PEDRO DINEZIO

University of Colorado Boulder | Department of Atmospheric and Oceanic Sciences
311 UCB Boulder, CO 80309 | pedro.dinezio@colorado.edu

Professional Experience

Associate Professor, Department of Atmospheric and Oceanic Sciences, University of Colorado Boulder, Boulder, Colorado. — 2020 – present

Research Scientist, Institute for Geophysics, Jackson School of Geosciences, University of Texas, Austin, Texas. — 2019 – 2020

Research Associate, Institute for Geophysics, Jackson School of Geosciences, University of Texas, Austin, Texas. — 2016 – 2018

Assistant Researcher, Department of Oceanography, School of Ocean Earth Science and Technology, University of Hawaii, Honolulu, Hawaii. — 2015

Visiting Researcher, 2014 Roland Madden Visitor, National Center for Atmospheric Research, Boulder, Colorado. — 2014

Young Investigator Fellow, International Pacific Research Center, School of Ocean Earth Science and Technology, University of Hawaii, Honolulu, Hawaii. — 2011 – 2013

Research Associate, Cooperative Institute of Marine and Atmospheric Studies, National Oceanographic and Atmospheric Administration, Miami, Florida — 2005 – 2010

Education

University of Miami — 2008 – 2011
Ph.D. in Meteorology and Physical Oceanography
Dissertation title: **Mechanisms of Tropical Pacific Climate Change: Beyond the Bjerknes Feedback**
Advisor: Prof. Amy Clement

University of Miami — 2006 – 2008
M.Sc. in Meteorology and Physical Oceanography
Thesis title: **Climate Response of the Equatorial Pacific to Global Warming**
Advisor: Prof. Amy Clement

Instituto Tecnológico de Buenos Aires — 1996 – 2000
B. Sc. In Mechanical Engineering

Honors & Awards

Roland Madden Visiting Fellowship, National Center for Atmospheric Research	2014
SOEST Young Investigator Fellowship	2012-2013
RSMAS Walton Smith Prize, Best Ph.D. dissertation	2011
RSMAS/MPO best student paper (DiNezio et al. 2009b)	2009

Refereed Publications (H-index = 34 Google Scholar, underlined indicates mentee)

2020 – 2022 (CU Boulder)

In review

Lawman, A., C. Sun, X. Wu, T.-Y. Sun, N. Piatrunia, K. Gomez, **P. N. DiNezio**, T. Shanahan and co-authors. Tropical rainfall changes in response to a weaker AMOC: Mechanisms and an integrative model-data comparison for Heinrich Stadial 1. *Clim. Past*, in review.

Todd, V., T. Shanahan, **P. N. DiNezio**, and coauthors. North Pacific response to hemispheric warming forces Holocene drought. *Nature. Comm.*, in review.

Klavans, J., **P. N. DiNezio,** C. Deser, A. Clement, and T. Shanahan: Human Emissions Drive Recent Shifts in the Pacific Decadal Oscillation. *Nature*, in review.

DiNezio, P. N., K. Thirumalai, J. Partin, Y. Okumura, and D. Liu: Future increase in risk of extreme El Niño supported by past glacial changes. *Nature*, in review.

DiNezio, P. N. and co-authors: The tropical response to ocean circulation collapse: *Nature*, in review.

2020 – 2023 (CU Boulder)

Published

Persch, C. F., **P. N. DiNezio**, and N. S. Lovenduski, 2023: The impact of orbital precession on air-sea CO2 exchange in the southern ocean. *Geophys. Res. Lett.*, 50, e2023GL103820. https://doi.org/10.1029/2023GL103820**.**

Maher, N., R. C. J. Wills, **P. DiNezio**, J. Klavans, S. Milinski, S. C. Sanchez, S. Stevenson, M. F. Stuecker, and X. Wu, 2023: The future of the El Niño–Southern Oscillation: using large ensembles to illuminate time-varying responses and inter-model differences*, Earth Syst. Dynam.*, **14**, 413–431, https://doi.org/10.5194/esd-14-413-2023.

