

# Chuixiang Yi

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## Education

Ph.D. Atmospheric Science, Nanjing University, China, 1991  
M.S. Theoretical physics, Northeast Normal University, China, 1984  
B.S. Physics, Liaoning Normal University, China, 1982

## Professional Experience

### Spectrum of Teaching Experience:

Institution	Dates	Rank	Department
Queens College of CUNY	2018-present	Professor	School of Earth and Envir. Sciences
Graduate Center of CUNY	2018-present	Professor	Earth and Envir. Sciences
Graduate Center of CUNY	2018-present	Professor	Physics
Queens College of CUNY	2014-2018	Associate Professor	School of Earth and Envir. Sciences
Graduate Center of CUNY	2014-2018	Associate Professor	Earth and Envir. Sciences
Graduate Center of CUNY	2017-2018	Associate Professor	Physics
Stockholm University	2014-2015	Rosby Gust Associate Professor	Meteorology
Queens College of CUNY	2007-2014	Assistant Professor	School of Earth and Envir. Sciences
Graduate Center of CUNY	2007-2014	Assistant Professor	Earth and Envir. Sciences
Beijing Normal University	1992-1996	Associate Professor	Geography
Beijing Normal University	1991-1992	Assistant Professor	Geography
Liaoning Normal University	1985-1988	Lecturer	Physics
Shanzuizi Middle School	1976-1977	Teacher	Physics
Shanzuizi Elementary School	1973-1975	Teacher	Chinese and Math

## Honors and Awards

09/2014 – 08/2015, **Rosby Guest Associate Professor**, Department of Meteorology, Stockholm University, Sweden.

**The Norbert Gerbier-MUMM International Award 2012** was conferred upon Yi, C., D. Ricciuto, R. Li, J. Wolbeck, X. Xu, M. Nilsson, L. Aires, J. D. Albertson, C. Ammann, M. A. Arain, A. C. de Araujo, M. Aubinet, M. Aurela, Z. Barcza, A. Barr, P. Berbigier, J. Beringer, C. Bernhofer, A. T. Black, P. V. Bolstad, F. C. Bosveld, M. S. J. Broadmeadow, N. Buchmann, S. P. Burns, P. Cellier, J.M. Chen, J.Q. Chen, P. Ciais, R. Clement, B. D. Cook, P. S. Curtis, D. B. Dail, E. Dellwik, N. Delpierre, A. R. Desai, S. Dore, D. Dragoni, B. G. Drake, E. Dufrêne, A. Dunn, J. Elbers, W. Eugster, M. Falk, C. Feigenwinter, L. B. Flanagan, T. Foken, J. Frank, J. Fuhrer, D. Gianelle, A. Goldstein, M. Goulden, A. Granier, T. Grünwald, L. Gu, H. Guo, A. Hammerle, S. Han, N. P. Hanan, L. Haszpra, B. Heinesch, C. Helfter, D. Hendriks, L. B. Hutley, A. Ibrom, C. Jacobs, T. Johansson, M. Jongen, G. Katul, G. Kiely, K. Klumpp, A. Knohl, T. Kolb, W. L. Kutsch, P. Lafleur, T. Laurila, R. Leuning, A. Lindroth, H. Liu, B. Loubet, G. Manca, M. Marek, H. A. Margolis, T. A. Martin, W. J. Massman, R. Matamala, G. Matteucci, H. McCaughey, L. Merbold, T. Meyers, M. Migliavacca, F. Miglietta, L. Misson, M. Mölder, J. Moncrieff, R. K. Monson, L. Montagnani, M. Montes-Helu, E. Moors, Ch. Moureaux, M. M. Mukelabai, J. W. Munger, M. Myklebust, Z. Nagy, A. Noormets, W. Oechel, R. Oren, S. G. Pallardy, K. T. Paw U, J. S. Pereira, K. Pilegaard, K. Pintér, C. Pio, G. Pita, T. L. Powell, S. Rambal, J. T. Randerson, C. von Randow, C. Rebmann, J. Rinne, F. Rossi, N. Roulet, R. J. Ryel, J. Sagerfors, N. Saigusa, M. J. Sanz, G.S. Mugnozza, H. P. Schmid, G. Seufert, M. Siqueira, J. F. Soussana, G. Starr, M. A. Sutton, J. Tenhunen, Z. Tuba, J. P. Tuovinen, R. Valentini, C. S. Vogel, J. Wang, S. Wang, W. Wang, L. R. Welp, X. Wen, S. Wharton, M. Wilkinson, C. A. Williams, G. Wohlfahrt, S. Yamamoto, G. Yu, R. Zampedri, B. Zhao, X. Zhao, for [their paper: climate control of terrestrial carbon exchange across biomes and continents, \*Environmental Research Letters\*, 5, doi: 10.1088/1748-9326/5/3/034007, 2010.](#)

CUNY Chancellor's "**Salute to Scholar**" Award, 2010

### ***Recent Research Awards***

PSC-CUNY-ENHC 2017 (PSC-CUNY-ENHC-48-33) P.I.

**US Forest Resilience and Tipping Points.**

QC-ENHC 2017 (QC- Research-Enhancement-Award-2017) P.I.

**Modeling US Tree Mortality from Regional to Continental Scales.**

PSC-CUNY-CIRG 2016 (PSC-CUNY-CIRG-22) Co -P.I.

**New concepts for observing and understanding changing patterns of water limitation on ecosystem productivity.**

PSC-CUNY-ENHC – 2015 (PSC-CUNY-ENHC-46-37) P.I.

**Impacts of recirculation on land-atmosphere exchanges.**

PSC-CUNY-ENHC 2014 (PSC-CUNY-ENHC-44) (66827-00 44) P.I.

**Quantifying how climate extremes alter U.S. terrestrial carbon-storage capacity: a pilot study for a NSF proposal.**

QC-ENHC 2013 (QC- Research-Enhancement-Award-2013) Co-P.I.

**Queens College Research at Black Rock Forest.**

PSC-CUNY-ENHC 2012 (PSC-CUNY ENHC-42-64) P.I.

**A pilot study for NSF proposal with a title: 3D-modeling over complex terrain.**

QC GRTI 2011, **Instrumentation Request for Eddy Flux Research.** Co-P.I.

QC GRTI, 2010 School of Earth and Environmental Sciences, **Soil, Air and Water Sampling,**  
Co- P.I.

NSF 2010-2013 (NSF-DEB-0949637) P.I.

**Ecosystem Science, Climate control of terrestrial ecosystem CO2 sequestration**

NSF 2010-2015 (NSF-ATM-0930015) P.I.

**Instability analysis of terrain-induced canopy flows.**

PSC-CUNY 2009 (PSC-CUNY 62787-00 40) P.I.

**A numerical study of advection fluxes over a forested hill under stable conditions.**

PSC-CUNY 2008 (PSC-CUNY 60020-38 39) P.I.

**Instability analysis on canopy turbulent flow over a complex terrain.**

### ***Publications***

**BOOKS:**

Yi, C., *Nonlinear Sciences and Their Applications to the Geosciences*, Meteorological Press, Beijing, 1995. (In Chinese)

Yi, C, *Climate Change and Climate Models*, Ocean Publishing House, Beijing, 1993. (In Chinese)

#### REFEREED PAPERS:

refereed journals. \*indicates corresponding author; (a) Ph.D. student; (b) Post-doc; (c) Undergraduate student; and (d) Master students

#### 2020

Gao, S., T. Zhou\*, C. Yi, P. Shi, W. Fang<sup>(b)</sup>, R. Liu, E. Liang, J. J. Camarero, Asymmetric impacts of dryness and wetness on tree growth and forest coverage, *Agric. Forest Meteorol.*, 288–289, 2020, 107980, <https://doi.org/10.1016/j.agrformet.2020.107980>.

Li, Z., Z. Zeng, D. Tian, J. Wang, Z. Fu, B. Wang, Z. Tang, W. Chen, H. Y H Chen, C. Wang, C. Yi, and S. Niu, 2020 The stoichiometry of soil microbial biomass determines metabolic quotient of nitrogen mineralization, *Environ. Res. Lett.* 15 034005, <https://iopscience.iop.org/article/10.1088/1748-9326/ab6a26>.

Ramadhin<sup>(a)</sup>, C., and C. Yi, 2020: ESD Ideas: Why are glaciations slower than deglaciations? *Earth Syst. Dynam.*, 11, 13–16, 2020, <https://doi.org/10.5194/esd-11-13-2020>.

#### 2019

Xu<sup>(a)</sup>, P., W. Fang<sup>(b)</sup>, T. Zhou\*, X. Zhao, H. Luo, G. Hendrey, and C. Yi, Spatial upscaling of tree-ring-based forest response to drought with satellite data, *Remote Sens.* 2019, 11(20), 2344; <https://doi.org/10.3390/rs11202344>.

Ma, Y., H. Liu, Z. Liu, C. Yi, B. Lamb, 2019, Influence of forest-edge flows on scalar transport with different vertical distributions of foliage and scalar sources, *Boundary-Layer Meteorology*, 1-19, <https://doi.org/10.1007/s10546-019-00475-y>, 2019.

