Conference on Agricultural and Forest Meteorology

## **PEER REVIEW CONTRIBUTIONS**

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### **Manuscripts**

Advances in Atmospheric Sciences  
 Advances in Water Resources  
 Agricultural and Forest Meteorology  
 Atmospheric Chemistry and Physics  
 Atmospheric Measurement Techniques  
 Atmospheric Research  
 Boundary-Layer Meteorology  
 Bulletin of American Meteorological Society  
 Ecological Applications  
 Environmental Fluid Mechanics  
 Environmental Research Letters  
 Environmental Science and Technology  
 Global Biogeochemical Cycles  
 Global Change Biology  
 Geoderma  
 Hydrological Processes  
 Hydrology and Earth System Sciences  
 Journal of Atmospheric Sciences  
 Journal of Atmospheric and Oceanic Technology  
 Journal of Applied Meteorology  
 Journal of Geophysical Research – Atmospheres  
 Journal of Geophysical Research – Biogeosciences  
 Journal of Hydrometeorology  
 Journal of Sustainable Forestry  
 Nature  
 Nature Climate Change  
 Nature Communications  
 Nature Ecology and Evolution  
 Oecologia  
 Plant and Soil

Proceedings of the National Academy of Sciences  
Quarterly Journal of Royal Meteorological Society  
Rangeland Ecology and Management  
Science  
Science of the Total Environment  
Scientific Reports  
Sensors  
Sustainable Cities and Society  
Tellus B  
Water Resources Research

### **Tenure and promotion**

Arizona State University, USA  
Beijing Normal University, China  
City University of New York, USA  
Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia  
East Carolina University, USA  
Harvard University, USA  
National University of Singapore, Singapore  
Oregon State University, USA  
Princeton University, USA  
State University of New York at Albany, USA  
Scripps Institution of Oceanography, USA  
Tsinghua University, China  
University of Connecticut, USA  
University of Hong Kong, Hong Kong  
University of Iowa, USA  
University of Kansas, USA  
University of Kentucky, USA  
University of Michigan  
University of Minnesota, USA  
University of Pennsylvania, USA  
University of Winnipeg, Canada  
Forest Service, US Department of Agriculture

### **Research proposals**

Canadian Metals in the Environment Network  
Chinese Academy of Sciences  
Chinese Ministry of Science and Technology  
Chinese National Science Foundation  
Council for the Earth and Life (The Netherlands)  
European Research Council  
Department of Energy (USA)  
Israel National Science Foundation  
National Center for Atmospheric Research (USA)  
Natural Sciences and Engineering Research Council of Canada  
National Science Foundation (USA)

The Royal Society of New Zealand  
UK Natural Environment Research Council

**Book proposals**

Oxford University Press  
Elsevier

**UNIVERSITY SERVICES**

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2017-present	Director, Yale Center for Earth Observation
2015-present	Program Coordinator, Yale-Tsinghua Dual Degree Program, School of the Environment
2021-2022	Urban Scientist Search Committee, School of the Environment
2020	Ad-hoc Committee on Tenure Promotion, School of the Environment
2018	Climate Solutions Panel, University Science Strategy Committee
2018	Ad-hoc Committee on Tenure Promotion, School of the Environment
2018	Climate Search Committee, Department of Geology and Geophysics
2016-2019	Doctoral Admissions Committee, School of the Environment
2014	Chair, Ad-hoc Committee on Tenure Promotion, School of the Environment
2011-2014	Provost's Standing Advisory and Appointments Committee for the School of the Environment
2011-present	Masters Admissions Committee, School of the Environment
2009-2011	Faculty Development and Appointments Committee, School of the Environment
2009-2010	Climate Science Search Committee, School of the Environment
2009	Atmosphere Physics and Climate Dynamics Search Committee, Department of Geology and Geophysics
2008-2009	Non-Ladder Appointments Committee, School of the Environment
2004-2007	Director of Doctoral Studies, School of the Environment
2002-2007	Space Committee, School of the Environment
2002-2006	Environmental Stewardship Committee, School of the Environment
2001-2011	Coordinator, Faculty Focal Group on Global Change, School of the Environment
1998	Hydrology Search Committee, School of the Environment
1997-2004	Curriculum Committee, School of the Environment
1997	Chair, Committee on Hydrology, School of the Environment
1996	Doctoral Admissions committee, School of the Environment
1995	Committee on School's Forests, School of the Environment
1994-	Steering Committee, Yale Center for Earth Observation
1994-2000	Masters Admissions Committee, School of the Environment

**TEACHING AND MENTORING**

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**Courses taught**

2019- present	Physical Science of Climate Change, 3 credits, with Peter Raymond
2010-present	Observing the Earth from Space, 3 credits (team taught before 2019)
2009-present	Boundary Layer Meteorology, 3 credits
2016	Cities in Hot Water: Urban Climate Adaptation, 3 credits, with Brad Gentry
2015, 18, 21	Workshop on Remote Sensing and Photogrammetry with Drones, 3 credits
2014-2016	Climate and Society, 3 credits, with Nadine Unger
2008	Lecture Series on China's Environment, 1-3 credits
2008	Seminar in Forest Carbon Science, 1-3 credits, with Mark Ashton
2004-2006	Doctoral Research Seminar, 3 credits
2005	Political Economy of Climate Change, 2-3 credits, with David Runnalls
2002, 09, 17	Research Methods, 3 credits
2002	Seminar on Remote Sensing Applications, 1 credit, with Mark Ashton
2000	Seminar on Climate Change Science and Policy, 2-3 credits
2000-2012	A Biological Perspective of Global Change, 3 credits
1998-2015	Seminar on Alpine, Boreal and Arctic Ecosystems, 3 credits, with Graeme Berlyn and Mark Ashton
1997-2016	Climate and Life, 3 credits
1996	Seminar on Plants and Their Environment, 1 credit, with Graeme Berlyn and Bill Smith
1995-1996	Biometeorology, 3 credits
1994-1998	Forest Meteorology and Methods of Micrometeorology, 3 credits