Chikamoto, M., **P. N. DiNezio**, and N. S. Lovendusky, 2023: Long-term slowdown of ocean carbon uptake by alkalinity dynamics. *Geophys. Res. Lett.*, **50**, e2022GL101954. https://doi.org/10.1029/2022GL101954.

Karamperidou, C. and **P. N. DiNezio**, 2022: Holocene hydroclimatic variability in the tropical Pacific explained by changing ENSO diversity. *Nat. Commun.* **13**, 7244 (2022). https://doi.org/10.1038/s41467-022-34880-8.

Lawman, A. E., **P. N. DiNezio**, J. W. Partin, S. G. Dee, K. Thirumalai, T. M. Quinn, 2022: Unraveling forced responses of extreme El Niño variability over the Holocene. *Sci. Adv.*, **8** (9), https://doi.org/10.1126/sciadv.abm4313.

Wu, X., Y. M. Okumura, and **P. N. DiNezio**, S. G. Yeager, and C. Deser 2022: The equatorial Pacific cold tongue bias in CESM1 and its influence on ENSO forecasts, *J. Climate*, **35**(11), 3261-3277, https://doi.org/10.1175/JCLI-D-21-0470.1.

Chalmers, J., Kay, J. E., Middlemas, E. A., Maroon, E. A., and P**. N. DiNezio**, 2022: Does disabling cloud radiative feedbacks change spatial patterns of surface greenhouse warming and cooling? *J. Climate*, 35(6), 1787–1807, https://doi.org/10.1175/JCLI-D-21-0391.1.

Amaya, D. J., A. M. Seltzer, K. B. Karnauskas, J. M. Lora, X. Zhang, **P. N. DiNezio**, 2022: Air-sea coupling shapes North American hydroclimate response to ice sheets during the Last Glacial Maximum, *Earth Planet. Sci. Lett.*, https://doi.org/10.1016/j.epsl.2021.117271.

Sun, C., T. M. Shanahan, **P. N. DiNezio**, N. P. McKay, P. D. Roy, 2021: Great Plains storm intensity since the last glacial controlled by spring surface warming, *Nat. Geosci.* **14**, 912–917, https://doi.org/10.1038/s41561-021-00860-8.

Chikamoto, M. O. and **P. N. DiNezio**, 2021: Multi-century changes in the ocean carbon cycle controlled by the tropical oceans and the Southern Ocean. *Global Biogeochem. Cy.*, **35** e2021GB007090. https://doi.org/10.1029/2021GB007090.

Wu, X, Y. M Okumura, and **P. N. DiNezio**, 2021: Predictability of El Niño duration based on the onset timing, *J. Climate*, **34**(4), 1351-1366, https://doi.org/10.1175/JCLI-D-19-0963.1.

Wu, X., Y. M. Okumura, C. Deser, and **P. N. DiNezio**, 2021: Two-year Dynamical Predictions of ENSO Event Duration during 1954–2015. *J. Climate*, https://doi.org/10.1175/JCLI-D-20-0619.1.

Zhu, J., B. L. Otto-Bliesner, E. C. Brady, C. J. Poulsen, J. E. Tierney, M. Lofverstrom and **P. N. DiNezio**, 2021: Assessment of equilibrium climate sensitivity of the Community Earth System

Model version 2 through simulation of the Last Glacial Maximum. *Geophys. Res. Lett.*, **48**, https://doi.org/10.1029/2020GL091220

Dee, S., Y. Okumura, S. Stevenson and **P. N. Di Nezio**, 2020: Enhanced North American ENSO teleconnections during the Little Ice Age revealed by paleoclimate data assimilation. *Geophys. Res. Lett.*, **47**, https://doi.org/10.1029/2020GL087504.

Lawman, A. E., J. W. Partin, S. G. Dee, C. A. Casadio, **P. N. Di Nezio** and T. M. Quinn, 2020: Developing a coral proxy system model to compare coral and climate model estimates of changes in paleo-ENSO variability. *Paleoceanography and Paleoclimatology*, **35**, https://doi.org/10.1029/2019PA003836.