Meng, C., D. Tian, H. Zeng, Z. Li, C. Yi, and S. Niu, 2019: Soil acidification impacts on belowground processes: a meta-analysis, *Environ. Res. Lett.* <https://doi.org/10.1088/1748-9326/ab239c>.

Burns, S.P., J. Sun, D.H. Lenschow, S.P. Oncley, B.B. Stephens, C. Yi, D.E. Anderson, J. Hu, and R.K. Monson, 2019: Correction to: Atmospheric stability effects on wind fields and scalar mixing within and just above a subalpine forest in sloping terrain. *Boundary-Layer Meteorology*, doi:10.1007/s10546-019-00436-5, 2019.

#### 2018

Gao<sup>(a)</sup>, S., R. Liu, T. Zhou\*, W. Fang<sup>(b)</sup>, C. Yi, R. Lu, X. Zhao, H. Luo, Dynamic responses of tree-ring growth to multiple dimensions of drought, *Global Change Biology*, DOI:10.1111/gcb.14367 (2018).

Xu<sup>(a)</sup>, P., T. Zhou\*, C. Yi\*, W. Fang<sup>(b)</sup>, G. Hendrey, and X. Zhao, Forest drought resistance distinguished by canopy height, *Environ. Res. Lett.* 13 (2018) 075003 (2018).

Xu<sup>(a)</sup>, P., T. Zhou\*, C. Yi, H. Luo, X. Zhao, W. Fang<sup>(b)</sup>, S. Gao, X. Liu, Impacts of Water Stress on Forest Recovery and Its Interaction with Canopy Height, *Int. J. Environ. Res. Public Health*, 15, 1257; doi:10.3390/ijerph15061257 (2018).

Ramadhin<sup>(a)</sup>, C., and C. Yi, 2019: Why are glacial inceptions slower than terminations? *Earth Syst. Dynam. Discuss.*, <https://doi.org/10.5194/esd-2019-10>.

Luo, H., T. Zhou\*, C. Yi, P. Xu, X. Zhao, S. Gao, X. Liu, Stock volume dependency of forest drought responses in Yunnan, China, *Forests*, 9(4), 209; doi:10.3390/f9040209 (2018).

Yi\*, C., G. Mu<sup>(d)</sup>, G. Hendrey, S. M. Vicente-Serrano, W. Fang<sup>(b)</sup>, T. Zhou, S. Gao<sup>(a)</sup>, P. Xu<sup>(a)</sup>. Bifurcated Response of a Regional Forest to Drought, *Expert Opin Environ Biol*, 7:2, 10.4172/2325-9655.1000153 (2018).

#### 2017

Andujar, E., N. Y. Krakauer\*, C. Yi, F. Kogan, Ecosystem Drought Response Timescales from Thermal Emission versus Shortwave Remote Sensing, *Advances in Meteorology*, Volume 2017, Article ID 8434020, 10 pages <https://doi.org/10.1155/2017/8434020>, (2017).

Kutter<sup>(a)</sup>, E., C. Yi\*, G. Hendrey, H. Liu, T. Eaton, W. Ni-Meister, Recirculation over Complex Terrain, *Journal of Geophysical Research*, 122, doi:10.1002/2016JD026409, (2017).

Xu<sup>(a)</sup>, X., C. Yi\*, L. Montagnani, E. Kutter<sup>(a)</sup>, Numerical Study of the interplay between thermo-topographic slope flow and synoptic flow on canopy transport processes, *Agric. Forest Meteorol.*, doi:10.1016/j.agrformet.2017.03.004. (2017).

Wei<sup>(a)</sup>, S., C. Yi\*, W. Fang<sup>(b)</sup>, G. Hendrey, A global Study of GPP focusing on Light Use Efficiency in a Random Forest Regression Model, *Ecosphere* 8(5):e01724. 10.1002/ecs2.1724 (2017).

#### 2015

Xu<sup>(a)</sup>, X., C. Yi\*, and E. Kutter<sup>(a)</sup>, Stably stratified canopy flow in complex terrain, *Atmos. Chem. Phys.*, 15, 7457-7470, doi:10.5194/acp-15-7457-2015, (2015).

Yi\*, C., E. Pendall & P. Ciais, Focus on extreme events and the carbon cycle. *Environ. Res. Lett.* 10 070201 doi:10.1088/1748-9326/10/7/070201 (2015). *Citations (6); JIF (4.134)*.

Huang<sup>(a)</sup>, K., C. Yi, D. Wu, T. Zhou, X. Zhao, W. J. Blanford, S. Wei<sup>(a)</sup>, H. Wu, D. Ling, and Z. Li, Tipping point of a conifer forest ecosystem under severe drought, *Environ. Res. Lett.* 10 024011 doi:10.1088/1748-9326/10/2/024011 (2015).

#### 2014

Yi\*, C., S. Wei<sup>(a)</sup> & G. Hendrey, Warming climate extends dryness-controlled areas of terrestrial carbon sequestration. *Sci. Rep.* 4, 5472; DOI:10.1038/srep05472 (2014).

Wei<sup>(a)</sup>, S., C. Yi\*, G. Hendrey, T. Eaton, G. Rustic<sup>(a)</sup>, S. Wang, H. Liu, N. Y. Krakauer, W. Wang, A. R. Desai, L. Montagnani, K. T. Paw U, M. Falk, A. Black, C. Bernhofer, T. Grünwald, T. Laurila, A. Cescatti, E. Moors, R. Bracho, and R. Valentini, Data-based perfect-deficit approach to understanding climate extremes and forest carbon assimilation capacity, *Environ. Res. Lett.* 9 065002 doi:10.1088/1748-9326/9/6/065002. (2014)

#### 2013

Yi\*, C., D. Ricciuto, G. Hendrey (2013) Biome Q10 and dryness, *The American Journal of Climate Change*. 2, 292-295. doi: 10.4236/ajcc.2013.24029, 2013.

## 2012

**Xu<sup>(a)</sup>, X., C. Yi\*** (2012) the influence of geometry on recirculation and CO<sub>2</sub> transport over forested hills, *Meteorology and Atmospheric Physics*, DOI: 10.1007/s00703-012-0224-6.

**Yi\*, C., G. Rustic<sup>(a)</sup>, X. Xu<sup>(a)</sup>, J. Wang<sup>(b)</sup>, A. Dookies<sup>(c)</sup>, S. Wei<sup>(a)</sup>**, G. Hendrey, D. M. Ricciuto, T. Meyers, Z. Nagy, K. Pinter (2012) Climate extremes and grassland potential productivity, *Environmental Research Letters*, 7, 035703 (6pp) doi:10.1088/1748-9326/7/3/035703.

Wang, W. and **C. Yi** (2012) A new nonlinear analytical model for canopy flow over a forested hill, *Theoretical and Applied Climatology*, DOI 10.1007/s00704-012-0599-9.

**Chen<sup>(b)</sup>, H., and C. Yi\*** (2012) Optimal control of katabatic flows within canopies, *Quarterly Journal of the Royal Meteorological Society*, DOI:10.1002/qj.1904.

## 2011

Wang\*, S., J. Liu, C. Zhang, **C. Yi**, W. Wu (2011) Effects of Afforestation on Soil Carbon Turnover in China's Subtropical Region, *J. Geogr. Sci.*, 21(1), 118-134.

## 2010

Burns\*, S.P., J. Sun, D.H. Lenschow, S.P. Oncley, B.B. Stephens, **C. Yi**, D.E. Anderson, J. Hu, and R.K. Monson (2010) Atmospheric stability effects on wind fields and scalar mixing within and just above a subalpine forest in sloping terrain. *Boundary-Layer Meteorology*, doi:10.1007/s10546-010-9560-6 , 231-262.