#### **Doctoral students and current affiliations**

As Chair/Co-Chair	<ul style="list-style-type: none"> <li>• Cao, Chang (Nanjing University of Information Science and Technology), Assistant Professor, Nanjing University of Information Science and Technology</li> <li>• Chakraborty, Tirthankar. Pacific Northwest National Laboratory, Research Scientist</li> <li>• Harper, Kandice. Affiliation unknown</li> <li>• Hu, Cheng (Nanjing University of Information Science and Technology), Assistant Professor, Nanjing Forestry University</li> <li>• Hu, Xinzhang. Senior Engineer, Bloomberg LP</li> <li>• Kim, Kyounghee. Affiliation unknown</li> <li>• Li, Jun (Chinese Academy of Science), Associate Professor, Chinese Academy of Sciences</li> <li>• Liu, Cheng (Nanjing University of Information Science and Technology), Assistant Professor, East China University of Technology</li> <li>• Richardson, Andrew. Professor, Northern Arizona State University</li> <li>• Schultz, Natalie. Associate Research Scientist, Yale University</li> <li>• Sigler, Jeff. Professor, Tulane University</li> <li>• Wang, Wei (Nanjing University of Information Science and Technology), Associate Professor, Nanjing University of Information Science and Technology</li> <li>• Wu, Hui-Ju. Affiliation unknown</li> <li>• Xiao, Qitao (Nanjing University of Information Science and Technology), Research Scientist, Nanjing Institute of Geography and Limnology, Chinese Academy of Science</li> <li>• Yang, Yichen (<b>current</b>)</li> </ul>
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- Zhao, Yong. Affiliation Unknown
- Zhang, Keer (**current**)
- Zhang, Xin. Assistant Professor, University of Maryland
- Zhao, Lei. Assistant Professor, University of Illinois Urbana-Champaign

As Committee  
Member

- Aho, Kelly
- Bash, Jesse (University of Connecticut)
- Bouda, Martin
- Butman, David
- Covey, Kris
- Della Valle, Curt
- Feng, Therese
- Harper, Kandice
- He, Hui
- Huang, Kangning
- Kapur, Amit
- Morrison, Wendy
- Koenig, Susan
- Mills, Helen
- Parry, Brooke
- Sigurdardottir, Ragnhildur
- Stoughton, Thomas (University of Connecticut)
- Takeishi, Azusa
- Zaitchik, Benjamin
- Zheng, Yiqi

**Post-doctoral advisee, current affiliation and year**

Bin Deng	Current affiliation unknown, 2011
Congsheng Fu	Professor, Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences, 2015 – 2017
Jianping Huang	Research Scientist, NOAA, 2009 – 2011
Tao Tang	<b>Current</b>
Zhongwang Wei	Associate Professor, Sun Yat-Sen University, 2016 – 2018
Lisa Welp	Assistant Professor, Purdue University, 2007-2009
Xuefa Wen	Professor, Institute of Geographic Science and Natural Resources Research, Chinese Academy of Science, 2007 – 2008
Weichang Yuan	<b>Current</b>
Wei Xiao	Professor, Nanjing University of Information Science and Technology, 2011

**GRANTS**

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2021	Co-PI, “How old is that forest? An interdisciplinary study using Cecropia as a biological clock”, Child’s Family Forestry Research Fund, Yale School of the Environment, \$25K,
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- with Simon Queenborough (PI), Michael Dove, and Peter Ludwig
- 2020-2023 PI, "Biking for science and health: Integration of smart sensor technology with public bicycles for urban environmental monitoring", Robert Wood Johnson Foundation, \$366K, with Robert Dubrow, Roman Kuc, and Zhong Shao
- 2020-2023 PI, "Investigation of climate impacts of land use and land cover using subgrid information from earth system models", US National Science Foundation, \$730K, with Natalie Schultz
- 2018-2020 PI, "Measuring heat stress of urban residents with smart thermometers on bicycles", Leitner Award for Uncommon Environmental Collaborations, \$75K, with Justin Farrell, Roman Kuc, and Zhong Shao
- 2018-2020 Co-PI, "Yale Sphagnum Carbon Project", funded by private donors, \$500K, with Dean Takahashi (PI), Peter Raymond, and Mark Bradford
- 2015-2018 PI, "Deuterium excess of water vapor in the atmospheric boundary layer", US National Science Foundation, \$467K, with Edward Patton
- 2013-2016 Co-PI, "Regional-scale assessment of N<sub>2</sub>O emissions within the US Corn Belt: The impact of precipitation and agricultural drainage on indirect emissions", US Department of Agriculture, \$500K (Yale budget \$250K), with John Baker and Tim Griffis (PI)
- 2010-2015 PI, "A doctoral and post-doctoral training program", Nanjing University of Information Science and Technology, \$100K
- 2010-2013 PI, "Carbon dioxide and water vapor isotopes in the atmospheric boundary layer", US National Science Foundation, \$240K
- 2010-2013 Co-PI, "New constraints on the nitrous oxide budget of agricultural ecosystems growing in the Upper Midwest, United States", US Department of Agriculture, \$399K (Yale budget \$12K), with John Baker, Kaycie Billmark, Tim Griffis (PI), Dylan Millet, and Rod Venterea
- 2009-2011 Co-PI, "Land surface properties, regional climate and feedbacks", with Karen Seto and Ron Smith (PI), Yale Climate and Energy Institute Interdisciplinary Grant, \$100K,
- 2007-2011 PI, "Greenhouse gas fluxes in managed and natural ecosystems in China", Rice Family Foundation, \$200K
- 2007-2009 PI, "Lecture series on China's environment", Rice Family Foundation, \$100K
- 2007-2008 PI, "Cycling of nitrous oxide in farmland", funded by an anonymous donor, \$50K
- 2006-2009 PI, "Influences of boundary layer flow on vegetation-air exchanges of energy, water and carbon dioxide". National Institute for Climatic Change Research, US Department of Energy, \$363K
- 2005-2008 PI, "Collaborative research: ecosystem-atmosphere oxygen isotopic fluxes and discrimination mechanisms". US National Science Foundation, with T Griffis, \$250K
- 2003-2007 PI, "Development and application of in-situ measurement of water vapor isotopes for hydrological and ecological research", US National Science Foundation, with R B Smith, \$500K
- 2004-2007 PI, "Response of soil respiration to rain", National Institute for Global Environmental Change, US Department of Energy, \$240K
- 2001-2004 PI, "Forest ecosystem respiration with the eddy covariance (II)", National Institute for Global Environmental Change, US Department of Energy, with T Siccama, \$240K
- 2000-2003 PI, "Vegetation-atmosphere exchange in non-ideal conditions", US National Science Foundation, \$140K
- 2000 PI, "AmeriFlux workshop on unaccounted flux in long-term observations of surface-air exchange", National Institute for Global Environmental Change, US Department of