Deser, C., A. S. Phillips, I. R. Simpson, N. Rosenbloom, D. Coleman, F. Lehner, A. G. Pendergrass, **P. N. DiNezio**, and S. Stevenson, 2020: Isolating the Evolving Contributions of Anthropogenic Aerosols and Greenhouse Gases: A New CESM1 Large Ensemble Community Resource, *J. Climate*, ***33*** (18), 7835-7858, https://doi.org/10.1175/JCLI-D-20-0123.1.

2016 – 2020 (UT Austin)

DiNezio P. N., M. Puy, K. Thirumalai, F.-F. Jin, and J. Tierney, 2020: Emergence of an equatorial mode of climate variability in the Indian Ocean under greenhouse warming. *Sci. Adv*. **6**, https://doi.org/10.1126/sciadv.aay7684.

Deser, C., F. Lehner, K. B. Rodgers, T. Ault, T. L. Delworth, T. L., **P. N. DiNezio**, et al. 2020: Insights from Earth system model initial-condition large ensembles and future prospects. *Nat. Clim. Chang.* https://doi.org/10.1038/s41558-020-0731-2.

Thirumalai, K., **P. N. DiNezio**, J. E. Tierney, M. Puy[§], and M. Mohtadi, 2019: An El Niño mode in the glacial Indian Ocean? *Paleoceanography and Paleoclimatology*, **34**, https://doi.org/10.1029/2019PA003669.

Wu, X., Y.M. Okumura, and **P.N. DiNezio**, 2019: What Controls the Duration of El Niño and La Niña Events? *J. Climate*, **32**, 5941–5965, https://doi.org/10.1175/JCLI-D-18-0681.1.

D'Arcy, M. K., T. F., Schildgen, J. M. Turowski, and **P. N. DiNezio**, 2019. Inferring the timing of abandonment of aggraded alluvial surfaces dated with cosmogenic nuclides. *Earth Surf. Dynam.*, **7,** 755-771, https://doi.org/10.5194/esurf-7-755-2019.

Windler, G., J. E. Tierney, **P. N. DiNezio**, K. Gibson, and R. Thunell, 2019: Shelf exposure influence on Indo-Pacific Warm Pool climate for the last 450,000 years. *Earth Planet Sci Lett.,* **516**, 66-76, https://doi.org/10.1016/j.epsl.2019.03.038.

DiNezio, P. N., J. E. Tierney, B. Otto-Bliesner, A. Timmermann, T. Bhattacharya, N. Rosenbloom, and E. Brady, 2018: Glacial changes in tropical climate amplified by the Indian Ocean. *Sci. Adv*., **4** (12) https://doi.org/10.1126/sciadv.aat9658.

Erb. M. P., C. S. Jackson, A. J. Broccoli, D. W. Lea, P. J. Valdes, M Crucifix and **P. N. DiNezio**, 2018: Model evidence for a seasonal bias in Antarctic ice cores. *Nat. Comm*. 9, https://doi.org/10.1038/s41467-018-03800-0.

Lee, S.-K., H. Lopez, E.-S. Chung, **P. N. DiNezio**, S.-W. Yeh and A. T. Wittenberg 2018: On the fragile relationship between El Niño and California rainfall. *Geophys. Res. Lett.* 45, https://doi.org/10.1002/2017GL076197.

DiNezio P. N., C. Deser, A. Karspeck, S. Yeager, J. Caron, N. Rosenbloom, Y. Okumura, G. Danabasoglu, G. Meehl, 2017a: A 2 Year Forecast for a 60–80% Chance of La Niña in 2017–2018. *Geophys. Res. Lett. 44*, https://doi.org/10.1002/2017GL074904.