**Yi\*, C., D. Ricciuto, R. Li, J. Wolbeck<sup>(a)</sup>, X. Xu<sup>(a)</sup>, M. Nilsson, L. Aires, J. D. Albertson, C. Ammann, M. A. Arain, A. C. de Araujo, M. Aubinet, M. Aurela, Z. Barcza, A. Barr, P. Berbigier, J. Beringer, C. Bernhofer, A. T. Black, P. V. Bolstad, F. C. Bosveld, M. S. J. Broadmeadow, N. Buchmann, S. P. Burns, P. Cellier, J.M. Chen, J.Q. Chen, P. Ciais, R. Clement, B. D. Cook, P. S. Curtis, D. B. Dail, E. Dellwik, N. Delpierre, A. R. Desai, S. Dore, D. Dragoni, B. G. Drake, E. Dufrêne, A. Dunn, J. Elbers, W. Eugster, M. Falk, C. Feigenwinter, L. B. Flanagan, T. Foken, J. Frank, J. Fuhrer, D. Gianelle, A. Goldstein, M. Goulden, A. Granier, T. Grünwald, L. Gu, H. Guo, A. Hammerle, S. Han, N. P. Hanan, L. Haszpra, B. Heinesch, C. Helfter, D. Hendriks, L. B. Hutley, A. Ibrom, C. Jacobs, T. Johansson, M. Jongen, G. Katul, G. Kiely, K. Klumpp, A. Knohl, T. Kolb, W. L. Kutsch, P. Lafleur, T. Laurila, R. Leuning, A. Lindroth, H. Liu, B. Loubet, G. Manca, M. Marek, H. A. Margolis, T. A. Martin, W. J. Massman, R. Matamala, G. Matteucci, H. McCaughey, L. Merbold, T. Meyers, M. Migliavacca, F. Miglietta, L. Misson, M. Mölder, J. Moncrieff, R. K. Monson, L. Montagnani, M. Montes-Helu, E. Moors, Ch. Moureaux, M. M. Mukelabai, J. W. Munger, M. Myklebust, Z. Nagy, A. Noormets, W. Oechel, R. Oren, S. G. Pallardy, K. T. Paw U, J. S. Pereira, K. Pilegaard, K. Pintér, C. Pio, G. Pita, T. L. Powell, S. Rambal, J. T. Randerson, C. von Randow, C. Rebmann, J. Rinne, F. Rossi, N. Roulet, R. J. Ryel, J. Sagerfors, N. Saigusa, M. J. Sanz, G.S. Mugnozza, H. P. Schmid, G. Seufert, M. Siqueira, J. F. Soussana, G. Starr, M. A. Sutton, J. Tenhunen, Z. Tuba, J. P. Tuovinen, R. Valentini, C. S. Vogel, J. Wang, S. Wang, W. Wang, L. R. Welp, X. Wen, S. Wharton, M. Wilkinson, C. A. Williams, G. Wohlfahrt, S. Yamamoto, G. Yu, R. Zampedri, B. Zhao, X. Zhao**, Climate control of terrestrial carbon exchange across biomes and

continents, *Environmental Research Letters*, 5 (2010) doi: 10.1088/1748-9326/5/3/034007.

#### **International Award:**

This paper was awarded the World Meteorological Organization (WMO) 2012 Norbert Gerbier-MUMM International Medal and Prize (€7,600) on 2 July 2012 at the International Award Ceremony in Geneva, Switzerland. [More](#)

#### **2009**

Eaton\*, T. T., **C. Yi** (2009) Hydroperiod and hydraulic loading for treatment potential in urban tidal wetlands, *Hydrol. Earth Syst. Sci. Discuss.*, 6, 589–625.

**Yi\***, C. (2009) Instability analysis of terrain-induced canopy flows, *Journal of the Atmospheric Sciences*, 66, 2134-2142, doi:10.1175/2009JAS3005.1.

#### **2008**

**Yi\***, C. (2008) Momentum transfer within canopies, *Journal of Applied Meteorology and Climatology*, 47, 262-275, doi:10.1175/2007JAMC1667.1.

**Yi**, C., D. E. Anderson, A. A. Turnipseed, S. P. Burns, and J. Sparks, D. Stannard, and K. R. Monson\* (**2008**) The contribution of advective fluxes to net ecosystem CO<sub>2</sub> exchange in a high-elevation, subalpine forest ecosystem, Invited Feature in *Ecological Applications*, 18 (6), 1379-1390.

Zhou\*, T. , **C. Yi**, P. S. Bakwin, and L. Zhu (2008) Links between global CO<sub>2</sub> variability and climate anomalies of biomes, *Sciences in China*, Ser D-Earth Sci., 51, 740-747.

Denning\*, A.S., N. Zhang, **C. Yi**, M. Branson, K. Davis, J. Kleist, and P. Bakwin (2008) Evaluation of modeled atmospheric boundary layer depth at the WLEF Tower, *Agricultural and Forest Meteorology*, 148, 206-215.

Wang\* W., K J. Davis, B. D. Cook, **C. Yi**, M. P. Butler, D. M. Ricciuto, and P. S. Bakwin, Estimating daytime CO<sub>2</sub> fluxes over a mixed forest from tall tower mixing ratio measurements, *Journal of Geophysical Research*, 112, D10308, doi:10.1029/2006JD007770, 2007.

Wang\* W., K J. Davis, **C. Yi**, E. G. Patton, M. P. Butler, D. M. Ricciuto, and P. S. Bakwin, A note on the top-down and bottom-up gradient functions over a forested site, *Boundary-Layer Meteorology*, 305-314 2007.

**Yi\***, C., R. K. Monson, Z. Zhai, D. E. Anderson, B. Lamb, G. Allwine, A. A. Turnipseed, and S. P. Burns, Modeling and measuring the nocturnal drainage flow in a high-elevation, subalpine forest with complex terrain, *Journal of Geographical Research*, 110, D22303, doi:10.1029/2005JD006282, 2005.

**Yi\***, C., R. Li, P. S. Bakwin, A. Desai, D. M. Ricciuto, S. P. Burns, A. A. Turnipseed, S. C. Wofsy, J. W. Munger, K. Wilson, and R. K. Monson, A nonparametric method for separating photosynthesis and respiration components in CO<sub>2</sub> flux measurements, *Geophysical Research Letters*, 31, L17107, doi:10.1029/2004GL020490, 2004b.

- Yi\*, C., K. J. Davis, P. S. Bakwin, A.S. Denning, N. Zhang, A. Desai, J. C. Lin, and C. Gerbig, The observed covariance between ecosystem carbon exchange and atmospheric boundary layer dynamics at a site in northern Wisconsin, *Journal of Geophysical Research*, 109, D08302, doi:10.1029/2003JD004164, 2004a.
- Yi\*, C., K. J. Davis, B. W. Berger, P. S. Bakwin, Long-term observations of the dynamics of the continental planetary boundary layer, *Journal of the Atmospheric Science*, 58, 1288-1299, 2001b.
- Yi\*, C., P. Gong, M. Xu , and Y. Qi , The effects of buffer and temperature feedback on the oceanic uptake of CO<sub>2</sub>, *Geophysical Research Letter*, 28, 751-754, 2001a.
- Yi\*, C., K. J. Davis, P. S. Bakwin, B. W. Berger, and L. Marr, The influence of advection on measurements of the net ecosystem-atmosphere exchange of CO<sub>2</sub> from a very tall tower, *Journal of Geophysical Research*, 105, 9991-9999, 2000.
- Wang\*, W., K.J. Davis, B.D. Cook, P. Bakwin, C. Yi, D. Ricciuto, and M. Butler, Surface layer CO<sub>2</sub> budget and advective contributions to measurements of net ecosystem-atmosphere exchange of CO<sub>2</sub>, *Agriculture and Forest Meteorology*, 2005, 135, 202-214.
- Bakwin\*, P.S., K.J. Davis, C. Yi, S.C. Wofsy, J.W. Munger, L. Haszpra and Z. Barcza, Regional carbon dioxide fluxes from mixing ratio data, *Tellus* 56B, 301-311, 2004.
- Cook\*, B.D., K.J. Davis, W. Wang, C. Yi, B.W. Berger, P.V. Bolstad, P. Bakwin, J.G. Isebrands, and R.M. Teclaw, Annual pattern of carbon exchange and evapotranspiration of an upland hardwood forest in northern Wisconsin, *Agriculture and Forest Meteorology*, 126, 271-295, 2004.
- Hurwitz\*, M.D., D.M. Ricciuto, P.S. Bakwin, K.J. Davis, W. Wang, C. Yi, and M.P. Butler, Transport of Carbon Dioxide in the Presence of Storm Systems over a Northern Wisconsin Forest, *Journal of the Atmospheric Sciences*, 61, 607-618, 2004.
- Werner\*, C., K.J. Davis, P. Bakwin, C. Yi, D. Hurst, and L. Lock, Interannual variability of methane exchange over a temperate-boreal lowland and wetland forest, *Global Change Biology*, 9, 1251-1261, 2003.
- Davis\*, K.J., P.S. Bakwin, C. Yi, B.W. Berger, C. Zhao, R.M. Teclaw and J.G. Isebrands, Long-term carbon dioxide fluxes from a very tall tower in a northern forest: Annual cycle of CO<sub>2</sub> exchange, *Global Change Biology*, 9, 1278-1293, 2003.
- Berger\*, B. W., K. J. Davis, C. Yi, P. S. Bakwin, and C. Zhao, Long-term carbon dioxide fluxes from a very tall tower in a northern forest: Part I. Flux measurement methodology, *Journal of Atmospheric and Oceanic Technology* , 18, 529-542, 2001.