- Energy, with W Massman, \$24K
- 1999-2000 PI, "Forest ecosystem respiration with the eddy covariance (I)", National Institute for Global Environmental Change, US Department of Energy, \$46K
- 1996-2000 PI, "CAREER award: nocturnal atmospheric exchange over forests", US National Science Foundation, \$230K
- 1996-1999 Co-PI, "Climate change and human response in the semi-arid Near-East using remote sensing", NASA, with R B Smith (PI), F Hole, N Kouchoukos and M L Wilson, \$1,200K
- 1996-1998 PI, "Development and application of a mobile micrometeorological system for measuring volatile mercury flux from Connecticut salt marshes", Connecticut Sea Grant Program, with G Benoit, \$105K

## **INVITED SEMINARS AND MEETING PRESENTATIONS**

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2021

- University of Hong Kong, China (via Zoom)
- Yale Beijing Center, China (via Zoom)

2018

- City University of New York, New York, USA
- Third International Potsdam Greenhouse Gas Flux Workshop, Nanjing, China
- 15<sup>th</sup> US-China Carbon Consortium Annual Meeting on Water-Heat-Carbon Nexus fluxes in Terrestrial Water Bodies, Jiujuang, China
- 35<sup>th</sup> Annual Meeting, Chinese Meteorological Society, Hefei, China

2017

- Annual AsiaFlux Workshop, Beijing, China
- Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences, Lanzhou, China
- Fourth Chinese Symposium on Isotope Ecology, Nanjing, China

2016

- University of Minnesota, Minnesota, USA
- Oakridge National Laboratory, Tennessee, USA

2015

- Annual American Geophysical Union Fall Meeting, Session on New Perspectives in Land Ecosystem Atmosphere Processes Research, San Francisco, USA
- 32<sup>nd</sup> Annual Meeting, Chinese Meteorological Society, Tianjin, China
- Beijing Normal University, Beijing, China
- IAEA International Symposium on Isotope Hydrology: Revisiting Foundations and Exploring Frontiers, Vienna, Austria

2014

- 12th AsiaFlux International Workshop, Los Baños, The Philippines
- Annual American Geophysical Union Fall Meeting, Session on Urban Areas and Global Change, San Francisco, USA
- 11<sup>th</sup> Chinese Symposium on Boundary-Layer Meteorology, Nanjing, China

- Peking University, Beijing, China
- 2013
- University of Minnesota, Minnesota, USA
  - First International Workshop on Advances in Observations, Models and Measurement Techniques of Atmospheric Water Vapor Isotopes, Gif-sur-Yvette, France
  - International Workshop on Challenges in the Applications of Stable Isotopes across Disciplines and Scales, Wroclaw, Poland
- 2012
- University of Connecticut, Connecticut, USA
  - Princeton University, New Jersey, USA
  - University of New Haven, Connecticut, USA
  - Symposium on Sustaining Forest Resources in a Changing Climate, Taipei, Taiwan.
- 2011
- American Geophysical Union Fall Meeting, Session on Carbon and Water isotopes, San Francisco, California
  - Conference on The Roles of Stable Isotopes in Water Cycle Research, Keystone, Colorado
  - Annual ASIAFLUX Workshop, Guangzhou, China
  - Workshop on Forest Carbon Flux, Taiwan
  - GreenFlux Workshop, Mierzecin, Poland
- 2010
- Chinese Academy of Agricultural Sciences, Beijing, China
- 2009
- Xiamen University, Xiamen, China
  - Nanjing University of Information, Science and Technology, Nanjing, China
  - Sun Yat-Sen University, Guangzhou, China
- 2008
- Nanjing University, Nanjing, China
  - Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China
- 2007
- Nanjing University of Information, Science and Technology, Nanjing, China
  - Pre-AGU BASIN Meeting, San Francisco, California, USA
- 2005
- Chinese Academy of Sciences, Beijing, China
  - Annual American Crop Society Meeting, Salt Lake City, Utah, USA
- 2003
- Eddy Covariance Training Workshop, Chinese Academy of Sciences, Beijing, China
  - International Workshop on Flux Footprint Observation and Modeling, Hyytiälä, Finland

2002

- Workshop on Standardization of Flux Diagnostics and Analysis Guidelines, Corvallis, Oregon, USA

2001

- Harvard University, Massachusetts, USA
- Chinese Academy of Sciences, Beijing, China
- National Bureau of Meteorology, Beijing, China
- Conference on Forest at the Land-Atmosphere Interface, Edinburgh, Scotland.
- Annual Ameriflux Meeting, Chicago, Illinois, USA

