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EDUCATION

Ph.D. Hydrology, Tsinghua University, Beijing, China, 2008

M.S. Photogrammetry and Remote Sensing, Peking University, Beijing, China, 2005

B.E. Hydrology, Wuhan University, Wuhan, China, 2002

WORK EXPERIENCE

Research Scientist (NASA NPP senior fellow), **Jet Propulsion laboratory** (2018-present):

- Working on permafrost hydrology and Arctic carbon cycle modeling

Research Scientist, Numerical Terradynamic Simulation Group (NTSG), **University of Montana**, MT (2009-2018)

- Diagnosing land surface scheme and evaluating its applications for global water and carbon cycle studies; developing global satellite-based terrestrial carbon model and assessing fire and drought impact on regional carbon cycle; conducting synthesis studies using multi-sensor satellite datasets and models to study links between regional hydrology and carbon cycle.
- Developing a coupled permafrost, hydrology and carbon model to investigate climate change impact on pan-Arctic soil freeze/thaw and carbon dynamics; Use multi-sensor remote sensing data to guide soil parameterization of permafrost modeling to study the effects of surface heterogeneity on soil active layer processes; Use the improved permafrost model to study how northern carbon cycle responds to changes in active layer conditions and soil hydrology.
- Postdoctoral researcher, Dept. of Civil Engineering, **University of Manitoba**, Canada (2008-2009)
- Combining statistical downscaling methods and distributed hydrological model (VIC) to evaluate the impact of climate change on the hydrological cycle of northern Canadian Rivers.

SELECTED PUBLICATIONS

Jiang, H., Zhang, W., **Yi, Y.**, Yang, K., Li, G., Wang, G.: The impacts of soil

freeze/thaw dynamics on soil water transfer and spring phenology in the Tibetan Plateau. *Arctic, Antarctic and Alpine Research*, in press.

Yi, Y., Kimball, J.S., Chen, R., Moghaddam, M., Reichle, R.H., Mishra, U., Zona, D., Oechel, W.: Characterizing permafrost soil active layer dynamics and sensitivity to landscape spatial heterogeneity in Alaska. *The Cryosphere*, 12, 145-161, 2018.

Wang, J., Dong, J., **Yi, Y.** et al.: Decreasing net primary production due to drought and slight decreases in solar radiation in China from 2000 to 2012. *Journal of Geophysical Research-Biogeosciences*, 122, doi:10.1002/2016JG003417. 2017.

Yi, Y., Kimball, J. S., Rawlins, M. A., Moghaddam, M., Euskirchen, E. S.: The role of snow cover affecting boreal-arctic soil freeze-thaw and carbon dynamics, *Biogeosciences*, 12, 5811-5829, 2015.

Zhang, W., **Yi, Y.**, Kimball, J.S., Kim, Y.: Climatic controls on spring onset of Tibetan Plateau grasslands from 1982 to 2008. *Remote Sensing*, 7(12), 16607-16622, 2015.

Yi, Y., Kimball, J. S., Reichle, R. H.: Spring hydrology determines summer net carbon uptake in northern ecosystems, *Environmental Research Letters*, 9, 064003, 2014.

Yi, Y., Kimball, J. S., Jones, L. A., Reichle, R. H., Nemani, R., Margolis, H. A.: Recent climate and fire disturbance impacts on boreal and arctic ecosystem productivity estimated using a satellite-based terrestrial carbon flux model, *Journal of Geophysical Research-Biogeosciences*, 118, 606-622, 2013.

Yi, Y., Kimball, J. S., Jones, L. A., Reichle, R. H., McDonald, K. C.: Evaluation of MERRA land surface estimates in preparation for the Soil Moisture Active Passive Mission, *Journal of Climate*, 24, 3797-3816, 2011.

Yi, Y. and Yang, D.: An operational method to estimate evapotranspiration using MODIS data during winter wheat growing season, *International Journal of Remote Sensing*, 32, 4915-4932, 2011.

Yi, Y., Yang, D., Huang, J., Chen, D.: Evaluation of MODIS surface reflectance products for wheat leaf area index (LAI) retrieval, *ISPRS Journal of Photogrammetry and Remote Sensing*, 63, 661-677, 2008.

SYNERGISTIC ACTIVITIES

- **Committee services:** Scientific Committee Member of IEEE Geoscience and Remote Sensing Symposium (IGARSS), 2014-2018.
- **Panel review:** NSF Polar Programs (2016), NASA Water Resources Earth Science Applications (2014), NASA Interdisciplinary Research in Earth Science (2013).
- **Journal review:** Nature Geoscience, JGR-Atmospheres, Hydrology and Earth System Sciences, Journal of Hydrometeorology, Geoscientific Model Development, Global Change Biology, IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, Remote Sensing, Journal of Applied Meteorology and Climatology, Ecological Modeling, Ecosphere, Ecohydrology etc.