#### Refereed Chinese Journals with English abstracts

- Zhou\* T., C. Yi, P. Shi, Relationship between NDVI and climatic factors under different drought

- conditions, *Acta Geographica Sinica*, 58, 512-518, 2003. (In Chinese)
- Zhou\* T., C. Yi, P. Shi, and J. Luo, Research on the feedback mechanism between terrestrial carbon cycle and temperature, *Geographical Research*, 21, 53-59, 2002. (In Chinese)
- Yi\*, C., K. Liu, and T. Zhou, Research on a formula of rainfall interception by vegetation, *Journal of Soil Erosion and Soil and Water Conservation*, 2, 77-79, 1996a. (In Chinese)
- Yi\*, C., K. Liu, and T. Zhou, A model for calculating soil moisture fields in the monsoon region of the eastern part of China, *Journal of Soil Erosion and Soil and Water Conservation*, 2, 80-85, 1996b. (In Chinese)
- Yi\*, C., K. Liu, and T. Li, Research on relations of soil zonal distributions with climate in the monsoon region of the eastern part of China, *Acta Pedologica Sinica*, 32, 385-390, 1996c. (In Chinese)
- Yi\*, C. and T. Zhou, On zonal relation of effective atmospheric emissivity with water vapor and carbon dioxide, *Journal of Beijing Normal University*, Natural Science Ed., 32, 278-280, 1996d. (In Chinese)
- Yi\*, C., On land surface dynamics, *Chinese Journal of Applied Ecology*, 6, 212-219, 1995a. (In Chinese)
- Yi\*, C., Approach on applying the nonlinear theories to formulate a synthetical theory of environment and ecology, *Advance in Earth Science*, 10, 164-168, 1995b. (In Chinese)
- Yi\*, C., A catastrophe model of debris flow, *Journal of Nature Disasters*, 4, 53-57, 1995c. (In Chinese)
- Yi\*, C., P. Shi, On the natural disaster model, *Journal of Nature Disasters*, 4, 6-8, 1995d. (In Chinese)
- Gong\*, D., C. Yi, Fractal analysis of climatic proxy, *Journal of Beijing Normal University*, Natural Science Ed., 31, 400-403, 1995e. (In Chinese)
- Yi\*, C., and P. Shi, Entropy Production and Natural Hazards, *Journal of Beijing Normal University*, Natural Science Ed., 30, 276-280, 1994b. (In Chinese)
- Yi\*, C. and R. Wu, A Self-Organization Climate Model, *Scientia Atmospherica Sinica*, 18, 129-140, 1994a. (In Chinese)
- Yi\*, C., On earth's surface dynamics I: A land surface system, *Journal of Beijing Normal University*, Natural Science Ed., 30, 511-515, 1994. (In Chinese)
- Yi\*, C., On earth's surface dynamics II: Governing equations, *Journal of Beijing Normal University*, Natural Science Ed., 30, 516-524, 1994. (In Chinese)



Yi\*, C., Entropy in the Atmospheric System, *Scientia Atmospheric Sinica*, 18, 367-372, 1989.  
(In Chinese)

**CONFERENCE PROCEEDINGS, PRESENTATIONS ( \* indicates invited talk)**

Yi, C., P. Xu<sup>a</sup>, Wei Fang<sup>b</sup>, Tao Zhou, George Hendrey (**Talk**), TERENO International Conference 2018: Conceptual framework of building linkages between tree-ring records, remote sensing images, and eddy-flux measurements: for understanding forest resilience to warming climate and predicting forest fate in next 100 years, Berlin, Germany, October 8-12, 2018.

Yi, C., G. Hendrey, G. Mu<sup>(d)</sup>, S. Gao<sup>(a)</sup>, W. Fang<sup>(b)</sup> (**Talk**), Potential links between tree-ring data and eddy-fluxes measurements, CGU-CSAFM National Meeting, May 28-31, Vancouver, Canada, 2017.

Yi, C., G. Mu<sup>a</sup>, G. Hendrey, S. M. Vicente-Serrano (**Talk**), Fall meeting of the American Geophysical Union, December 12-17, San Francisco, California, 2016.

Fang<sup>b</sup>, W., S. Wei<sup>a</sup>, C. Yi, G. Hendrey, A Global Study of GPP focusing on Light Use Efficiency in a Random Forest Regression Model (**Poster**), Fall meeting of the American Geophysical Union, December 12-17, San Francisco, California, 2016.

Yi, C., G. Mu<sup>a</sup>, K. Huang, G. Hendrey, Drought-based tipping point for forest collapse with climate warming (**Talk**), Presentation at 32nd AMS Conference on Agricultural and Forest Meteorology, Salt Lake City, UT, USA, June 20 – 24, 2016.

Kutter<sup>a</sup>, E. C. Yi, G. R. Hendrey, H. Liu, T. T. Eaton, and W. Ni-Meister, Recirculation on a Forested Hillside (talk), Presentation at 32nd AMS Conference on Agricultural and Forest Meteorology, Salt Lake City, UT, USA, June 20 – 24, 2016.

Yi, C., G. Mu<sup>a</sup>, K. Huang, G. Hendrey, Dendrochronology indicates a dryness tipping point for increased regional tree mortality (Talk), The TRACE 2016-Tree Rings in Archaeology, Climatology and Ecology, 11-15 May, Białowieża Forest, eastern Poland, 2016.

Ramadhin<sup>a</sup>, C., C. Yi, Approaching the Edge of Abrupt Climate Change, (**Poster**), *Fall meeting of the American Geophysical Union*, December 14-18, San Francisco, California, 2015.

Yi, C., X. Xu, J. Nycander, M. Nilsson, W. J. Riley, Tipping points of terrestrial biome carbon storage (**Talk**), *Fall meeting of the American Geophysical Union*, December 14-18, San Francisco, California, 2015.

Yi, C., X. Xu, J. Nycander, M. Nilsson, W. J. Riley, What is the most important factor of controlling the carbon forests hold? (**Talk**), *BIPM Workshop on Global to Urban Scale Carbon Measurements*, BIPM, Sèvres France, June 30 – July 1, 2015.

Yi, C., K. Jensen<sup>a</sup>, L. Barrie, J. Nycander, What is the best climate driver on the greenness of the MENA region? (**Talk**), *the EWACC2015-Building Bridges Conference (Energy, Water, and Climate Change in Mediterranean – Building Bridges between Europe, the Middle East and North Africa)*, The Cyprus Institute, Nicosia, Cyprus, June 15-17, 2015.

- Yi, C., K. Jensen<sup>a</sup>, S. Wei<sup>a</sup>, G. Hendrey, Decreased water availability over an increasing area of the Southern Hemisphere is limiting NPP as indicated by LAI. The 11th meeting of the International Conference on Southern Hemisphere Meteorology and Oceanography, Santiago, Chile, October 5 – October 9, 2015.
- Yi, C., X. Xu, J. Nycander, M. Nilsson, W. J. Riley, Equilibrium responses of terrestrial carbon storage to increasing of atmospheric CO<sub>2</sub> (**Talk**), *7th International Congress of European Society for Soil Conservation (ESSC)*, Moscow, Russian Federation, May 18-22, 2015.
- Huang<sup>a</sup>, K., C. Yi, D. Wu, T. Zhou, X. Zhao, W. J. Blanford, S. Wei<sup>a</sup>, H. Wu, D. Ling, and Z. Li, Tipping point of a conifer forest ecosystem under severe drought (**poster**), *Fall meeting of the American Geophysical Union*, December 15-19, San Francisco, California, 2014.
- Yi, C., X. Xu, Theory of climate control on tree Dynamics (**poster**), *Fall meeting of the American Geophysical Union*, December 15-19, San Francisco, California, 2014.
- Yi, C., S. Wei<sup>a</sup>, K. Jensen<sup>a</sup>, G. Hendrey, Is the dry zone of the land shifting poleward? (**talk**), TERENO International Conference 2014: from observation to prediction in terrestrial systems, Bonn University, Bonn, Germany, September 29-October 2, 2014.
- Yi, C., S. Wei<sup>a</sup>, K. Jensen<sup>a</sup>, G. Hendrey, Warm part of the land is drying and expanding and CO<sub>2</sub> absorption is reducing (**poster**) in workshop: Advancing the science of gas exchange between fresh waters and the atmosphere, Hyytiälä Forestry Field Station, Helsinki, Finland, September 16-19, 2014.
- Yi, C., E. Kutter<sup>a</sup>, X. Xu<sup>a</sup>, G. Hendrey, T. T. Eaton, H. Liu, and W. Wang, Modeling and measuring turbulent recirculation bubbles over complex terrain: mixing mechanisms for forest-atmosphere exchanges (**talk**), *21st Symposium on Boundary Layers and Turbulence*, Leeds, United Kingdom, June 9 - 13, 2014.
- Kutter<sup>a</sup>, E. C. Yi, G. R. Hendrey, H. Liu, T. T. Eaton, and W. Ni-Meister, Impacts of Recirculation on Biosphere-Atmosphere Interactions over Complex Terrain (**talk**), Presentation at *31th Conference on Agricultural and Forest Meteorology*, Portland, OR, USA, May 12 – 15, 2014.
- Yi, C., S. Wei<sup>a</sup>, K. Jensen<sup>a</sup>, G. Hendrey, Global warming, land drying and terrestrial carbon sinks weakening (**talk**), Presentation at *31th Conference on Agricultural and Forest Meteorology*, Portland, OR, USA, May 12 – 15, 2014.
- Xu<sup>a</sup>, X., C. Yi, Three-dimensional modeling of canopy flow in complex terrain (**poster**), *Fall meeting of the American Geophysical Union*, December 9-13, San Francisco, California, 2013.
- Kutter<sup>a</sup>, E., C. Yi, G. Hendrey, H. Liu, T. Eaton, W. Ni-Meister, Recirculation bubbles measured in Black Rock Forest in New York (**poster**), *Fall meeting of the American Geophysical Union*, December 9-13, San Francisco, California, 2013.
- Yi, C., K. Jensen<sup>a</sup>, Climate drivers of leaf area index (LAI) deficits across the coterminous US (**Talk**), *Fall meeting of the American Geophysical Union*, December 9-13, San Francisco,

California, 2013.

