

## **Zhenci Xu**

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### **EDUCATION:**

**Ph.D.**, Sustainability Science, Michigan State University

Chair: Dr. Jianguo Liu

2014 - 2019

**B.A.**, Hydraulic engineering, China Agricultural University

2010-2014

**AREAS OF EXPERTISE:** Sustainable Development Goals, food-energy-water nexus, environmental impacts assessment, footprint, ecology, ecosystem services, spatial analysis, human environment interactions, China

### **EMPLOYMENT:**

2014 - 2019 - Research assistant, Michigan State University, Center for Systems Integration and Sustainability (Dr. Jianguo Liu)

### **PUBLICATIONS:**

**Xu, Z.**, Paul, M., Gong, M., & Liu, J. (2019). Shift in a National Virtual Energy Network *Applied Energy*, 242, 561-569.

**Xu, Z.**, Chen, X., Wu, S. R., Gong, M., Du, Y., Wang, J., ... & Liu, J. (2019). Spatial-temporal assessment of water footprint, water scarcity and crop water productivity in a major crop production region. *Journal of Cleaner Production*, 224, 375-383.

**Xu, Z.**, Chau, S. N., Ruzzenenti, F., Connor, T., Li, Y., Tang, Y., ... & Liu, J. (2019). Evolution of multiple global virtual material flows. *Science of the Total Environment*, 658, 659-668.

**Xu, Z.**, Tang, Y., Connor, T., Li, D., Li, Y. and Liu, J., (2017). Climate variability and trends at a national scale. *Scientific Reports*, 7(1), p.3258.

**Xu, Z.**, Li, Y., Herzberger, A., Chen, X., Gong, M., Kapsar, K., ... & Liu, J. (2019). Interactive national virtual water-energy nexus networks. *Science of The Total Environment*, 673, 128-135.

Wang, J., Chen, X., Liu, Z., Frans, V. F., **Xu, Z.**, Qiu, X., ... & Li, Y. (2019). Assessing the water and carbon footprint of hydropower stations at a national scale. *Science of The Total Environment*, 676, 595-612.

**(as corresponding author)**

- Liu, J., Hull, V., Godfray, H.C.J., Tilman, D., Gleick, P., Hoff, H., Pahl-Wostl, C., **Xu, Z.**, Chung, M.G., Sun, J. and Li, S., 2018. Nexus approaches to global sustainable development. *Nature Sustainability*, 1(9), p.466.
- Sun, J., Mooney, H., Wu, W., Tang, H., Tong, Y., **Xu, Z.**, Huang, B., Cheng, Y., Yang, X., Wei, D., Zhang, F., & Liu, J. 2018. Importing food damages domestic environment: Evidence from global soybean trade. *Proceedings of the National Academy of Sciences*, 115(21), pp.5415-5419.
- Viña, A., McConnell, W. J., Yang, H., **Xu, Z.**, & Liu, J. (2016). Effects of conservation policy on China's forest recovery. *Science Advances*, 2(3), e1500965.
- Wang, T., **Xu, Z.**, Li, Y., Liang, M., Wang, Z., & Hynds, P. (2016). Biofilm growth kinetics and nutrient (N/P) adsorption in an urban lake using reclaimed water: A quantitative baseline for ecological health assessment. *Ecological Indicators*, 71, 598-607.
- Zhou, B., Li, Y., Song, P., **Xu, Z.**, & Bralts, V. (2016). A kinetic model for biofilm growth inside non-PC emitters under reclaimed water drip irrigation. *Agricultural Water Management*, 168, 23-34.
- Liu, J., Hull, V., Luo, J., Yang, W., Liu, W., Viña, A., Vogt, C., **Xu, Z.**, Yang, H., Zhang, J. and An, L., 2015. Multiple telecouplings and their complex interrelationships. *Ecology and Society*, 20(3).
- Xu, Z.**, Liu, J., Wang G, & Yang, J. (2013). Comparison of Beijing Temperature Prediction Effect Based on PSO-LSSVM and Elman Neural Network Model. *Journal of Henan Agricultural Sciences*, 42(3), 157-160. (In Chinese)

***Honors and Prizes***

1. Summer Critical Needs fellowship funds, \$7000, from the College of Agriculture and Natural Resource, Office of Academic and Student Affairs (2019)
2. Top 100 *Scientific Reports* Earth science papers (100/1500) (2017)

***Manuscript reviews***

Global Environmental Change  
Applied energy  
Journal of Cleaner Production  
Science of The Total Environment  
Journal of Environmental Management  
Ecology and Society  
Ecological Modelling