Okumura, Y. M., **P. N. DiNezio**, and C. Deser, 2017: Evolving impacts of multi-year La Niña events on atmospheric circulation and US drought. *Geophys. Res. Lett.*, 44, https://doi.org/10.1002/2017GL075034.

Puy, M., J. Vialard, M. Lengaigne, E. Guilyardi, **P. N. DiNezio**, A. Voldoire, M. Balmaseda, G. Madec, C. Menkes, and M. J. Mcphaden, 2017: Influence of Westerly Wind Events

stochasticity on El Niño amplitude: the case of 2014 vs. 2015. *Clim Dyn.*, https://doi.org/10.1007/s00382-017-3938-9.

Thirumalai, K., **P. N. DiNezio**, Y. Okumura, and C. Deser, 2017: Extreme April 2016 temperatures in Southeast Asia caused by El Nino and worsened by global warming. *Nat. Commun.*, **8**, http://dx.doi.org/10.1038/ncomms15531.

Bhattacharya, T., J. E. Tierney, and **P. N. DiNezio**, 2017: Glacial reduction of the North American Monsoon via surface cooling and atmospheric ventilation, *Geophys. Res. Lett.*, **44**, 5113–5122, https://doi.org/10.1002/2017GL073632.

DiNezio, P. N., C. Deser, Y. Okumura, and A. Karspeck, 2017a: Predictability of 2-year La Niña events in a coupled general circulation model. *Clim. Dyn.*, 866–894, https://doi.org/10.1007/s00382-017-3575-3.

DiNezio, P. N., A. Timmermann, J. E. Tierney, F.-F. Jin, B. Otto-Bliesner, N. Rosenbloom, B. Mapes, R. Neale, R. F. Ivanovic, and A. Montenegro, 2016: Climate response of the Indo-Pacific warm pool to Last Glacial Maximum sea level. *Paleoceanography,* **31**, 866–894, https://doi.org/10.1002/2015PA002890.

2013 – 2015 (U. of Hawaii)

DiNezio P. N., L. Barbero, M. Church, N. Lovenduski, and C. Deser, 2015: Anthropogenic changes in the tropical carbon cycle masked by Pacific Decadal Varability? CLIVAR Variations.

Karamperidou C., **P. N. DiNezio**, A. Timmermann, F.-F. Jin, and K. Cobb, 2015: The response of ENSO flavors to mid-Holocene climate: Implications for proxy interpretation. *Paleoceanography*, **30**, 527–547, https://doi.org/10.1002/2014PA002742.

Chikamoto Y., A. Timmermann, S. Stevenson, and **P. N. DiNezio**, 2015: Decadal predictability of soil water, vegetation, and wildfire frequency over North America. *Clim. Dyn.*, **28** (5), 1865–1880, https://doi.org/10.1007/s00382-015-2469-5.

Stevenson S., A. Timmermann, Y. Chikamoto, S. Langford, and **P. N. DiNezio**, 2015: Stochastically Generated North American Megadroughts. *J. Climate* **28**, 1865–1880, https://doi.org/10.1175/JCLI-D-13-00689.1.

Lee, S.-K., **P. N. DiNezio**, E.-S. Chung, S.-W. Yeh, A. T. Wittenberg, and C. Wang, 2014: Spring persistence, transition and resurgence of El Niño. *Geophys. Res. Lett.*, **41** (23), 8578–8585, https://doi.org/10.1002/2014GL062484.

DiNezio, P. N., and C. Deser, 2014: Nonlinear controls on the persistence of La Niña. *J. Climate* **27**, 7335–7355, https://doi.org/10.1175/JCLI-D-14-00033.1.

Small, J. and coauthors, 2014: A new synoptic scale resolving global climate simulation using the Community Earth System Model. *J. Adv. Model Earth Sy.,* **6**, 1065–1094, https://doi.org/10.1002/2014MS000363.

DiNezio P. N., 2014: Climate science: A high bar for decadal forecasts of El Niño*. Nature,* **507***,* 437–439, http://dx.doi.org/10.1038/507437a.