2000

- International FLUXNET Workshop, Marshall, California, USA

1999

- Indiana University, Indian, USA

1998

- Harvard University, Massachusetts, USA
- IUFRO (International Union of Forestry Research Organisations) Conference on Wind and Other Abiotic Risks to Forests and Trees, Joensuu, Finland
- Annual Ameriflux Meeting, Harvard Forest, Massachusetts, USA
- International FluxNet (Network of Carbon and Energy Study Flux Sites) Workshop, Paulson, Montana, USA

1994

- University of Northern British Columbia, British Columbia, Canada
- University of Toronto
- Atomic Energy of Canada Ltd., Chalk River Laboratories, Canada

## **PUBLICATIONS**

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### **Books**

**Lee X** (2018) *Fundamentals of Boundary-Layer Meteorology*. Springer

**Lee X** (2009) *Lectures on China's Environment*. Yale School of the Environment Publication Series, Report No 20.

**Lee X**, W Massman, B Law (2004) *Handbook of Micrometeorology: A Guide for Surface Flux Measurement and Analysis*. Kluwer Academic Publishers.

### **Papers published in referred journals**

(# lab member; + visiting student/scholar; \* corresponding author)

(reprints available at <https://xleelab.sites.yale.edu/publications>)

**2022**

1. Xie Y, M Zhang, W Xiao, J Zhao, W Huang, Z Zhang, Y Hu, Z Qin, L Jia, Y Pu, H Chu, J Wang, J Shi, S Liu, **X Lee\*** (2022) Nitrous oxide flux observed with tall-tower eddy covariance over a heterogeneous rice cultivation landscape. *Science of The Total Environment* 810: 152210.
2. Xiao Q, H Duan\*, B Qin, Z Hu, M Zhang, T Qi, **X Lee** (2022) Eutrophication and temperature drive large variability in carbon dioxide from China's Lake Taihu. *Limnology and Oceanography* doi.org/10.1002/lno.11998.
3. Pu Y, M Zhang\*, L Jia, Z Zhang, W Xiao, S Liu, J Zhao, Y Xie, **X Lee\*** (2022) Methane emission of a lake aquaculture farm and its response to ecological restoration. *Agriculture, Ecosystems and Environment*, in press.

## 2021

4. Wang W, TC Chakraborty#, W Xiao, **X Lee\*** (2021) Ocean surface energy balance allows a constraint on the sensitivity of precipitation to global warming. *Nature Communications* 12: 2115.
5. Tang T#\*, D Shindell, Y Zhang, A Voulgarakis, JF Lamarque, G Myhre, G Faluvegi, B Samset, T Andrews, D Olivié, T Takemura, **X Lee** (2021) Distinct surface response to black carbon aerosols. *Atmospheric Chemistry and Physics* 21: 13797–13809.
6. Chakraborty TC#\*, **X Lee**, DM Lawrence (2021) Strong local evaporative cooling over land due to atmospheric aerosols. *Journal of Advances in Modeling Earth Systems* 13: e2021MS002491.
7. Chakraborty T#\*, **X Lee** (2021) Large differences in diffuse solar radiation among current-generation reanalysis and satellite-derived products. *Journal of Climate* 34: 6635–6650.
8. Chakraborty T#\*, **X Lee** (2021) Using supervised learning to develop BaRAD, a 40-year monthly bias-adjusted global gridded radiation database. *Scientific Data* 8: 238.
9. Venter Z\*, TC Chakraborty#, **X Lee** (2021) Crowdsourced air temperatures contrast satellite measures of the urban heat island and its mechanisms. *Science Advances* 7: eabb9569.
10. Huang K\*, **X Lee**, B Stone Jr, J Knievel, ML Bell, KC Seto (2021) Persistent increases in nighttime heat stress from urban expansion despite heat island mitigation. *Journal of Geophysical Research - Atmospheres* 126: e2020JD033831.
11. Chakraborty TC#, C Sarangi\*, **X Lee\*** (2021) Reduction in human activity can enhance the urban heat island: insights from the COVID-19 lockdown. *Environmental Research Letters* 16: 054060.
12. Chakraborty TC#\*, **X Lee**, S Ermida, W Zhan (2021) On the land emissivity assumption and Landsat-derived surface urban heat islands: a global analysis. *Remote Sensing of the Environment* 265: 112682.
13. Lai J, W Zhan+\*, J Voogt, J Quan, F Huang, J Zhou, B Bechtel, L Hu, K Wang, C Cao, **X Lee** (2021) Meteorological controls on daily variations of nighttime surface urban heat islands. *Remote Sensing of the Environment* 253: 112198.
14. Lai J, W Zhan+\*, J Quan, B Bechtel, K Wang, J Zhou, F Huang, T Chakraborty, Z Liu, **X Lee** (2021) Statistical estimation of next-day nighttime surface urban heat islands. *ISPRS Journal of Photogrammetry and Remote Sensing* 176: 182-195.
15. Zhao J+, M Zhang\*, W Xiao, L Jia, X Zhang, J Wang, Z Zhang, Y Xie, Y Pu, S Liu, Z Feng, **X Lee\*** (2021) Large methane emission from freshwater aquaculture ponds revealed by long-term eddy covariance observation. *Agricultural and Forest Meteorology* 308: 108600.
16. Deventer MJ\*, T Roman, I Bogoev, RK Kolka, M Erickson, **X Lee**, JM Baker, DB Millet, TJ Griffis (2021) Biases in open-path carbon dioxide flux measurements: Roles of instrument surface heat