**Yi, C.**, G. Rustic<sup>a</sup>, S. Wei<sup>a</sup>, A. Dookie<sup>c</sup>, G. Hendrey, D. Ricciuto, Ecological consequences of climate extremes: A perfect-deficit approach, *Fall meeting of the American Geophysical Union*, December 3-7, San Francisco, California, 2012.

Wei<sup>a</sup>, S., **C. Yi**, G. Hendrey, T. Eaton, H. Liu, G. Rustic<sup>a</sup>, N. Krakauer, Climate extremes and forest carbon sequestration capacities (**poster**), *Fall meeting of the American Geophysical Union*, December 9-13, San Francisco, California, 2013.

**Yi, C.**, X. Xu<sup>a</sup>, H. Chen<sup>b</sup>, Katabatic flows, advection and CO<sub>2</sub> transport over complex terrain, Presentation at **30th Conference on Agricultural and Forest Meteorology**, Boston, MA, USA, May 29 – June 1, 2012.

Xu<sup>a</sup>, X. **C. Yi**, Mechanistic analysis of thermo-topographic flows in forested terrain, Presentation at **30th Conference on Agricultural and Forest Meteorology**, Boston, MA, USA, May 29 – June 1, 2012.

Wei<sup>a</sup>, S., **C. Yi**, Climate control of photosynthetic parameters across biomes, **Fall meeting of the American Geophysical Union**, December 5-9, San Francisco, California, 2011.

Xu<sup>a</sup>, X., **C. Yi**, Airflow and CO<sub>2</sub> transport over double forested hills, **Fall meeting of the American Geophysical Union**, December 5-9, San Francisco, California, 2011.

**Yi, C.**, X. Xu<sup>a</sup>, New microstructures of stably stratified subcanopy flows over complex terrain, **Fall meeting of the American Geophysical Union**, December 5-9, San Francisco, California, 2011.

Rustic<sup>a</sup>, G., **C. Yi**, X. Xu<sup>a</sup>, J. Wang<sup>b</sup>, A. Dookie<sup>c</sup>, Canopy Photosynthetic Capacity Signature of Extreme Events, **Fall meeting of the American Geophysical Union**, December 5-9, San Francisco, California, 2011.

Hendrey, G., D. Ricciuto, **C. Yi**, The temperature sensitivity of biome respiration and dryness, **Fall meeting of the American Geophysical Union**, December 5-9, San Francisco, California, 2011.

**Yi, C.**, H. Chen<sup>b</sup>, Cooperative control of katabatic flows within canopies with terrain slope, canopy structure, and thermal velocity, In: , European Geosciences Union General Assembly 2011. *European Geosciences Union General Assembly 2011*, Vienna, Austria. April 3-8, 2011.

**Yi, C.**, D. Ricciuto, and 150 others, Climate controls of terrestrial carbon sequestration, **Fall meeting of the American Geophysical Union**, December 13-17, San Francisco, California, 2010.

**Yi, C.**, W. Wang, A nonlinear analytical analysis of terrain-induced canopy flows, Presentation at **19th Symposium on Boundary Layers and Turbulence and 29th Conference on Agricultural and Forest Meteorology**, Keystone, CO, USA, August 1-6, 2010.

- Yi, C., D. Ricciuto, R. Li, J. Wolbeck<sup>a</sup>, X. Xu<sup>a</sup> et al. (158 co-authors), Climate Control of Terrestrial Carbon Sequestration, ***AMERIFLUX Annual Team Meeting***, Washington D. C., November 21-23, 2009.
- Wolbeck<sup>a</sup>, J., G. Hendrey, C. Yi, A New Baby AmeriFlux site (Black Rock Forest) Born to Study Complex Terrain, ***AMERIFLUX Annual Team Meeting***, Washington D. C., November 21-23, 2009.
- Xu<sup>a</sup>, X., C. Yi, Complex canopy flow and advection model development, ***AMERIFLUX Annual Team Meeting***, Washington D. C., November 21-23, 2009.
- Luo<sup>a</sup>, Z., Y. Li, C. Yi, Analytical Solution for Cold-air-drainage flow On Sloping Forest, 2<sup>nd</sup> International Countermeasures of Urban Heat Island, Berkeley, USA, Sep21-23, 2009.
- Monson, R. K A. A. Turnipseed, J. Sun, D. E. Anderson, C. Yi, S. P. Burns, and B. Lamb, Measurement of Landscape-scale Fluxes in the Complex Terrain of a Rocky Mountain Subalpine Forest, Fall meeting of the American Geophysical Union, December 10-14, San Francisco, California, 2007.
- Yi, C., Instability analysis on drainage flow over a complex terrain. Fall meeting of the American Geophysical Union, December 10-14, San Francisco, California, 2007.
- Yi, C., R. K. Monson, Z. Zhai, D. E. Anderson, B. Lamb, A. A. Turnipseed, and S. P. Burns, Modelling canopy turbulent flow over complex terrain, Presentation at 17th Symposium on Boundary Layers and Turbulence and 27th Conference on Agricultural and Forest Meteorology, San Diego, CA, USA, May 21-25, 2006.
- Yi, C., R. K. Monson, Z. Zhai, D. E. Anderson, B. Lamb, A. A. Turnipseed, and S. P. Burns, Advective flows and canopy turbulence caused by topography and canopy structure, ***Integrated Land Ecosystem—Atmosphere Processes Study (iLEAPS) Specialist Workshop on Flux Measurements in Difficult Conditions***, 26-28 January 2006, NCAR Center Green Campus, Boulder, Colorado, USA.
- Yi, C., R. K. Monson, D. E. Anderson, A. A. Turnipseed, and S. P. Burns, Comparison between aerodynamic and biological corrections to six-year cumulative NEE at the Niwot Ridge Ameriflux site, ***Integrated Land Ecosystem—Atmosphere Processes Study (iLEAPS) Specialist Workshop on Flux Measurements in Difficult Conditions***, 26-28 January 2006, NCAR Center Green Campus, Boulder, Colorado, USA.
- Anderson, D. E., C. Yi, R. K. Monson, A. A. Turnipseed, S. P. Burns, and B. Lamb, Five years of CO<sub>2</sub> nighttime advective flux measurements at the Niwot Ridge, Colorado subalpine forest site, ***Integrated Land Ecosystem—Atmosphere Processes Study (iLEAPS) Specialist Workshop on Flux Measurements in Difficult Conditions***, 26-28 January 2006, NCAR Center Green Campus, Boulder, Colorado, USA.
- Burns, S. P., J. Sun, S. P. Oncley, A. A. Turnipseed, C. Yi, D. H. Lenschow, and R. K. Monson, An evaluation of in-canopy flux measurements, ***Integrated Land Ecosystem—Atmosphere***

***Processes Study (iLEAPS) Specialist Workshop on Flux Measurements in Difficult Conditions***, 26-28 January 2006, NCAR Center Green Campus, Boulder, Colorado, USA.

- Yi, C.**, R. K. Monson, Z. Zhai, D. E. Anderson, B. Lamb, A. A. Turnipseed, and S. P. Burns, Modelling terrain-induced canopy flows over complex terrain, ***AMERIFLUX Annual Team Meeting***, Boulder, Colorado, October 18-20, 2005.
- Monson, R., **C. Yi**, D. Anderson, J. Sun, B. Lamb, S. Burns, Observational uncertainties in net ecosystem CO<sub>2</sub> exchange: the effect of complex terrain. ***The Ecological Society of America Annual Meeting***, Montreal, Canada, 2005.
- Yi, C.**, D. E. Anderson, S. P. Burns, A. A. Turnipseed, and R. K. Monson, Examining advection effects on eddy flux measurements at the Niwot Ridge AmeriFlux site in the Colorado Rocky Mountains, Presentation at the Fall Meeting of the American Geophysical Union, San Francisco, CA, December, 2004.
- Yi, C.**, D. E. Anderson, S. P. Burns, A. A. Turnipseed, and R. K. Monson, Advection at the Niwot Ridge AmeriFlux site, AmeriFlux Annual Science Team Meeting, Boulder Marriott, Boulder, CO, October 5-7, 2004.
- Monson, R., **C. Yi**, D. Bowling, Y. Luo, W. Sacks, D. Schimel, Extracting photosynthetic insight from net ecosystem CO<sub>2</sub> exchange. 13th International Congress on Photosynthesis, Montréal, Quebec, Canada, August 29 to September 3, 2004.
- Yi, C.**, L. Mahrt, K.J. Davis, P. S. Bakwin, Estimates of horizontal advection from WLEF, Chequamegon Ecosystem Atmosphere Study (ChEAS) 2003 Workshop, Kemp Natural Resources Station, Woodruff, WI June 29-July 2, 2003.
- Yi, C.**, T. Zhou, K. J. Davis, P. S. Bakwin, L. Zhu, P. Stackhous, Interannual variability of fluxes, atmospheric CO<sub>2</sub>, climate, Chequamegon Ecosystem Atmosphere Study (ChEAS) 2003 Workshop, Kemp Natural Resources Station, Woodruff, WI June 29-July 2, 2003.
- Yi, C.**, K.J. Davis, P. S. Bakwin, Are controlling rules of climate factors on terrestrial CO<sub>2</sub> fluxes different across time scales? Chequamegon Ecosystem Atmosphere Study (ChEAS) 2002 Workshop, Kemp Natural Resources Station, Woodruff, WI August 16-21, 2002.
- Davis, K.J., P.S. Bakwin, B.D. Cook, M.D. Hurwitz, D.M. Ricciuto, W. Wang and **C. Yi**, The blobs and other advective horrors of northern Wisconsin. Proceedings of the 15th American Meteorological Society Symposium on Boundary Layers and Turbulence, pages 508-511, Wageningen, The Netherlands, July, 2002.
- \*Davis, K.J., **C. Yi**, M.P. Butler, M.D. Hurwitz, D.M. Ricciuto and P.S. Bakwin, Merging CO<sub>2</sub> flux and mixing ratio observations at synoptic, seasonal and interannual scales. Invited presentation and poster at the Fluxnet synthesis workshop, Orvieto, Italy, 20-22 June, 2002.