Clement A. and **P. N. DiNezio**, 2014: The Tropical Pacific Ocean: Back in the Driver's Seat? *Science*, **314**, 976–978, http://dx.doi.org/10.1126/science.1248115.

Zhang, H., A. Clement, **P. N. DiNezio**, 2013: The South Pacific Meridional Mode: A Mechanism for ENSO-like variability. *J. Climate*, **27**, 769–783, https://doi.org/10.1175/JCLI-D-13-00082.1.

DiNezio, P. N., and J. Tierney, 2013: The impact of sea level on glacial Indo-Pacific climate. *Nat. Geosci.*, **6**, 485–491, https://doi.org/10.1038/ngeo1823.

DiNezio, P. N., A. C. Clement, and G. Vecchi, 2013: Detectability of Changes in the Walker Circulation in Response to Global Warming. *J. Climate*, **26**, 4038–4048, http://dx.doi.org/10.1175/JCLI-D-12-00531.1.

2009 – 2012 (U. of Miami and AOML)

DiNezio, P. N., B. J. Kirtman, A. C. Clement, S.-K. Lee, G. A. Vecchi, and A. Wittenberg, 2012: Mean Climate Controls on the Simulated Response of ENSO to Increasing Greenhouse Gases. *J Climate*, **25**, 21, 7399–7420, https://doi.org/10.1175/JCLI-D-11-00494.1.

DiNezio, P. N., A. Clement, G. A. Vecchi, B. Soden, A. J. Broccoli, B. L. Otto-Bliesner, and P. Braconnot, 2011: The response of the Walker circulation to Last Glacial Maximum forcing: Implications for detection in proxies. *Paleoceanography*, **26**, PA3217, http://dx.doi.org/10.1029/2010PA002083.

Clement A. C., **P. N. DiNezio**, and C. Deser, 2011: Rethinking the Ocean's Role in the Southern Oscillation. *J. Climate*, **24**(15), 4056–4072, https://doi.org/10.1175/2011JCLI3973.1.

DiNezio, P. N., and G. Goni, 2011: Direct Evidence of a Changing Fall-rate Bias in XBTs Manufactured During 1986-2008. *J. Atmos. Oceanic Technol*., **28**(11), 1569–1578, https://doi.org/10.1175/JTECH-D-11-00017.1.

Goni, G.J., F. Bringas, and **P. N. DiNezio**, 2011: Observed Low Frequency Variability of the Brazil Current Front. *J. Geophys. Res.,* 116, C10037, http://dx.doi.org/10.1029/2011JC007198.

DiNezio, P. N., A. C. Clement, and G. A. Vecchi, 2010: Reconciling Differing Views of Tropical Pacific Climate Change. *Eos, Trans. AGU*, **91**(16), 141–142, https://doi.org/10.1029/2010EO160001.

DiNezio, P. N., and G. J. Goni, 2010: Identifying and Estimating Biases Between XBT and Argo Observations Using Satellite Altimetry. *J. Atmos. Oceanic Technol.*, **27**, 226–240, https://doi.org/10.1175/2009JTECHO711.1.

DiNezio, P. N., A. C. Clement, G. A. Vecchi, B. J. Soden, B. J. Kirtman, and S.-K. Lee, 2009b: Climate Response of the Equatorial Pacific to Global Warming. *J. Climate*, **22**, 4873–4892, https://doi.org/10.1175/2009JCLI2982.1.

DiNezio, P. N., L. Gramer, W. Johns, C. Meinen, and M. Baringer, 2009a: Observed Interannual Variability of the Florida Current: Wind Forcing and the North Atlantic Oscillation. *J. Phys. Oceanogr.*, **39**, 721–736, https://doi.org/10.1175/2008JPO4001.1.

Talks

2020 – 2022 (CU Boulder)

Invited departmental talks, colloquia, and workshop presentations

Anthropogenic forcing of the tropical Pacific cooling trend, *ECS & cloud feedback virtual symposium #26,* 2023, Invited speaker.