- exchange and analyzer temperature sensitivity. *Agricultural and Forest Meteorology* 296: 108216.
17. Chu H\*, X Luo, Z Ouyang, ..., **X Lee**, ..., JD Wood, D Zona (2021) Representativeness of Eddy-Covariance flux footprints for areas surrounding AmeriFlux sites. *Agricultural and Forest Meteorology* 301-302: 108350.
  18. Xie C, W Xiao\*, M Zhang, S Liu, Y Qian, H Zhu, Z Zhang, Q Liu, Y Hu, J Wang, **X Lee\*** (2021) Isotopic kinetic fractionation of evaporation from small water bodies. *Journal of Hydrology* 603: 126974.
  19. Hu Y, W Xiao\*, Z Wei, LR Welp, X Wen, **X Lee\*** (2021) Determining the isotopic composition of surface water vapor flux from high-frequency observations using flux-gradient and Keeling plot methods. *Earth and Space Science* 8: e2020EA001304.
  20. Xiao Q, Z Hu\*, C Hu, ARM T Islam, H Bian, S Chen, C Liu, **X Lee** (2021) A highly agricultural river network (Jurong River) as significant CO<sub>2</sub> and CH<sub>4</sub> sources. *Science of Total Environment* 769: 144558.
  21. Hu C\*, J Xu, C Liu, Y Chen, D Yang, W Huang, L Deng, S Liu, TJ Griffis\*, **X Lee** (2021) Anthropogenic and natural controls on atmospheric δ<sup>13</sup>C-CO<sub>2</sub> variations in the Yangtze River Delta: Insights from a carbon isotope modeling framework. *Atmospheric Chemistry and Physics* 21: 10015-10037.
  22. Huang W, TJ Griffis, C Hu, W Xiao\*, **X Lee** (2021) Seasonal variations of CH<sub>4</sub> emissions in the Yangtze River Delta region of China are driven by agricultural activities. *Advances in Atmospheric Sciences* 38:1537-1551.

## 2020

23. Ruehr S#\*, **X Lee**, R Smith, X Li, Z Xu, S Liu, X Yang, Y Zhou (2020) A mechanistic investigation of the oasis effect in the Zhangye cropland in semiarid western China. *Journal of Arid Environments* 176: 104120.
24. Cao C, Y Yang#, Y Lu, N Schultz#, P Gu, Q Zhou, J Xu, **X Lee\*** (2020) Performance evaluation of a smart mobile air temperature and humidity sensor for characterizing intracity thermal environment. *Journal of Atmospheric and Oceanic Technology* 37: 1891-1905.
25. Xiao W\*, Z Zhang, W Wang, M Zhang, Q Liu, Y Hu, W Huang, S Liu, **X Lee\*** (2020) Radiation controls the interannual variability of evaporation of a subtropical lake. *Journal of Geophysical Research – Atmospheres* 125: e2019JD031264.
26. Zhang Z, M Zhang, C Cao, W Wang, W Xiao, C Xie, H Chu, J Wang, J Zhao, L Jia, Q Liu, W Huang, W Zhang, Y Lu, Y Xie, Y Wang, Y Pu, Y Hu, Z Chen, Z Qin, **X Lee\*** (2020) A dataset of microclimate and radiation and energy fluxes from the Lake Taihu eddy flux network. *Earth System Science Data* 12: 2635-2645.
27. Sun L, XZ Liang\*, T Ling, M Xu, **X Lee** (2020) Improving a multilevel turbulence closure model for a shallow lake in comparison with other 1D models. *Journal of Advances in Modeling Earth Systems* 12: e2019MS001971.
28. Meng L, J Mao\*, Y Zhou, AD Richardson, **X Lee**, PE Thornton, DM Ricciuto, X Li, Y Dai, X Shi, G Jia (2020) Urban warming advances spring phenology but reduces temperature response of plants in the conterminous United States. *Proceedings of the National Academy of Sciences of the United States of America* 117: 4228-4233.
29. Shao L, G Li, Q Zhao, Y Li, Y Sun, W Wang, C Cai, W Chen, R Liu, W Luo\*, X Yin, **X Lee\***

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30. Hu C, TJ Griffis\*, JM Baker, JD Wood, DB Millet, Z Yu, **X Lee** (2020) Modeling the sources and transport processes during extreme ammonia episodes in the US Corn Belt. *Journal of Geophysical Research - Atmospheres* 125: e2019JD31207.
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### 1985-1993

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under a Douglas-fir forest stand. *Canadian Journal of Forest Research* 21: 1020-1028.

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205. **Lee X** (1985) On the estimation of evapotranspiration in western countries: A review (in Chinese with English abstract). *Advances in Mechanics* 15: 333-346.

### **Book chapters**

- Covey KR, J Orefice, **X Lee** (2012) The physiological ecology of carbon science in forest stands, in *Managing Forest Carbon in a Changing Climate* (M. Ashton, M. L. Tyrrell, D Spalding, B Gentry eds), Springer, New York, 31-49.
- Zhang X, Y Zhao, MS Ashton, **X Lee** (2012) Measuring carbon in forests, in *Managing Forest Carbon in a Changing Climate* (M. Ashton, M. L. Tyrrell, D Spalding, B Gentry eds), Springer, New York, 139-144.
- Lee X**, J Finnigan, KT Paw U (2004) Coordinate systems and flux bias error, in *Handbook of Micrometeorology: A Guide for Surface Flux Measurement and Analysis* (X. Lee, W. Massman, B. Law eds), Kluwer Academic Publishers, Dordrecht, 33-66.
- Lee X** (2004) Forest-air exchange in non-ideal conditions: the role of horizontal flux and its divergence, in *Forests at the Land-Atmosphere Interface* (M. Mencuccini, J. Grace, J. Moncrieff, K. G. McNaughton eds), CABI Publishing, 145-157.