- Davis, K.J., P.S. Bakwin, M.P. Butler, M.D. Hurwitz, D.M. Ricciuto, and **C. Yi**, Joint analyses of carbon dioxide mixing ratio and flux measurements. Spring meeting of the American Geophysical Union, May 28-31, Washington, D.C., 2002.
- Bakwin, P.S., K.J. Davis, M.P. Butler, M. Hurwitz, D. Ricciuto, W. Wang and **C. Yi**, Seasonal and synoptic patterns of CO<sub>2</sub> fluxes and mixing ratios from FLUXNET sites. Presentation at the Fall Meeting of the American Geophysical Union, San Francisco, CA, December, 2001.
- Cook, B.D., K.J. Davis, W. Wang, P.S. Bakwin, **C. Yi**, P.V. Bolstad, J.G. Isebrands and R.M. Teclaw, Contributions from a deciduous forest and shrub wetland to regional carbon fluxes in northern Wisconsin. Presentation at the Fall Meeting of the American Geophysical Union, San Francisco, CA, December, 2001.
- \*Davis, K.J., P.S. Bakwin, **C. Yi**, B.D. Cook, W. Wang, A.S. Denning, R. Teclaw and J. Isebrands, Multiple flux footprints, flux divergences and boundary layer mixing ratios: Studies of ecosystem-atmosphere CO<sub>2</sub> exchange using the WLEF tall tower. Invited talk, Spring meeting of the American Geophysical Union, Boston, MA, May 2001.
- Yi, C.**, K.J. Davis, P.S. Bakwin, A.S. Denning, N. Zhang, D. Ricciuto, M. Hurwitz, Boundary layer CO<sub>2</sub> budgets and the rectifier effect. Poster presentation, Spring meeting of the American Geophysical Union, Boston, MA, May 2001.
- Yi, C.**, K.J. Davis, B.W. Berger, and P.S. Bakwin, On development of convective boundary layers, Proceedings of the 14th Symposium on Boundary Layer and Turbulence, Aspen, Colorado, 7-11 August, Amer. Met. Soc., 223-226, 2000.
- Davis, K. J. **C. Yi**, P. S. Bakwin, W.M. Angevine, C. Zhao, J.G. Isebrands and R. Teclaw, Profiles, fluxes and entrainment of carbon dioxide from a very tall tower, Proceedings in Fourth International Symposium on Tropospheric Profiling: Needs and Technologies, Snowmass, Colorado, 1998.
- Davis, K.J., **C. Yi**, B.W. Berger, R.J. Kubesh and P.S. Bakwin, Scalar budgets in the continental boundary layer, Proceedings of the 14th Symposium on Boundary Layer and Turbulence, 7-11 August, American Meteorological Society, Aspen, Colorado, 100-103, 2000.
- Davis K. J., B.W. Berger, B.D. Cook, **C. Yi**, P.S. Bakwin, C. Zhao, J.G. Isebrands, and R. Teclaw, Forging a link between AmeriFlux and GLOBALVIEW-CO<sub>2</sub>, NOAA, Climate Monitoring & Diagnostics Laboratory Annual Meeting, May 3-4, Boulder, Colorado, 2000.
- Zhang N., S.A. Denning, **C. Yi**, K.J. Davis, P.S. Bakwin, and M. Branson, Covariance of the ecosystem carbon dioxide flux and the PBL depth at the tall tower in northern Wisconsin: Observations and simulations, NOAA, Climate Monitoring & Diagnostics Laboratory Annual Meeting, May 3-4, Boulder, Colorado, 2000.
- Bakwin, P.S., C. Zhao, Davis K. J., B.W. Berger, B.D. Cook, **C. Yi**, J.G. Isebrands, and R. Teclaw, Exchange of carbon dioxide between the atmosphere and a forest in northern Wisconsin, USA, NOAA, Climate Monitoring & Diagnostics Laboratory Annual Meeting, May 3-4, Boulder, Colorado, 2000.

Wang, W., B.D. Cook, B.W. Berger, K.J. Davis, R.J. Kubesh, **C. Yi**, P.S. Bakwin, J.G. Isebrands, and R.M. Teclaw, Turbulent transport above a forest under light wind conditions, Amer. Met. Soc., Proceedings of the 24th Conference on Agricultural and Forest Meteorology, Davis, California, 14-18 August, 2000.

Berger, B.W., K.J. Davis, P.S. Bakwin, and **C. Yi**, "Diurnal carbon dioxide fluxes and boundary layer structure from a very tall tower." Paper presented at Amer. Geophys. Union Spring Meeting, Boston, Mass., 1999.

Davis, K.J., P.S. Bakwin, B.W. Berger, B.D. Cook, and **C. Yi**, Flux budgets and CO<sub>2</sub> profiles in the atmospheric boundary layer. Fall meeting of the American Geophysical Union, San Francisco, CA, December, 1999.

Denning, A.S., N. Zhang, K.J. Davis, **C. Yi**, P.S. Bakwin and B.W. Berger, Simulations and observations of diurnal coupling between ecophysiology and the atmospheric boundary layer as a control on CO<sub>2</sub>. Fall meeting of the American Geophysical Union, San Francisco, CA, December, 1999.

Davis K. J., B.D. Cook, W.B. Sea, **C. Yi**, PV Bolstad, J. Martin, P.S. Bakwin, C. Zhao, J.G. Isebrands, R. Teclaw and V. Gutschick, The Chequamegon ecosystem-atmosphere study: overview and preliminary results, Proceedings in 23rd Conference on Agricultural and Forest Meteorology, New Mexico, 1998.

Davis, K.J., **C. Yi**, P.S. Bakwin, W.M. Angevine, C. Zhao, J.G. Isebrands and R. Teclaw, Profiles, fluxes and entrainment of carbon dioxide observed from a very tall tower. Proceedings of the 4th International Symposium on Tropospheric Profiling: Needs and Technologies, September, Snowmass, Colorado, 73-75, 1998.

**Yi, C.**, and Rongsheng Wu, Mechanism on the Quaternary Glacier, in The Research on Historic Evolution of the Existent Environment in China, Ocean Publishing House, 156-169, 1992. (In Chinese)

### ***Invited Speaker***

**Yi\***, C. (**Invited Lecture**), Forest resilience and climate change, Colloquium Series of Doctorial Program in Earth and Environmental Sciences, December 7, 2017, New York.

**Yi\***, C. (**Keynote Speaker**), Forest resilience to warming climate, 4th World Conference on Climate Change October 19-21, 2017 Rome, Italy.

**\*Yi, C.**, Canopy Flows: Problems and Perspective (**Invited Talk**), In honoring Dr. William J. Massman for his outstanding contribution to the field of biometeorology at the Joint Session of 22nd Symposium on Boundary Layer and Turbulence/32nd AMS Conference on Agricultural and Forest Meteorology/the 3rd AMS Conference on Atmospheric Biogeosciences, Salt Lake City, UT, USA, June 20 – 24, 2016.

**\*Yi, C.**, 21<sup>st</sup> century climate on NEE (**invited talk**), A Popular Science Talk at the Board Meeting of the International Meteorology Institute in Stockholm, **Sweden**, November 28,

2014.