Paleodata from glacial intervals help predict Increasing risk of extreme El Niño under greenhouse warming, Paleoclimate Advances Webinar Series, 2022, Invited speaker.

Influence of continental shelfs on tropical climate, *Tectonics and Climate Workshop*, Department of Geological Sciences, CU Boulder, 2022, Invited speaker and participant.

Glacial Lessons on Tropical Climate Change, *PMIP30 Symposium*: *30 Years of PMIP,* 2021*,* Invited speaker and participant.

Needs for community-driven modelling, Identifying New Community-Driven Science Themes for NSF's Support of Paleo Perspectives on Climate Change workshop, 2021, Invited speaker and participant.

Aumento de la variabilidad tropical extrema en respuesta al Calentamiento Global, Colloquio CIMA/DCAO, *University of Buenos Aires*, 2021, Invited speaker.

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Extreme tropical variability under greenhouse warming, Department of Atmospheric Sciences Colloquium, *Colorado State University*, 2021*,* Invited speaker.

Extreme tropical variability under greenhouse warming, Combined OCE MPO ATM Seminar, *University of Miami*, 2021*,* Invited speaker.

Glacial lessons on tropical climate change, Oceanography Seminar, *University of Washington*, 2020, Invited speaker.

Glacial lessons on tropical climate change, INSTAAR Seminar, *University of Colorado Boulder*, 2020, Invited speaker.

Scientific conferences

New model-data approaches reduce uncertainty in climate risk prediction, AGU Fall meeting 2023, Speaker.

The tropical response to a collapse of the Atlantic Meridional Overturning Circulation, *EGU General Assembly*, 2023, Invited speaker.

Consistent past and future changes in Indian Ocean climate driven by coupled ocean-atmosphere dynamics, AGU Fall meeting 2022, Invited speaker.

Hosing simulations validated against past changes help predict future of tropical rainfall*, CESM workshop*, 2022, Invited speaker.

Future increase in extreme El Niño supported by past glacial changes, *Ocean Sciences Meeting*, 2022, Speaker.

Improving predictions of Indian Ocean climate change using paleoclimate data, *AGU Fall meeting, 2020*, Invited speaker.

2010 – 2019 (Prior to joining CU Boulder)

Invited departmental talks and colloquia, workshop presentations, and conferences

How past changes in El Niño could inform its future, *AGU Fall meeting, 2019*, Speaker.

Unprecedented climate swings in the tropics driven by greenhouse warming, *AGU Fall meeting, 2019*, Invited speaker.

Can the tropical oceans amplify climate change? *BASC seminar, U. of California Berkeley, 2019,* Invited speaker.

Glacial lessons on tropical climate change, *CGD seminar, NCAR, Feb 2019*, Invited speaker.

Could an El Niño happen in the Indian Ocean? *Atmospheric Sciences Seminar*, *U. of Hawaii*, Sept 5, 2018, Invited speaker.

Bridging theory, observations, and models of the El Niño/Southern Oscillation, *Natural Variability in the Pacific Summer School*, *Princeton U.*, August 15–17, 2018, Invited speaker and instructor.

Weaker Indian monsoon due to glacial ventilation, *Goldschmidt Conference*, August 13, 17, 2018, Speaker.

Mechanisms controlling the position of the Inter-Tropical Convergence Zone, *2nd WCRP Grand Challenge Meeting on Monsoons and Tropical Rain Belts*, July 2-5, 2018, Invited speaker.

Asymmetries in the predictability of El Niño and La Niña: Implications for TPOS2020, *TPOS2020 workshop*, May 3, 2018, Invited speaker and participant.

How early could the current La Niña have been predicted? *International Research Institute for Climate and Society*, April 4, 2018, Invited speaker.

Glacial lessons on tropical climate change, *Lamont Doherty Earth Observatory, Columbia University,* April 6, 2018, Invited speaker.

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How early could the current La Niña have been predicted? *Oceanography seminar, Texas A&M*, 2018, Invited speaker.