### **CONFERENCE AND WORKSHOP PRESENTATIONS**

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2021

- Chakraborty T, X Lee, S Ermida, W Zhan. A global examination of the impact of different approaches for prescribing land emissivity on satellite-derived urban heat islands. *American Geophysical Union Fall Meeting*, virtual
- Chakraborty T, Z Venter, X Lee, Y Qian. Large-scale mapping of the urban thermal environment using citizen weather stations. *American Geophysical Union Fall Meeting*, virtual

2020

- T Chakraborty, C Sarangi, X Lee. A Reduction in Human Activities can Enhance the Urban Heat Island Intensity: Insights from the COVID-19 Lockdowns. *American Geophysical Union Fall Meeting*, virtual
- T Chakraborty, X Lee, DM Lawrence. A surface energy budget perspective on aerosol-climate interactions: role of the evaporative pathway. *American Geophysical Union Fall Meeting*, virtual
- Chakraborty T, X Lee. Creating bias-corrected global radiation datasets from climate reanalysis products using supervised learning. *100th American Meteorological Society Annual Meeting*, Boston, Massachusetts.
- Meng L, J Mao, Y Zhou, AD Richardson, X Lee, PE Thornton, DM Ricciuto, X Li, Y Dai, X Shi and G Jia. Urban warming advances spring phenology but reduces the response of phenology to

temperature in the conterminous United States. *Ecological Society of America Annual Meeting*, Salt Lake City, Utah.

2019

- Chakraborty T, X Lee. Aerosol-climate interactions at the local scale are strongly modulated by the biophysical properties of the underlying land surface. *American Geophysical Union Fall Meeting*, San Francisco, California.
- O'Brien M, NM Schultz, X Lee. UAV deployment for fine-scale CO<sub>2</sub> flux estimation in a mid-size city. *American Geophysical Union Fall Meeting*, San Francisco, California.

2018

- T Chakraborty, X Lee. Quantifying surface climate response to aerosol-induced shortwave and longwave radiative forcing. *American Geophysical Union Fall Meeting*, Washington DC.

2017

- Wei Z, X Lee, X Wen, W Xiao. Evapotranspiration partitioning for three agro-ecosystems with contrasting moisture conditions: a comparison of an isotope method and a two-source model calculation. *American Geophysical Union Fall Meeting*, New Orleans, Louisiana.
- Wang L, X Lee, D Feng, S Chen, C Fu, Z Wei, Y Yang, Y Yin, Y Luo, W Gang, G Lin. Impacts of large scale afforestation on regional climate: a case study in the Kubuqi Desert, Inner Mongolia based on WRF model. *American Geophysical Union Fall Meeting*, New Orleans, Louisiana.

2016

- Turner P, T Griffis, J Baker, X Lee, J Crawford, L Loken, R Venterea. Regional-scale Controls on Dissolved Nitrous Oxide in the Upper Mississippi River. *American Geophysical Union Fall Meeting*, San Francisco, California.
- Zhao J, M Zhang, W Xiao, W Wang, Z Zhang, Q Xiao, C Hu, Z Yu, Z Cao, JZ Xu, S Liu, X Lee. Measuring methane emission from fish ponds with micrometeorological methods. *32nd American Meteorological Society Conference on Agricultural and Forest Meteorology*, Salt Lake City, Utah.
- Griffis T, Z Chen, J Wood, J Baker, P Turner, X Lee, D Millet. Sensitivity of nitrous oxide emissions to climate. *32nd American Meteorological Society Conference on Agricultural and Forest Meteorology*, Salt Lake City, Utah.
- Wang W, X Lee, L Zhao, ZM Subin. Lake evaporation in a changing climate. *32nd American Meteorological Society Conference on Agricultural and Forest Meteorology*, Salt Lake City, Utah.
- Hu N, X Zhang, JZ Xu, Z Zhang, S Liu, X Lee, X Zhao. A mobile laboratory for measuring greenhouse gases and gaseous pollutants in urban airsheds. *32nd American Meteorological Society Conference on Agricultural and Forest Meteorology*, Salt Lake City, Utah.

2015

- Cao C, X Lee, S Liu, K Oleson, N Schultz, W Xiao, M Zhang, L Zhao. Urban heat islands in China enhanced by haze pollution. *American Geophysical Union Fall Meeting*, San Francisco, California.
- Wang W, X Lee, L Zhao, ZM Subin. An energy partitioning perspective on lake evaporation variations to climate change. *American Geophysical Union Fall Meeting*, San Francisco,

California.

- Schultz N, X Lee, PJ Lawrence, DM Lawrence, L Zhao. Improvements towards using sub-grid CLM output to study. *American Geophysical Union Fall Meeting*, San Francisco, California.
- Zhao L, X Lee, K Oleson, N Schultz, R Smith. Mitigating the urban heat island under climate change through urban management. *American Geophysical Union Fall Meeting*, San Francisco, California.
- Hu N, S Wang, X Zhang, S Liu, X Lee, L Deng, X Zhao. Carbon dioxide and methane measurement on urban roads in Nanjing, China. *American Geophysical Union Fall Meeting*, San Francisco, California.

2014

- Turner P, T Griffis, X Lee, J Baker, R Venterea, Wood. Nitrous oxide emissions from streams within the US Corn Belt scale with stream order. *American Geophysical Union Fall Meeting*, San Francisco, California.
- Zhang X, X Lee, T Griffis. Evaluating uncertainties in nitrous oxide emission inventories with multi-scale observations for an agriculture-dominated region. *American Geophysical Union Fall Meeting*, San Francisco, California (**invited**).
- Lee X. Taihu Eddy Flux Mesonet: Results to date and scientific challenges. *Asia-Pacific Economic Cooperation Climate Symposium*, Nanjing, China.
- Zhao L, X Lee, RB Smith, K Oleson. Significant contributions of background climate to urban heat island. *31st American Meteorological Society Conference on Agricultural and Forest Meteorology*, Portland, Oregon.
- Liu S, Y Gao, H Li, S Wang, L Deng, N Hu, W Xiao, X Zhao, Z Xu, X Lee. Temporal and spatial variations of atmospheric CO<sub>2</sub> in Nanjing, China. *31st American Meteorological Society Conference on Agricultural and Forest Meteorology*, Portland, Oregon.
- Xu J, Y Gao, W Wang, W Xiao, S Liu, G Yuan, X Sun, X Lee. Performance evaluation of an integrated eddy covariance system in a cold environment. *31st American Meteorological Society Conference on Agricultural and Forest Meteorology*, Portland, Oregon.
- Schultz N, X Lee. Determining the role of land cover on temperature extremes using MODIS data. *31st American Meteorological Society Conference on Agricultural and Forest Meteorology*, Portland, Oregon.

