Yuxin Zhou

Contact Information

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Santa Barbara, CA 93106
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Education

Columbia University, New York, NY — 2016 – 2022

Ph.D., Earth and Environmental Sciences
Dissertation: Atlantic Meridional Overturning Circulation instabilities during the last glacial cycle. Advisor: Jerry F. McManus

University of Southern California, Los Angeles, CA — 2012 – 2016

B.S., Geological Sciences, *Phi Beta Kappa*
Minor in Computer Science

Experience

Postdoctoral Scholar, UC Santa Barbara. Advisor: Lorraine Lisiecki 2022-

Awards

Cushman Foundation Johanna M. Resig Fellowship ($30,000)	2021
IODP Schlanger Fellowship ($30,000)	2020
Columbia University GSAS Dean's Fellowship	2016
Woods Hole Oceanographic Institution Summer Student Fellowship	2015
USC Dornsife Harry Miller Scholarship	2015
USC Dornsife Sylas and Rose Marx Meyer Scholarship	2015
USC Earth Sciences Richard O. Stone Scholarship	2012, 2014, 2015

Publications

Zeng, M., Rashid, H., **Zhou, Y.**, McManus, J.F., Wang, Y. (2023), Dynamics of the subpolar gyre and transition zone of the North Atlantic during the last glacial cycle. *Quaternary Science Reviews*, 314, 108215. doi:10.1016/j.quascirev.20

Zhou, Y. and McManus, J.F. (2023), Authigenic uranium deposition in the glacial North Atlantic - implications for oxygenation, carbon storage, and deep water mass geometry. *Quarternary Science Reviews*, 300, 107914. doi: 10.1016/j.quascirev.2022.107914

Zhou, Y. and McManus, J.F. (2022), Extensive evidence for a Last Interglacial Laurentide Outburst (LILO) event. *Geology*, 50(8), 934-938. doi: 10.1130/G49956.1

Zhou, Y., McManus, J.F., Jacobel, A., Costa, K., Wang, S., and Alvarez Caraveo, B. (2021), Enhanced iceberg discharge in the western North Atlantic during all Heinrich events of the last glaciation. *Earth and Planetary Science Letters*, 564, 116910. doi: 10.1016/j.epsl.2021.116910

Costa, K.M., Hayes, C.T., Anderson, R.F., Pavia, F.J., Bausch, A., Deng, F., Dutay, J.-C., Geibert, W., Heinze, C., Henderson, G., Hillaire-Marcel, C., Hoffmann, S., Jaccard, S.L., Jacobel, A.W., Kienast, S.S., Kipp, L., Lerner, P., Lippold, J., Lund, D., Marcantonio, F., McGee, D., McManus, J.F., Mekik, F., Middleton, J.L., Missiaen, L., Not, C., Pichat, S., Robinson, L.F., Rowland, G.H., Roy-Barman, M., Tagliabue, A., Torfstein, A., Winckler, G. and **Zhou, Y.** (2020), ^{230}Th Normalization: New Insights on an Essential Tool for Quantifying Sedimentary Fluxes in the Modern and Quaternary Ocean. *Paleoceanography and Paleoclimatology*, 35: e2019PA003820. doi:10.1029/2019PA003820

Khider, D. , Emile-Geay, J. , McKay, N. P., Gil, Y. , Garijo, D. , Ratnakar, V. , Alonso-Garcia, M. , Bertrand, S. , Bothe, O. , Brewer, P. , Bunn, A. , Chevalier, M. , Comas-Bru, L. , Csank, A. , Dassié, E. , DeLong, K. , Felis, T. , Francus, P. , Frappier, A. , Gray, W. , Goring, S. , Jonkers, L. , Kahle, M. , Kaufman, D. , Kehrwald, N. M., Martrat, B. , McGregor, H. , Richey, J. , Schmittner, A. , Scroxton, N. , Sutherland, E. , Thirumalai, K. , Allen, K. , Arnaud, F. , Axford, Y. , Barrows, T. , Bazin, L. , Pilaar Birch, S. E., Bradley, E. , Bregy, J. , Capron, E. , Cartapanis, O. , Chiang, H. , Cobb, K. M., Debret, M. , Dommain, R. , Du, J. , Dyez, K. , Emerick, S. , Erb, M. P., Falster, G. , Finsinger, W. , Fortier, D. , Gauthier, N. , George, S. , Grimm, E. , Hertzberg, J. , Hibbert, F. , Hillman, A. , Hobbs, W. , Huber, M. , Hughes, A. L., Jaccard, S. , Ruan, J. , Kienast, M. , Konecky, B. , Le Roux, G. , Lyubchich, V. , Novello, V. F., Olaka, L. , Partin, J. W., Pearce, C. , Phipps, S. J., Pignol, C. , Piotrowska, N. , Poli, M. , Prokopenko, A. , Schwanck, F. , Stepanek, C. , Swann, G. E., Telford, R. , Thomas, E. , Thomas, Z. , Truebe, S. , von, Gunten, L. , Waite, A. , Weitzel, N. , Wilhelm, B. , Williams, J. , Winstrup, M. , Zhao, N. and **Zhou, Y.** (2019), PaCTS 1.0: A Crowdsourced Reporting Standard for Paleoclimate Data. *Paleoceanography and Paleoclimatology*, 34, 1570-1596. doi:10.1029/2019PA003632