- \***Yi, C.**, Advection problems in eddy flux measurements (**invited lecture**), the Departments of Earth Science, Swedish University of Agricultural Sciences, **Umeå, Sweden**, November 13, 2014.
- \***Yi, C.**, Links between land carbon sinks/sources, El Nino/La Nina, Hadley Cell expansion, and global warming (**invited lecture**), Swedish University of Agricultural Sciences, **Umeå, Sweden**, November 12, 2014.
- \***Yi, C.**, Advection problems in eddy flux measurements (**invited lecture**), the Departments of Earth Science, Uppsala University, **Sweden**, November 3, 2014.
- \***Yi, C.**, Links between land carbon sinks/sources, El Nino/La Nina, Hadley Cell expansion, and global warming (**invited lecture**), *Lectures in Biogeochemistry and Atmospheric Science*, Sponsored by the Departments of Applied Environmental Science and Geological Science and the Bolin Center for Climate Research, Ahlmannsalen, Geohuset, Stockholm University, **Sweden**, October 15, 2014.
- \***Yi, C.**, Fundamental Issues in Modeling of Atmosphere-Biosphere Interactions (**Invited talk**), Department of Meteorology, Stockholm University, **Sweden**, September 9, 2014.
- \***Yi, C.**, A big picture behind FLUXNET data (**Invited talk**), Earth Sciences Division, Lawrence Berkeley National Laboratory, **Berkeley**, California, August 11, 2014.
- \***Yi, C.**, Extreme weather altering ecosystem performance and their carbon-storage capacity (**Invited talk**), [\*The 3rd International Congress of Environment-2013, September 26-28\*](#), Xian, **China**, 2013.
- \***Yi, C.**, K. Jensen (a), S. Wei (a), G. Hendrey, Global warming, drought events, and GPP performance (**invited talk**), *Fall meeting of the American Geophysical Union*, December 9-13, **San Francisco**, California, 2013.
- \* **Yi, C.** Global warming likely intensifies climate extremes and leads to grassland degradation: The Institute of Geophysical Sciences and Natural Resources Research, Chinese Academy of Sciences, April 10, 2012, Beijing, **China**.  
(<http://www.cern.ac.cn/manage/ewebeditor/uploadfile/20124511311575.pdf>); Beijing Normal University, April 11, 2012 (<http://www.bnu.edu.cn/xzhd/44108.htm>).
- \***Yi, C.** Is possible to know turbulent transport processes in vegetation layer from the sky? **Invited speaker** of NOAA-CREST Center at the City College of New York, February 2, 2012. **U.S.A.**
- \***Yi, C.**, Key knowledge gaps and progress in atmosphere-biosphere interactions, **an invited speaker** for a Joint Colloquium of Departments of Atmospheric Sciences and Renewable Resources and Program in Ecology at University of Wyoming, Laramie, March 10, 2011. **U.S.A.**



- \***Yi, C.**, Advection measurements and the superstable layer, **invited speaker** for Advection workshop and ADVEX final conference, Gembloux, 30 June & 1 July, 2008.  
<http://www.fsagx.ac.be/ph/ADVEX/ADVEX%20conference.htm>. **Belgium.**
- \***Yi, C.**, Land-atmosphere interface: importance to global change, Department of Geography, Kings College at the University of London, May 4, 2007. **U.K.**
- \***Yi, C.**, Canopy flow theory, Department of Physics and Astronomy at the University of Leicester, December 10, 2006. **U.K.**
- \***Yi, C.**, Measuring and modeling biosphere-atmosphere exchanges in complex terrain, in Department of Earth and Environmental Sciences, Waterloo University, May 18, 2005. **Canada.**
- \***Yi, C.**, Summer Graduate Course on Land-Atmosphere Interaction and Climate Change. **Invited Speaker**, School of Applied Meteorology, NUIST, June 15-20, 2009. **China.**
- \***Yi, C.**, Analytical Approach to Canopy Flows over Complex Terrain, Atmospheric Science Research Center, University at Albany, SUNY, April 21, 2008. **U.S.A.**
- \***Yi, C.**, Measuring and modeling NEE over complex terrain, International Symposium on CO<sub>2</sub> Flux Monitoring, Sitou, Taiwan, December 15-19, 2008. **China.**
- \***Yi, C.**, Fundamental problems and recent advances in transport processes within canopies, China Ecological Forum, July 30, 2007. Beijing, **China.**
- \***Yi, C.** Land-Atmosphere Interface: Importance to Global Change, State Key Laboratory of Numerical Modeling for Atmospheric Sciences and Geophysical Fluid Dynamics, (<http://www.lasg.ac.cn/Sylm/2007/7/crf6gzeitu.htm>), July 27, 2007, Beijing, **China.**
- \***Yi, C.**, Two curves in controlling biosphere-atmosphere exchanges, FL-2, room 1001 at NCAR, 10:30 am-11:30, Wed. March 23, 2005. **U.S.A.**

## ***Teaching and Advising***

### Courses

**ENSCI. 99 Guide to Environmental Choices**, 2019 Fall

**GEOL 799.3 Statistical Methods in Geosciences**

Graduate Course (Queens College at CUNY), 2017 Fall

**GEOL 77 Weather, Climate, and Climate Change**

Undergraduate Course (Queens College at CUNY), 2016 spring, 2017 spring, 2018 spring, 2019 spring

**GEOL 342 Introduction to meteorology**

Undergraduate Course (Queens College at CUNY), 2017 spring, 2018 fall

**ENSCI 377 Atmosphere-Biosphere Interactions**

Undergraduate Course with permission, 2014 spring, 2015 fall, 2016 fall, 2019 spring

**GEOL 799.3 Atmosphere-Biosphere Interactions**

Graduate Course (Graduate Center at CUNY), 2014 spring, 2015 fall

**GEOL 216 Dynamics of the Oceans and Atmospheres,**

Undergraduate Course (Queens College at CUNY), Spring 2013

**GEOL 011 Survey of Atmospheric Science**

Undergraduate Course (Queens College at CUNY), every semester till 2014

**GEOL 520 Meteorology**

Undergraduate Course (Queens College at CUNY), 2008 spring, 2010spring

**GEOL 799.3 Extreme Weather and Megacities**

Graduate Course (Queens College at CUNY), 2008 spring

**GEOL 799.3 Atmosphere-Biosphere Modeling**

Graduate Course (Graduate Center at CUNY), 2011 spring

**ENSCI 112 Our Changing Planet**

Undergraduate Course (Queens College at CUNY), 2008 fall, 2013 fall, 2015 fall, 2017 Fall

**ENSCI 111 Introduction to Environmental Sciences**

Undergraduate Course (team teaching at Queens College at CUNY), 2008fall, 2009spring, 2009fall

**Climate Change and Climate Models**

Graduate Course (BNU in China), Fall 1992-1995

**Nonlinear Sciences and their Applications in Geosciences**

Senior Undergraduate and Graduate Course (BNU in China), Spring 1993-1996

**Nonequilibrium statistical physics**

Graduate Course (LNU in China), Fall 1987

**Physics**

Undergraduate Course (LNU in China), 1985-1988

**Postdoctoral Research Associate**

Dr. Wei Fang (2016-present)

**Undergraduate Research Students**

Natascha Hey (2019-present)

Michelle Park (2019-present)

Sara Abedi (2018)

Jessica Rosenberg (2018)

Ashley Isaccs (2017-2018)

Yunmee Han (2017-2018)

Silvio Aldebot (2017-2018)

Daniel Baruch (2016)

Victorya Kaon (2016)

David Kim (2016)

Lili Ye (2013)

Max Trukhin (2013)

Kevin Clinton (2012 – 2013)

Anand Dookie (2010 – 2013)

Kalin Kuo (2010)

**High School Student Mentoring**

2018-summer: Nathan Jackson

2010-2011: Max Wang

2011-2012: Chun Wu

2013: Hugh Han

### **Past Graduate Students, Post-docs, and visiting students**

Ph.D. Students have been advised:

Dr. Eric Kutter, **Thesis:** *Wind Flow Dynamics over Complex Terrain*

Dr. Christine Ramadhin, **Thesis:** *Abrupt Climate Transitions*

Dr. Suhua Wei, **Thesis:** *Impacts of climate extremes on terrestrial productivity.*

Dr. Xiyan Xu, **Thesis:** *Numerical Study of Canopy Flows in Complex Terrain.*

Postdoctoral Fellow in Lawrence Berkeley National Laboratory (2014-2016)

Chinese Academy of Sciences Pioneer Hundred Talent Scholars (2017-present)

Dr. Shan Gao, BNU Visiting Ph.D. student (10/2016-10/2017).

Dr. Peipei Xu, BNU visiting Ph.D. student (9/2017- 2018).

Dr. Kaicheng Huang, BNU visiting PhD student (2013- 2014).