2013

- Zhao L, X Lee. Contributions of background climate to urban heat island. *American Geophysical Union Fall Meeting*, San Francisco, California.
- Liu S, W Xiao, C Cao, L Deng, C Hu, N Hu, H Li, C Liu, J Shen, S Sun, W Wang, Q Xiao, J Xu, D Yang, M Zhang, X Lee. Lake Taihu eddy flux mesonet for atmospheric and hydrological research. *European Geosciences Union General Assembly*, Vienna, Austria.
- Xiao W, X Lee, X Wen, S Liu, H Li. Validation of the Craig-Gordon isotopic model for lake evaporation. *European Geosciences Union General Assembly*, Vienna, Austria.
- Zhao X, S Yang, W Wang, J Xu, X Lee. Urbanization as a driver of the regional thermal environment in the Yangtze River Delta, China. *European Geosciences Union General Assembly*, Vienna, Austria.

2012

- Xiao W, X Lee, S Liu, Z Hu, W Wang, H Lee, Q Xiao. Measuring CH<sub>4</sub>, CO<sub>2</sub> and H<sub>2</sub>O fluxes over

a lake surface with the gradient-diffusion methods. *American Geophysical Union Fall Meeting*, San Francisco, California.

- Griffis T, X Lee, J Baker, M Russelle, X Zhang, R Venterea, D Millet. Regional scale analysis of nitrous oxide emissions within the US Corn Belt and the potential role of episodic hot spots. *American Geophysical Union Fall Meeting*, San Francisco, California.
- Lee X. A perspective on the WPL theory. *30<sup>th</sup> American Meteorological Society Conference on Agricultural and Forest Meteorology*, Boston, Massachusetts.
- Zhang M, X Lee, G Yu, S Han, J Yan, H Wang, Y Zhang. Effects of deforestation on land surface air temperature in eastern China. *30<sup>th</sup> American Meteorological Society Conference on Agricultural and Forest Meteorology*, Boston, Massachusetts.
- Zhao, L, X Lee. Correcting surface solar radiation modeled by two data assimilation systems against FLUXNET observations. *30<sup>th</sup> American Meteorological Society Conference on Agricultural and Forest Meteorology*, Boston, Massachusetts.
- Zhang X, TJ Griffis, X Lee, M Erickson. Estimating the greenhouse gas budgets of an agriculture-dominated landscape. *30<sup>th</sup> American Meteorological Society Conference on Agricultural and Forest Meteorology*, Boston, Massachusetts.

2011

- Griffis TJ, NM Schultz, X Lee. Investigating the source, transport, and isotope composition of water in the atmosphere. *American Geophysical Union Fall Meeting*, San Francisco, California (**invited**).
- Welp L, X Lee, T Griffis, XF Wen, W Xiao SG Li, X Sun, Z Hu, M val Martin. Deuterium-excess of water vapor. *American Geophysical Union Fall Meeting*, San Francisco, California (**invited**).
- Deng B, X Lee, W Xiao, S Liu, L Zhao, J Jin. Offline test of the CLM-VRLS lake model at Lake Taihu. *American Geophysical Union Fall Meeting*, San Francisco, California.
- Griffis T, N Schultz, X Lee, J Baker. Investigating the source, transport, and isotope fractionation of water vapor in the atmospheric boundary layer. *Conference on the Roles of Stable Isotopes in Water Cycle Research*, Keystone, Colorado.
- Welp L, X Lee, T Griffis, XF Wen, SG Li, X Sun, Z Hu. A meta-analysis of high-frequency d-excess of water vapor measured at six stations. *Conference on the Roles of Stable Isotopes in Water Cycle Research*, Keystone, Colorado.
- Xiao W, X Lee, XF Wen, XM Sun, SC Zhang. Temporal and spatial variabilities of leaf-water <sup>18</sup>O enrichment in wheat and corn. *Conference on the Roles of Stable Isotopes in Water Cycle Research*, Keystone, Colorado.

2010

- Lee X, J Huang, E Patton. A LES study of carbon dioxide and water vapor isotopes in the atmospheric boundary layer. *John C Wyngaard Symposium on Atmospheric Turbulence and Boundary Layers*, State College, Pennsylvania.
- Lee X, J Huang, E Patton. Temporal and spatial variations of carbon dioxide and water vapor isotopes in the atmospheric boundary layer. *International Conference on Stable Isotopes and Biogeochemical Cycles in Terrestrial Ecosystems*, Monte Verità, Switzerland.
- Santos EA, C Wagner-Riddle, X Lee, JS Warland, SE Brown, RM Staebler, PA Bartlett, K Kim. <sup>13</sup>O<sub>2</sub> and <sup>18</sup>O<sub>16O temporal variation near the ground and above a temperate deciduous forest. *American Geophysical Union Fall Meeting*, San Francisco, California.</sub>
- Schultz NM, TJ Griffis, JM Baker, X Lee, M Erickson, X Zhang, W Xiao, N Hu. Isotope

variability in surface water and precipitation in the Upper Midwest, USA. *American Geophysical Union Fall Meeting*, San Francisco, California.

