Zhengyu Xia

Department of Earth and Environmental Sciences, Lehigh University

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EDUCATION

- 2015 – Pres. **Ph.D. in Earth and Environmental Sciences**, Lehigh University, USA
  Dissertation title: Reconstructing late-Holocene climate and atmospheric circulation changes in southern Patagonia and South Georgia using peat moss stable isotopes (expected in 2020)
  Advisor: Dr. Zicheng Yu
- 2011 – 2015 **B.S. in Geology**, China University of Geosciences, Wuhan, China

PROFESSIONAL EXPERIENCE

- 2017 – Pres. **Teaching Assistant**, Lehigh University
  1) Taught lab class EES022 (*Exploring Earth*)
  2) Assisted with lab section and grading for EES152 (*Ecology*), EES357 (*Paleoecology and Landscape History*), and EES386 (*Wetland Ecology*)
- 2016 – 2017 **Research Assistant**, Lehigh University

PUBLICATIONS

- Peer-reviewed journal articles:

Xia, Z., Yu, Z., and Loisel, J., 2018. Centennial-scale dynamics of the Southern Hemisphere Westerly Winds across the Drake Passage over the past two millennia. *Geology*, 46, 855–858, doi: 10.1130/G40187.1

Xia, Z., Zheng, Y., Stelling, J. M., Loisel, J., Huang, Y., and Yu, Z. Environmental controls on the carbon and water (H and O) isotopes in peatland *Sphagnum* mosses. *Geochimica et Cosmochimica Acta* (in revision)

Treat, C. C., Kleinen, T., Broothaerts, N., Dalton A. S., Dommain, R., Douglas, T. A., Drexler, J., Finkelstein S. A., Grosse, G., Hope, G., Hutchings, J., Jones, M. C., Kuhry, P., Lacourse, T., Lähteenoja, O., Loisel, J., Notebaert, B., Payne, R., Peteet, D., Sannel A. B. K., Stelling, J. M., Strauss, J., Swindles, G. T., Talbot, J., Tarnocai, C., Verstraeten, G., Williams, C. J., **Xia, Z.**, Yu, Z., Väliranta, M., Hättestrand, M., Alexanderson, H., and Brovkin, V. Widespread global peatland establishment and persistence over the last 130,000 y. *Proceedings of the National Academy of Sciences*, 116, 4822–4827, doi: 10.1073/pnas.1813305116

- Peer-reviewed book chapters:

Xia, Z. and Yu, Z. Applications of stable isotopes to studies of paleohydrology and

Paleoclimatology. *Encyclopedia of Water: Science, Technology and Society*, Ed. P. A. Maurice, Wiley (in press)

CONFERENCE ABSTRACTS

Xia, Z. Investigating the influence of moisture sources and trajectories on monthly isotopic composition of precipitation using daily weather station data, HYSPLIT backward trajectory modeling, and moisture uptake analysis. 2018 AGU Fall Meeting, Washington D.C., USA

Xia, Z., Yu, Z., Zheng, Y., Loisel J., and Huang, Y. Late-Holocene hydroclimate and atmospheric circulation variability in southern Patagonia: insights from triple stable isotopes ($\delta^{18}O$, $\delta^{13}C$, δD) of peat bog *Sphagnum* moss. 2017 AGU Fall Meeting, New Orleans, USA

Treat, C. C., Broothaerts, N., Dalton, A., Dommain, R., Finkelstein, S., Grosse, G., Jones, M. C., Kleinen, T., Kuhry, P., Lacourse, T., Lähteenoja, O., Notebaert, B., Payne, R., Peteet, D. M., Sannel, B., Stelling, J., Strauss, J., Swindles, G., Talbot, J., Tarnocai, C., Verstraeten, G., Williams, C., **Xia, Z.**, Yu, Z., and Brovkin, V. Buried Peats: Past Peatland Distribution as an Indicator of Hydroclimate and Temperature. 2016 AGU Fall Meeting, San Francisco, USA

Yu, Z., Beilman D., Loisel J., Stelling, J. M., **Xia, Z.**, Parnikoza, I. Solar heating, microclimate, and the formation of peat-accumulating ecosystems in Antarctica. XXXIV SCAR Open Science Conference (2016), Kuala Lumpur, Malaysia

Xia, Z., Yu, Z., Loisel, J., and Stelling J. M. A 500-year record of atmospheric circulation change in southern Patagonia from dual water isotopes of subfossil *Sphagnum* moss cellulose (2016). VIII Southern Connection Congress, Punta Arenas, Chile

HONORS AND AWARDS

The University of Utah SPATIAL short course participant support award (2019), Lehigh University College of Arts and Sciences Summer Research Fellowship (2018), Lehigh University EES Graduate Symposium Best Talk Winner (2018), Lehigh University Presidential Fellowship (2015)

FIELD WORK EXPERIENCE

Antarctic Peninsula Palmer Station (2018–2019), Patagonian peatlands in Chile (2016), peatlands in northeastern and central China (2014)

SERVICE

Reviewer of *The Holocene* (2)

PROFESSIONAL AFFILIATION

American Geophysical Union