Jacobel, A.W., Anderson, R.F., Winckler, G., Costa, K.M., Gottschalk, J., Middleton, J.L., Pavia, F.J., Shoenfelt, E.M. and **Zhou, Y.** (2018), No evidence for equatorial Pacific dust fertilisation, *Nature Geoscience*, 12, 154-155. doi:10.1038/s41561-019-0304-z

Emile-Geay, J., Cobb, K.M., Carre, M., Braconnot, P., Leloup, J., **Zhou, Y.**, Harrison, S.P., Correge, T., McGregor, H.V., Collins, M., Driscoll, R., Elliot, M., Schneider, B. and Tudhope, A. (2016), Links between tropical Pacific seasonal, interannual and orbital variability during the Holocene, *Nature Geoscience*, 9, 168. doi: 10.1038/ngeo2608

Dee, S., Noone, D., Buenning, N., Emile-Geay, J. and **Zhou, Y.** (2015), SPEEDY-IER: A fast atmospheric GCM with water isotope physics, *Journal of Geophysical Research - Atmospheres*, 120, 73–91. doi: 10.1002/2014JD022194

Zhou, Y. and McManus, J.F. Heinrich event ice discharge and the future fate of the Atlantic Meridional Overturning Circulation. In review at *Science*.

CONFERENCES

Zhou, Y., Lisiecki, L.E., Rand, D., Hobart, B., Lee, T., Gebbie, G., and Lawrence, C.E. Revisiting Pleistocene benthic $\delta^{18}O$ stacks with BIGMACS. *2022 AGU Fall Meeting*

Zhou, Y. and McManus, J.F. Authigenic uranium deposition in the glacial North Atlantic - implications for oxygenation, carbon storage, and deep water mass geometry. *2022 Comer Climate Conference*

Jorgensen, E.M., **Zhou, Y.**, and McManus, J.F. Contextualizing North Atlantic Sediment within Heinrich Events. *2021 AGU Fall Meeting*

Paul, A., **Zhou, Y.** and McManus, J.F. Climatic and Oceanographic Conditions in the Mid-Atlantic through the Penultimate Interglacial Period. *2021 AGU Fall Meeting*

Zhou, Y. and McManus, J.F. Glacial carbon storage and water mass geometry in the North Atlantic. *2021 AGU Fall Meeting*

Zhou, Y. and McManus, J.F. Extensive evidence for the Last Interglacial analog of the 8.2 ka event. *2021 Comer Climate Conference*

Middleton, J.L., Winckler, G., Schaefer, J., Pavia, F., Anderson, R.F., Schwartz, S., **Zhou, Y.**, and Kinsley, C. Global patterns in oceanographic influences on ^{10}Be deposition rates to the seafloor. *2021 Goldschmidt*

Zhou, Y. and McManus, J.F. A new method of estimating freshwater fluxes during millennial events of the last glaciation. *2020 Comer Climate Conference*

Zhou, Y. and McManus, J.F. Heinrich Events 3 and 6 as Events of Increased Ice-Rafted Deposition. *2019 Goldschmidt*

McManus, J.F., Costa, K.M., **Zhou, Y.**, Cohall, M., and Hoffmann, S.S. Reconstructions of changes in deep ocean circulation and climate through the last large glacial-interglacial cycle in the North Atlantic region. *2019 AGU Fall Meeting*