M.S. Advisees:

Dr. Tao Zhou (Prof. at Beijing Normal Univ)

Dr. Shaoqiang Wang (Prof. at IGSNRR)

Dr. Dongmei Guo (Scientist, MEP)

Dr. Qiaozhen Mu (Research Scientist at Steve Running group)

Dr. Caroline Farkas (Scientist at EPA)

Guangwei Mu, Master, Thesis Advisor 9/14-12/17

B.S. Advisee:

Dr. Kaiyu Liu (BP)

Post-Docs Advisees:

Dr. Hongbin Chen, currently Associate Professor at Huaqiao University in China

Lab Technician:

Qianyu Zhang

## ***Campus Service***

### **COLLEGE/UNIVERSITY**

Academic Senate Committee -Special Committee on Governance (2016 - 2019)

CUNY Graduate Center PhD EES Admission Committee 2017-2018

CUNY Graduate Center PhD EES Admission Committee 2018-2019

Departmental Web Master 2008 - 2014

Surficial Geology Faculty Hiring Committee, 2019 - 2020

Geochemistry Faculty Hiring Committee 2017-2018

Bedrock Geology Faculty Hiring Committee, 2012 - 2013

Ph. D. Dissertation Committee (Shihyan Lee, 2007 - 2010)

Ph. D. Dissertation Committee (Gordon Green, 2011 - 2014)

Ph. D. Dissertation Committee (Xiyan Xu, 2008 - 2013)

Ph. D. Dissertation Committee (Suhua Wei, 2010 - 2018)

Ph. D. Dissertation Committee (Christine Ramadhin, 2011 - 2019)

Ph. D. Dissertation Committee (Nathaniel Levitan, 2015 - 2019)

Ph. D. Dissertation Committee (Eric Kutter, 2012 - 2019)

## ***Professional Service***

### **I. Professional Society Committee:**

**Committee member**, American Meteorology Society (AMS), Agricultural and Forest Meteorology Science and Technical Advisory Committee (STAC), 2011-2017

**Committee member**, NEON Surface Atmosphere Exchange Technology Working Group 2018- present.

### **II. International Conference Conveners and Session Chairs:**

**Program Co-Chair** of joint AMS 32<sup>nd</sup> Conference on Agricultural and Forest Meteorology, 22<sup>nd</sup> Symposium on Boundary layers and Turbulence and the Third Conference on Atmospheric Biogeosciences, Salt Lake City, UT, June 20-24, 2016.

#### **Have been a convener for AGU Fall Meetings almost every year since 2010**

- i. **AGU-2016-Convener**, American Geophysical Union Fall Meeting, Session **B86**: Tree Mortality: patterns, Causes, and Implications, May – December, 2016.
- ii. **AGU-2015-Convener**, American Geophysical Union Fall Meeting, Session **ID#**: 7919 Terrestrial Biome Fluxes, May – December, 2015.
- iii. **AGU-2013-Convener**, American Geophysical Union Fall Meeting, Session **B17**: Climatic Controls on Net Ecosystem Exchange (NEE), May – December, 2013.
- iv. **AGU-2012-Convener**, American Geophysical Union Fall Meeting, Session **B14**: Climatic Controls on Net Ecosystem Exchange (NEE), May – December, 2012.
- v. **AGU-2011-Convener**, American Geophysical Union Fall Meeting, Session **B30**: Environmental Controls of Ecosystem-Atmosphere Exchanges (NEE), May – December, 2011.
- vi. **AGU-2010-Convener**, American Geophysical Union Fall Meeting, Session **B20**: Determining the Controls of Terrestrial Net Ecosystem Exchange (NEE) and Related Processes at Regional to Global Scales, May – December, 2010.

#### **Session Chairs for many international conferences**

- i. 2016-Bialowieza, Poland, TRACE 2016, Tree Rings in Archaeology, Climatology and Ecology
- ii. 2016-Salt Lake City UT, ***Advances in Modeling Ecosystem-Atmosphere Exchanges***, AMS 32<sup>nd</sup> Conference on Agricultural and Forest Meteorology
- iii. 2016-Salt Lake City UT, ***Drought Effects on Semi-Arid Ecosystems***, AMS 32<sup>nd</sup> Conference on Agricultural and Forest Meteorology
- iv. 2016-Salt Lake City UT, ***Arctic and Boreal Ecosystems***, AMS 32<sup>nd</sup> Conference on Agricultural and Forest Meteorology
- v. 2013-San Francisco CA, ***Climatic Controls on Net Ecosystem Exchanges (NEE), B41A*** – 2013 AGU Fall Meeting
- vi. 2012-San Francisco CA, ***Climatic Controls on Net Ecosystem Exchanges (NEE) I, B54A*** – 2012 AGU Fall Meeting
- vii. 2012-San Francisco CA, ***Climatic Controls on Net Ecosystem Exchanges (NEE) II, B51C*** – 2012 AGU Fall Meeting
- viii. 2011-San Francisco CA, ***Environmental Controls on Net Ecosystem Exchanges (NEE) I, B13J*** – 2011 AGU Fall Meeting
- ix. 2011-San Francisco CA, ***Environmental Controls on Net Ecosystem Exchanges (NEE) II, B14J*** – 2011 AGU Fall Meeting
- x. 2011-San Francisco CA, ***Environmental Controls on Net Ecosystem Exchanges***

- xi. **(NEE) II, B23A** – 2011 AGU Fall Meeting  
2010-San Francisco CA, ***Determining the Controls of Terrestrial Net Ecosystem Exchange (NEE) and Related Processes at Regional to Global Scales, B42B*** – 2010 AGU Fall Meeting
- xii. 2010-San Francisco CA, ***Determining the Controls of Terrestrial Net Ecosystem Exchange (NEE) and Related Processes at Regional to Global Scales, B41K*** – 2010 AGU Fall Meeting
- xiii. 2010-San Francisco CA, ***Determining the Controls of Terrestrial Net Ecosystem Exchange (NEE) and Related Processes at Regional to Global Scales, B31B*** – 2010 AGU Fall Meeting
- xiv. 2012-Boston MA, ***Advances in Surface Layer Theory from Observations and Model***, AMS 30<sup>th</sup> Conference on Agricultural and Forest Meteorology.
- xv. 2008-Sitou, Taiwan, ***International Symposium on CO2 Flux Monitoring Technology***.

### III. Editors

**Editorial Board**, *Environmental Research Letters*, 2010 - present.

**Editorial Board**, *Scientific Reports, Nature Publishing Group*, 2015-2018.

**Editorial Board**, *Atmosphere*, 2018-present.

**Editorial Board**, *Experts Opinion on Environmental Biology*, 2018-present.

**Editorial Board**, *Sci*, 2018-present.

**Editorial Board**, *Remote Sensing*, 2019-present.

**Editorial Board**, *SciNotes*, 2019-present.

**Guest editor**, Focus Issue “Extreme Events and the Carbon Cycle”, *Environmental Research Letters*. 2012-2013.

**Guest editor**, Focus Issue “Tree Mortality in a Warming World: Causes, Patterns, and Implications”, *Environmental Research Letters*. 2017-2019.

**Guest editor**, Special Issue “10th Anniversary of Atmosphere: Climatology and Meteorology”, *Atmosphere*. 2019-present.

**Guest editor**, Special Issue “Paleoclimate and Its Connection with Future Climate Change”, *Atmosphere*. 2019-present.

**Guest editor**, Special Issue “Forest Resilience to Extreme Events”, *Remote Sensing*. 2020-present.

### IV. External Dissertation Examiner

Computational Engineering and Science Research Centre and Dept. of Mathematics and Computing, University of Southern Queensland (USQ), Toowoomba, Australia, 2014.

### V. Panelists

NSF Geosciences panelist, Graduate Research Fellowship Program in 2013-2014

NSF Geochemistry panelist, Graduate Research Fellowship Program in 2017-2018

Panelist for 2020 **Paul & Daisy Soros** Fellowships for New Americans

### VI. Peer Reviewing

- i. >500 manuscript peer reviews (>30 a year) for 38 journals

➤ *Sci*

- *Tellus*
- *Forests*
- *Ecosphere*
- *Atmosphere*
- *Biogeosciences*
- *Remote Sensing*
- *Climatic Change*
- *Scientific Report*
- *Open Geosciences*
- *Ecological Modeling*
- *Journal of Hydrology*
- *Global Change Biology*
- *Geographical Research*
- *Journal of Plant Ecology*
- *International Agrophysics*
- *Atmospheric Environment*
- *Water Resources Research*
- *Geophysical Research Letters*
- *Boundary-Layer meteorology*
- *Environmental Fluid Mechanics*
- *Environmental Research Letters*
- *Global Ecology and Conservation*
- *Journal of Hydraulic Engineering*
- *Advances in Atmospheric Sciences*
- *Rangeland Ecology & Management*
- *Atmospheric Chemistry and Physics*
- *Journal of the Atmospheric Sciences*
- *Agricultural and Forest Meteorology*
- *Theoretical and Applied Climatology*
- *Journal of Engineering Mathematics*
- *Meteorology and Atmospheric Physics*
- *African Journal of Agricultural Research*
- *Journal of Geophysical Research-Atmosphere*
- *Journal of Advances in Modeling Earth Systems*
- *Journal of Geophysical Research-Biogeosciences*
- *Journal of Applied Meteorology and Climatology*
- *Journal of Atmospheric and Oceanic Technology*

- ii. Proposal reviews for National Science Foundation (NSF) – Atmosphere, NSF – Ecosystem Sciences, NSF – Geography and Spatial Science, NSF – Atmospheric and Geospace Sciences, and National Oceanic and Atmospheric Administration (NOAA) – Climate Program Office (CPO), Department of Energy (DOE) –ARM
- iii. Book reviews for Cambridge University Press, 2013.  
Book reviews for Cambridge University Press, 2019.