- Sun XM, XF Wen, GR Yu, X Lee. Evapotranspiration partitioning of a winter wheat and summer maize double-cropping system using  $^{18}\text{O}$  isotopic labeling. *American Geophysical Union Fall Meeting*, San Francisco, California.
- Wen XF, XM Sun, SG Li, X Lee. Intercomparison of four commercial analyzers for water vapor isotope measurement. *American Geophysical Union Fall Meeting*, San Francisco, California.
- Xin Z, T Griffis, X Lee, J Baker, M Erikson, J Fassbinder. Top-down constraints on the landscape-scale nitrous oxide budget in the Upper Midwest USA. *American Geophysical Union Fall Meeting*, San Francisco, California.
- Zhang X, X Lee, TJ Griffis, DB Millet, JM Baker, MD Erikson, JC Lin. Evaluating land surface flux of methane and nitrous oxide in an agricultural landscape with tall tower measurements and a trajectory model. *29<sup>th</sup> American Meteorological Society Conference on Agricultural and Forest Meteorology*, Keystone, Colorado.

2009

- Griffis T, X Lee, SD Sargent, JM Baker, K Billmark, N Schultz, M Erickson, X Zhang, J Fassbinder, W Xiao, N Hu. Oxygen isotope composition of evapotranspiration and its relation to  $\text{C}_4$  photosynthetic discrimination. *American Geophysical Union Fall Meeting*, San Francisco, California.
- Kim K, X Lee. Dew water effects on leaf water isotope D and  $^{18}\text{O}$  contents. *American Geophysical Union Fall Meeting*, San Francisco, California.
- Lee X, J Huang, E Patton. A large eddy simulation study of carbon dioxide and water vapor isotopes in the atmospheric boundary layer. *American Geophysical Union Fall Meeting*, San Francisco, California.
- Santos E, C Wagner-Riddle, J Warland, S Brown, K Kim, X Lee, R Staebler. Stable isotope fluxes of  $\text{CO}_2$  and  $\text{H}_2\text{O}$  for a temperate deciduous forest in Canada. *American Geophysical Union Fall Meeting*, San Francisco, California.
- Zhang X, X Lee, X Griffis, J Baker, M Erikson, N Hu, W Xiao. Characterizing  $\text{CH}_4$  and  $\text{N}_2\text{O}$  fluxes from a soybean-corn rotation ecosystem in Minnesota. *American Geophysical Union Fall Meeting*, San Francisco, California.
- Warland J, C Wagner-Riddle, R Staebler, X Lee, P Barrlett, S Brown, K Kim, E Santo, M Chang. The Borden Micrometeorological Experiment 2009 (BMW09): micrometeorology and stable isotopes for carbon cycle studies. *American Geophysical Union Fall Meeting*, San Francisco, California.

2008

- Huang J, X Lee, EG Patton. A modeling study of flux imbalance and the influence of entrainment in the convective boundary layer. *28<sup>th</sup> American Meteorological Society Conference on Agricultural and Forest Meteorology*, Orlando, Florida.
- Kim K, X Lee. Investigation of kinetic fractionation during evaporation using the evaporation flux isotope ratio measured by a tunable diode. *American Geophysical Union Fall Meeting*, San Francisco, California.
- Lee X. Research on carbon dioxide and water vapor isotopes in the terrestrial environment: an update. *Workshop on Human Activities and Ecosystem Changes*, Beijing, China.
- Welp L, X Lee, K Kim. Variability in the hourly deuterium excess of water vapor near the ground. *American Geophysical Union Fall Meeting*, San Francisco, California.

2007

- Billmark, KA, TJ Griffis, X Lee, LR Welp, JM Baker. Temporal dynamics and environmental controls on carbon isotope discrimination at the canopy scale. *American Geophysical Union Fall Meeting*, San Francisco, California.
- Kim K, X Lee, L Welp. Transition of the isotopic composition of leaf water to the isotopic steady state in soybeans and corns. *American Geophysical Union Fall Meeting*, San Francisco, California.
- Lee X. Measurement and interpretation of water vapor isotopic flux. *Annual Ameriflux Meeting*, Boulder, Colorado.
- Lee X, L Welp. TDL water vapor isotope measurements: ambient and flux ratios. *Pre-AGU BASIN Meeting*, San Francisco, California.
- Welp X, X Lee, K Kim, T Griffis, K Billmark, J Baker.  $d^{18}O$  of evapotranspiration and the sites of leaf evaporation in a soybean canopy. *American Geophysical Union Fall Meeting*, San Francisco, California.

2006

- Griffis T, J Baker, X Lee, B Breiter, J Zhang, K Billmark, T Bavin, M Erickson, J Smith, J Corcoran. Investigation of carbon cycle processes within a managed landscape: progress and future research. *Annual Ameriflux Meeting*, Boulder, Colorado.
- Griffis T, S Sargent, B Tanner, J Greene, E Swiatek, J Baker, X Lee. Direct measurement of biosphere-atmosphere isotopic  $CO_2$  exchange using the eddy covariance technique. *American Geophysical Union Fall Meeting*, San Francisco, California.
- Kim K, X Lee. Continuous isotope signal of water balance in a northeastern forest in the United States. *27<sup>th</sup> American Meteorological Society Conference on Agricultural and Forest Meteorology*, San Diego, California.
- Sigler J, X Lee. Gaseous mercury in background forest soil in the northeastern United States. *27<sup>th</sup> American Meteorological Society Conference on Agricultural and Forest Meteorology*, San Diego, California.
- Welp LR, X Lee, TJ Griffis, K Kim, T Bavin, K Billmark, J Baker. Simultaneous diurnal measurements of stable isotopes of water vapor and  $CO_2$  exchange above a soybean ecosystem using high frequency laser spectroscopy. *American Geophysical Union Fall Meeting*, San Francisco, California.
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