Xing Liu

Purdue University
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EDUCATION

Ph.D., Agricultural Meteorology   Summer 2017(anticipated)
Ecological Science and Engineering Interdisciplinary Program
Purdue University, West Lafayette, IN Advisor: Dr. Dev Niyogi
Dissertation: Enhancing Mesoscale Weather Forecast skills via Improving the Simulation of Cropland-Atmospheric Interactions

M.S., Agricultural Meteorology   Fall 2013
Purdue University, West Lafayette, IN
Thesis: A Land Data Assimilation System (LDAS) based Dataset for Regional Agro-Climatic Assessments

B.S., Applied Meteorology   Fall 2011
China Agricultural University, Beijing, China

SKILL SET

Analytical & research skills, Programming (Fortran, R, Python, NCL), Spatial data analysis, Numerical weather modeling, Regional crop modeling, Model development, Data management.

PROFESSIONAL EXPERIENCE

Instructor, Weather and Climate (AGRY335), Purdue University   Jan 2017 – May 2017
        Develop and teach a 3-credit undergraduate level course
Quantitative Research Intern, Citadel Investment Group, Chicago, IL   Sept 2016 – Dec 2016
        Commodity trading model development
Crop Modeler, Useful to Useable (U2U) group, USDA funded   Nov. 2011- present
        Lead crop modeler for a 5-million USDA project
Visiting Researcher, National Center for Atmospheric Research, CO   June 2015- Aug 2016
        Developmental Testbed Center Visitor Program
Student Representative, WRF Working Group 14   June 2014- present
        Weather Forecasting and Research Model (WRF) working geoup
Visiting Researcher, National Center for Atmospheric Research, CO   June- Sept. 2014
    Crop-Atmospheric Interaction Model Development (WRF-Crop).
Teaching Assistant, Purdue University, IN   Jan. 2012- present
    Weather and Climate (AGRY 335) for non-meteorology majors.   (Spring Semesters)
Guest Lecturer, Purdue University, IN   Mar. 2013- present
    Global Awareness (AGRY 350)   (Spring Semesters)

PUBLICATIONS

Xing Liu, F Chen, M Barlage and D Niyogi. 2016. Noah-MP-Crop: Introducing Dynamic Crop Growth in the Noah-MP Land-Surface Model. *Journal of Geophysical Research: Atmosphere*

Xing Liu, E Jacobs, A Kumar, L Biehl, J Andresen, and D Niyogi. 2016. The Purdue Agro-climatic (PAC) dataset for the US Corn Belt: Development and initial results. *Climate Risk Management*

Niyogi, D, E Jacobs, **X Liu**, A Kumar, L Biehl and P S C Rao. 2016. Long-term high resolution hydroclimatic dataset for the U.S. Midwest. Earth Interactions (in press).

Xing Liu, Andresen, J., Yang, H. and Niyogi, D., 2015. Calibration and Validation of the Hybrid-Maize Crop Model for Regional Analysis and Application over the US Corn Belt. Earth Interactions, 19(9), pp.1-16.

Dev Niyogi, **X Liu,** J Andersen, Y Song, A K Jain, O Kellner, E S Takle and O C Doering, 2015. Crop models capture the impacts of climate variability on corn yield. *Geophysical Research Letters*, 42(9), pp.3356-3363.

PRODUCTS

WRF-CROP (https://www.ral.ucar.edu/projects/wrf-crop)
  A weather forecasting model specializes on simulating cropland-atmospheric interactions.

SELECTED PRESENTATIONS

Xing Liu, E Jacobs, L Biehl, A Kumar and J Andresen. 2017. An Agro-hydro-climatic dataset for the U.S. Corn Belt: Development, Validations and Applications. 97TH AMS Annual Meeting. Seattle, WA, January 2017

Xing Liu. 2016. Introducing Dynamic Crop Growth in the Noah-MP Land-Surface Model: Development and Applications. National Center for Atmospheric Research RAL/DTC Seminar, Boulder, CO, August 2016 (invited presentation)

Xing Liu and D Niyogi. 2016. Interdisciplinary and Cross-scales Agroclimatic Assessment across The U.S. Corn Belt: What Have We Learnt? 2016. AgMIP Global Workshop. Montpellier, France, June 2016

Xing Liu, F Chen, M Barlage, GS Zhou, D Niyogi. 2015. Noah-MP-Crop: Enhancing cropland representation in the community land surface modeling system. 2015 Fall Meeting, AGU, San Francisco, CA, Dec 2015. Poster

Dev Niyogi, **X Liu**, E Takle, C Anderson, J Andreson, G Alagarswamy, B Gramig, O Doering. 2015. Impacts of climate change on corn yield and the length of corn growing season in U.S. Corn Belt. 2015 Fall Meeting, AGU, San Francisco, CA, Dec 2015. *Oral presentation.*

Xing Liu, E.M Jacobs, LL Biehl, , A Kumar, D Niyogi. 2015. A Land Information System (LIS) Based Dataset for Regional Agro-Hydro-Climatic Assessments over the U.S. Corn Belt. ASA, CSSA&SSSA International Annual Meeting. Minneapolis, MN, November 2015. *Invited presentation.*

Dev Niyogi, **X Liu**, E Takle, C Anderson, J Andreson, G Alagarswamy, B Gramig, O Doering. 2015. Impacts of climate change on corn yield and the length of corn growing season in U.S. Corn Belt. 2015 Fall Meeting, AGU, San Francisco, CA, Dec 2015. *Oral presentation.*

Xing Liu, F Chen, M Barlage, D Niyogi. 2014. Noah-MP-CROP: An integrated Atmosphere-Crop-Soil Modeling System for Regional Agro-Climatic Assessments. 2014 Fall Meeting, AGU, San Francisco, CA, Dec 2014. *Oral presentation.*

Xing Liu, LL Biehl, EM Karlsson, A Kumar, D Niyogi. 2014. A Land Data Assimilation System (LDAS) based Dataset For Regional Agro-climatic Assessments over the U.S. Corn Belt. AMS 21st Conference on Applied Climatology. Denver, CO, June 2014. *Oral presentation.*

Xing Liu, D Niyogi, U Charusombat. 2012. GC21H-07. Estimating Corn Yields Regionally across Midwest using the Hybrid Maize model with a Land Data Assimilation System, 2012 Fall Meeting, AGU, San Francisco, CA, Dec 2012. *Oral presentation.*

AWARDS AND PROFESSIONAL RECOGNITION

1. Outstanding Ph.D. Graduate Research Award, Department of Agronomy, Purdue University, 2016
2. Purdue Research Foundation Research Grant, Purdue University, 2016
3. National Center for Atmospheric Research (NCAR) Developmental Testbed Center (DTC) Visitor Program, Aug 2015 to Sept 2016
4. Partnership Award for Mission Integration (U2U project), USDA National Institute for Food and Agriculture, 2015
5. TEAM Award (U2U project), College of Agriculture, Purdue University, 2015
6. Bailey Scholarship, Travel Award to AGU, Purdue University, 2015
7. Most Dedicated Graduate Student Award, U2U Group, 2015

REVIEWER

Water Resources Research
International Journal of Climatology

LEADERSHIP

Ecological Sciences and Engineering Peer-to-peer mentor, 2015
Design Thinking and Solutions (TECH 120) mentor, 2016
Graduate student representative, 2016- present, Department of Agronomy, Purdue University

PRESS

"Existing crop models can forecast yield in uncertain climate conditions." Purdue Agriculture News, August 26, 2015.
"U2U program wrapping up, brought useful climate tools to farmers." Purdue Agriculture News, March 7, 2017.