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Education and Training

Nanjing Institute of Meteorology, China	Meteorology	BS 1984
University of Melbourne, Australia	Meteorology	MSc 1989
Macquarie University, Australia	Atmospheric Science	PhD 1992

Appointments

2011 – present	John A. and Katherine G. Jackson Chair in Earth System Sciences, Professor, Department of Geological Sciences, University of Texas at Austin
2008 – present	Professor (with tenure), Department of Geological Sciences, University of Texas at Austin
2005 – 2008	Associate Professor (with tenure), Department of Geological Sciences, University of Texas at Austin
2001 – 2005	Assistant Professor, Department of Geological Sciences, University of Texas at Austin
1998 – 2001	Research Associate Professor, Department of Hydrology and Water Resources, University of Arizona
1993 – 1998	Postdoctoral Research Associate through Principal Research Specialist, Department of Atmospheric Science, University of Arizona

Publications Most Closely Related to the Course

- (*denotes graduate students, postdocs underlined>; see ORCID 0000-0003-3030-0330 for 200+ articles)
- Cai, X.*, **Z.-L. Yang**, J. B. Fisher, X. Zhang, M. Barlage and F. Chen, 2016: Integration of nitrogen dynamics into the Noah-MP land model v1.1 for climate and environmental predictions. *Geosci. Model Dev.*, **9**, 1–15, doi:10.5194/gmd-9-1-2016.
- Jiang, X.Y.* and **Z.-L. Yang**, 2012: Projected changes of temperature and precipitation in Texas from downscaled global climate models, *Climate Research*, **53**, 229–244, doi: 10.3354/cr01093.
- Li, L. C.*, **Z.-L. Yang**, A. M. Matheny, H. Zheng, S. C. Swenson, D. M. Lawrence, M. Barlage, B.Y. Yan, N. G. McDowell, and L. R. Leung, 2021: Representation of plant hydraulics in the Noah-MP land surface model: Model development and multi-scale evaluation, *Journal of Advances in Modeling Earth Systems*, <https://doi.org/10.1029/2020MS002214>.
- Lin, P. R.*, **Z.-L. Yang**, D. J. Gochis, W. Yu, D. R. Maidment, M. A. Somos-Valenzuela, and C. H. David, 2018: Implementation of a vector-based river network routing scheme in the community WRF-Hydro modeling framework for flood discharge simulation, *Environmental Modelling and Software* **107**, 1–11, <https://doi.org/10.1016/j.envsoft.2018.05.018>.
- Nielsen-Gammon, J. W., J. L. Banner, B. I. Cook, D. M. Tremain, C. I. Wong, R. E. Mace, H. Gao, **Z.-L. Yang**, M. F. Gonzalez, R. Hoffpauir, T. Gooch, and K. Kloesel, 2020: Unprecedented drought challenges for Texas water resources in a changing climate: what do researchers and stakeholders need to know? *Earth's Future*, **8**, e2020EF001552. doi: 10.1029/2020EF001552.
- Qing, Y., Wang, S., Ancell, B., and **Yang, Z.-L.**, 2022: Accelerating flash droughts induced by the joint influence of soil moisture depletion and atmospheric aridity. *Nature Communications*, **13**, 1139.
- Souto, L., J. Yip, W.-Y. Wu*, B. Austgen, E. Kutanoglu, J. Hasenbein, **Z.-L. Yang**, C. W. King, and S. Santoso, 2022: Power system resilience to floods: Modeling, impact assessment, and mid-term mitigation strategies, *International Journal of Electrical Power and Energy Systems*, **135**, 107545, <https://doi.org/10.1016/j.ijepes.2021.107545>.

- Wang, L. and **Z.-L. Yang**, 2020: Changes of Land-use under Anthropogenic Influences, *Oxford Research Encyclopedia of Environmental Science*, doi: 10.1093/acrefore/9780199389414.013.37.
- Wu, W.-Y., **Z.-L. Yang**, L. Zhao, and P.-R. Lin, 2022: The impact of multi-sensor land data assimilation on river discharge estimation, *Remote Sensing of Environment*, **279**, 113138 <https://doi.org/10.1016/j.rse.2022.113138>.
- Wu, W.-Y.*, M. H. Lo, Y. Wada, J. S. Famiglietti, J. T. Reager, P. J. F. Yeh, A. Ducarne, and **Z.-L. Yang**, 2020: Divergent effects of climate change on future groundwater availability in key mid-latitude aquifers, *Nature Communications*, **11** (1), 3710, **DOI**: 10.1038/s41467-020-17581-y.
- Yang, Z.-L.**, 2004: Modeling land surface processes in short-term weather and climate studies, in *Observations, Theory, and Modeling of Atmospheric Variability*, (ed. X. Zhu), World Scientific Series on Meteorology of East Asia, Vol. 3, World Scientific Publishing Corporation, Singapore, pp. 288–313.
- Yang, Z.-L.**, 2015: Foreword to the special issue: regional earth system modeling, *Climatic Change*, **129** (3–4), 365–368, doi: 10.1007/s10584-015-1365-7.
- Yang, Z.-L.** and Z.-G. Ma, 2017: Foreword to the special issue: decadal scale drought in arid regions, *Climatic Change*, **144** (3), 389–390.
- Yang, Z.-L.**, L. Zhao, Y. J. He, and B. Wang, 2020: Perspectives for Tibetan Plateau Data Assimilation, *National Science Review*, **7** (3), 495–499, <https://doi.org/10.1093/nsr/nwaa014>.
- Yang, Z.-L.**, G.-Y. Niu, K. E. Mitchell, F. Chen, M. B. Ek, M. Barlage, L. Longuevergne, K. Manning, D. Niyogi, M. Tewari, and Y.-L. Xia, 2011: The community Noah land surface model with multiparameterization options (Noah-MP): 2. Evaluation over global river basins, *J. Geophys. Res.*, **116**, D12110, doi:10.1029/2010JD015140.
- Zheng, H., **Z.-L. Yang**, P. Lin*, W.-Y. Wu*, L. Li*, Z. Xu, J. F. Wei, L. Zhao, Q. Y. Bian, and S. Wang, 2020: Falsification-oriented signature-based evaluation for guiding the development of land surface models and the enhancement of observations, *Journal of Advances in Modeling Earth Systems*, **12** (12), e2020MS002132. <https://doi.org/10.1029/2020MS002132>.

Major Honors

- Outstanding Editor Award, for Exceptional Contributions to *Advances in Atmospheric Sciences*, 2021
- Distinguished Achievement Award (shared) - National Center for Atmospheric Research (NCAR) Community Climate System Model (CCSM) Version 3.5 Development, USA, June 2008
- The Joseph C. Walter Jr. Excellence Award (the most prestigious internal award in the Jackson School of Geosciences), The University of Texas at Austin, 2007
- Teaching Excellence Award, College of Natural Sciences, The University of Texas at Austin, 2004

Synergistic Activities

- Editor in Chief, Water and Climate Section in *Water*, 2021–present
- Editor, *Advances in Atmospheric Sciences*, 2020–present
- Associate Editor, *Journal of Geophysical Research–Atmospheres*, 2019–present
- Co-Chair of the NCAR Community Climate System Model (CCSM) Land Working Group (LandWG), 2008–2013
- Chair/organizer of numerous sessions at the AGU and AMS and other professional meetings