

Curriculum Vitae

Personal Information

Name: **Xiangtao Xu (徐湘涛)**
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Education

09/2012 – Present Ph.D. in **Department of Geosciences**, Princeton University, expected in 2017. Primary Adviser: Dr. David Medvigy
09/2008 – 07/2012 B.S. in **Geographical Sciences**,
College of Urban and Environmental Science (CUES), Peking University
Second Major in **Computer Science**

Research Interests

Terrestrial ecosystem ecology, Vegetation modelling, Plant Hydraulics, Ecohydrology, Phenology, Theoretical ecology, Global Change

Publication

A. T. Trugman, N. J. Fenton, Y. Bergeron, **X. Xu**, L. R. Welp, D. Medvigy: *Climate, soil organic layer, and nitrogen jointly drive forest development after fire in the North American boreal zone*. Journal of Advances in Modeling Earth Systems 07/2016; DOI:10.1002/2015MS000576

Youmi Oh, Brandon Stackhouse, Maggie C.Y. Lau, **Xiangtao Xu**, Anna T. Trugman, Jonathan Moch, Tullis C. Onstott, Christian J. Jørgensen, Ludovica D'Imperio, Bo Elberling, Craig A. Emmerton, Vincent L. St.Louis, David Medvigy: *A scalable model for methane consumption in arctic mineral soils: Arctic methane consumption*. Geophysical Research Letters 05/2016; DOI:10.1002/2016GL069049

Xiangtao Xu, David Medvigy, Jennifer S. Powers, Justin M. Becknell, Kaiyu Guan: *Diversity in plant hydraulic traits explains seasonal and inter-annual variations of vegetation dynamics in seasonally dry tropical forests*. New Phytologist 05/2016; DOI:10.1111/nph.14009

Xiangtao Xu, David Medvigy, Ignacio Rodriguez-Iturbe: *Relation between rainfall intensity and savanna tree abundance explained by water use strategies*. Proceedings of the National Academy of Sciences 10/2015; 112(42). DOI:10.1073/pnas.1517382112

Xuhui Wang, Shilong Piao, **Xiangtao Xu**, Philippe Ciais, Natasha MacBean, Ranga B. Myneni, Laurent Li: *Has the advancing onset of spring vegetation green-up slowed down or changed abruptly over the last three decades?*. Global Ecology and Biogeography 02/2015; 24(6). DOI:10.1111/geb.12289

Kaiyu Guan, Eric F. Wood, David Medvigy, John Kimball, Ming Pan, Kelly K. Caylor, Justin Sheffield,

- Xiangtao Xu**, Matthew O. Jones: *Terrestrial hydrological controls on land surface phenology of African savannas and woodlands*. Journal of Geophysical Research: Biogeosciences 08/2014; 119(8). DOI:10.1002/2013JG002572
- Yan Yang, Miao Zhao, **Xiangtao Xu**, Zhenzhong Sun, Guodong Yin, Shilong Piao: *Diurnal and Seasonal Change in Stem Respiration of Larix principis-rupprechtii Trees, Northern China*. PLoS ONE 02/2014; 9(2):e89294. DOI:10.1371/journal.pone.0089294
- Anwar Mohammat, Xuhui Wang, **Xiangtao Xu**, Liqing Peng, Yan Yang, Xinping Zhang, Ranga B. Myneni, Shilong Piao: *Drought and spring cooling induced recent decrease in vegetation growth in Inner Asia*. Agricultural and Forest Meteorology 09/2013; 178-179:21-30. DOI:10.1016/j.agrformet.2012.09.014
- Xiangtao Xu**, Shilong Piao, Xuhui Wang, Anping Chen, Philippe Ciais, Ranga B Myneni: *Spatio-temporal patterns of the area experiencing negative vegetation growth anomalies in China over the last three decades*. Environmental Research Letters 09/2012; 7(3):035701. DOI:10.1088/1748-9326/7/3/035701

Academic Activity and Service

- 08/2016 Presentation "Relation between tree abundance and intra-annual rainfall variability in tropical savannas: global patterns and ecological causes"
Xiangtao Xu, David Medvigy, Ignacio Rodriguez-Iturbe
Ecological Society of America annual meeting, Fort Lauderdale, Florida
- 01/2016 Presentation "Plant hydraulics in Ecosystem Demography 2"
Xiangtao Xu, David Medvigy
Ecosystem Demographics in the Earth System workshop at National Center for Atmospheric Research (NCAR), Boulder, Colorado
- 12/2015 Poster Presentation "Hydrological niche separation explains seasonal and inter-annual variations of vegetation dynamics in seasonally dry tropical forests", session ID: *B23F-0653*
Xiangtao Xu, David Medvigy, Jennifer Powers, Justin Becknell and Kaiyu Guan
American Geophysical Union annual meeting, San Francisco, California
- 08/2015 Oral Presentation "Modeling phenology and vegetation growth in tropical dry forest: relating coordination and trade-offs among functional traits to vegetation responses to water stress"
Xiangtao Xu, David Medvigy, Jennifer Powers, Justin Becknell and Kaiyu Guan
Ecological Society of America annual meeting, Baltimore, Maryland.
- 12/2014 Oral Presentation "Simulating Plant Water Stress and Phenology in Seasonally Dry Tropical Forests Based on Coordination and Trade-offs among Plant Functional Traits" **Xiangtao Xu**, David Medvigy, Jennifer Powers, Justin Becknell and Kaiyu Guan
American Geophysical Union annual meeting, San Francisco, California
- 12/2013 Poster "Representing Seasonality of Tropical Dry Forests in Ecosystem Demography Model Version 2" **Xiangtao Xu**, David Medvigy, Jennifer Powers, Justin Becknell, session ID *B33B-0469*
American Geophysical Union annual meeting, San Francisco, California
- 11/2013 Presentation "Climate and Vegetation Dynamics in tropical dry forest of Central America"
Graduate Climate Conference at Woods Hole, Massachusetts
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Members of Ecological Society of America, American Geophysical Union

Served as reviewers for *Biotropica*, *Forestry*, *New Phytologist*, *Journal of Hydrology*

Awards and Honors

09/2011	Kenneth Fong Scholarship
06/2011	Third Prize in Jiangzehan Cup Mathematical Modeling and Computer Application Competition, Peking University (Team Work)
10/2010	National Scholarship and Merit Student
10/2009	Robin Li Scholarship
10/2009, 10/2010, 10/2011	Geographical Sciences Foundation, 1st prize, three times