McManus, J.F., Costa, K.M., Ng, H.C., **Zhou, Y.**, Hoffmann, S.S., Major, C.O., Robinson, L.F., and Keigwin, L.D. Time-series Transects of Deglacial Circulation Changes in the Deep North Atlantic Ocean. *2018 AGU Fall Meeting*

Zhou, Y., Oppo, D., Gebbie, G., and Thornalley, D. Magnitude of the Suess Effect in North Atlantic - a Study of Foraminifera and Transient Tracer Simulations. *2016 AGU Ocean Sciences Meeting*

Zhou, Y., Paterson, S., Pablo, A.H., Cao, W. and Ratschbacher, B. An Isostatic Mass Balance Model of Continental Arcs and Its Application to Paleozoic-Mesozoic Argentinean Cordilleran Orogenic Systems. *2016 GSA Cordilleran Section meeting*

Emile-Geay, J., Cobb, K.M., Carre M., Braconnot, P., Leloup J, **Zhou, Y.**, Harrison, S.P., Correge, T., McGregor, H.V., Collins, M., Driscoll, R. Holocene constraints on simulated tropical Pacific climate. *2015 AGU Fall Meeting*

Invited Seminars

Paleo/Environmental Seminar, University of Southern California 2023

Earth Research Institute Climate Seminar, University of California, Santa Barbara 2023

Whole Earth Seminar, University of California, Santa Cruz 2023

Paleoclimate working group meeting, National Center for Atmospheric Research 2022

International Quaternary Webinar, University of Massachusetts 2022

Climate-geochemistry departmental seminar, Max Planck Institute for Chemistry 2021

Seagoing Experience

R/V Roger Revelle, UNOLS Coring PI training Aug. 22–Sept. 1, 2022

R/V Tioga, plankton towing and grab coring training Jul. 17, 2015

Professional Services

Steward, UCSB postdoc union (UAW 5810) 2022 –

Chair, LDEO graduate student committee 2019 – 20

Volunteer, LDEO Wally Broecker Symposium 2019

Orientation co-chair, LDEO graduate student committee 2018 – 19

Member, LDEO committee on professional conduct 2018 – 2022

Co-organizer, LDEO geochemistry seminar committee 2017 – 19

Co-organizer, LDEO first year colloquium 2017

President, USC Sigma Gamma Epsilon 2015 – 2016

Secretary, — 2014

Member: Phi Beta Kappa 2016 –

Member: American Geophysical Union 2015 –

Manuscript reviewer for *Science Advances*, *Environmental Research Letters*, *Earth and Planetary Science Letters*, *Climate of the Past*, *Geo-Marine Letters*, *Marine Geology*, and *Quaternary Research*

Teaching and Outreach

Domain Expert, ClimateMatch Academy 2023 –

Guest lecturer, UCSB Earth 4 Introduction to Oceanography 2023

Facilitator, UCSB Family Ultimate Science Exploration 2022

Teacher, Columbia University Girls Who Code 2018 – 2022

Guest lecturer, Columbia University EESCW4920 Paleoceanography 2022

Teacher, Columbia University COVID Volunteer Tutor Corps 2020

Foundational Track completion, Teaching Development Program, the Center for Teaching and Learning at Columbia University 2020

Guest lecturer, Columbia University EESCW2100 Earth's Environmental Systems: Climate System 2018

Teaching Assistant, Columbia University EESCW2100 Earth's Environmental Systems: Climate System 2017-2018

Volunteer, Columbia University Girls Science Day 2018 – 2019

Volunteer, Lamont Open House 2016 – 2019

Oceanography Teacher, Lenicia B. Weemes Elementary School, Joint Education Program 2012

REU mentor of Alyson Churchill (Colby College; 2018; now PhD student at Oregon State University), Annemarie Pillsbury (Dutchess Community College; 2018; now graduate student at University at Buffalo), Miah Cohall (Manhattan College; 2019; now Assistant Engineer at Hazen and Sawyer), Cassandra Bartels (Barnard College; 2019), Ellen May Jorgensen (Syracuse University; 2021; now PhD student at Brown University), Herman Garcia (The City College of New York; 2021; now Bridge-to-PhD program participant at WHOI), Ariana Paul (Barnard College; 2021)

Programming Languages

C++ (proficient), Java (proficient), Fortran (competent), Python (expert), Matlab (expert), R (competent), Javascript (proficient), Git (expert)