Prediction of 2-year La Niña in CESM. *CGD Seminar, NCAR,* October 24, 2017, Invited speaker.

Glacial lessons on tropical climate change, *Department of Geosciences Colloquium, University of Arizona,* October 12, 2017, Invited speaker.

The climate of the Indo-Pacific warm pool at the Last Glacial Maximum. *University of Texas Institute for Geophysics*, 2015, Invited speaker.

Simulating the effect of glacial sea level changes on Indo-Pacific climate. *AGU Fall meeting, 2014*, Speaker.

CMIP5: Uncertainties in tropical climate and carbon uptake. *CLIVAR Carbon Cycle Workshop*, 2014, Invited speaker and participant.

The Role of the Ocean in Tropical Pacific Climate Variability and Change. *University of Colorado Boulder*, February 2014, Invited speaker.

Mean Climate Controls on the Simulated Response of ENSO to Increasing Greenhouse Gases. *AGU Fall meeting,* 2012, Speaker.

Non-linear controls on the persistence of La Nina events in CCSM. *CGD Seminar, NCAR,* 30 October 2012, Invited speaker.

Glacial-interglacial rainfall dynamics of the warm pool: dynamics and detection in models. *Lake Towuti Drilling Workshop, Indonesia, March 2011*, Invited speaker and participant.

Tropical Pacific Climate Change. *Brown U.*, March 2011, Invited speaker.

The Role of the Ocean in Tropical Pacific Climate Variability and Change. *University of California LA*, April 2011, Invited speaker.

The Response of the Walker Circulation to LGM Forcing: Implications for Detection in Proxies. *AGU Fall meeting,* 2011, Speaker.

Tropical Pacific Climate Change. *CGD Seminar, NCAR,* 3 May 2011, Invited speaker.

Sensitivity of ENSO to Global Warming. *CLIVAR Workshop: New strategies for evaluating ENSO processes in climate models, Paris, France,* 17-19 November 2010, Invited speaker and participant.

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Teaching & Mentoring

CU Graduate Students Advised

Cole Persch, Ph.D. student in Atmospheric and Oceanic Sciences, Fall 2020 – present.
Brandon Molina, Ph.D. student in Atmospheric and Oceanic Sciences, Fall 2021 – present.

Other Mentoring at CU

Jeremy Klavans, postdoctoral researcher, Dec 2020 – present.
Nathan Lenssen, postdoctoral researcher, Aug 2022 – present.
Oscar Gandara, undergraduate researcher, Sep 2021 – present.
Natalie Gonzalez, undergraduate researcher, Jun 2022 – Aug 2022.

Examination Committees at CU

Juliana Olsen-Valdez, Ph.D. student in Geological Sciences.
Giovanni Seijo, Ph.D. student in Atmospheric and Oceanic Sciences.

Other Mentoring outside CU

Providing significant mentoring to Victoria Todd (Ph.D. student at UT Austin supported via collaborative grant led by DiNezio), Spring 2022 –present.

Mentoring at previous institutions

Advised Kaustubh Thirumalai (Postdoctoral researcher), Sylvia Dee (Postdoctoral researcher), Martin Puy (Postdoctoral researcher), Megumi Chikamoto (Postdoctoral researcher).
Co-advised Xian Wu (Ph.D., UT Austin, 2020).
Provided significant mentoring to Tian-Yi Sun (Ph.D., UT Austin, 2019), Chijun Sun (Ph.D., UT Austin, 2021), Natallia Piatrunia (Ph.D. student, UT Austin), A. Lawman (Ph.D., UT Austin 2020).

Classroom Teaching at CU

ATOC 1060, Our Changing Environment, Fall 2020, 2021.
ATOC 4740/5740, Dynamics of Past Climate Changes: Lessons for the Future, Spring 2021†.
ATOC 6800, Scientific Writing and Communication, Fall 2022.

Course development at CU

ATOC 1060, Redesigned course for online instruction during COVID19 pandemic.
ATOC 4740/5740, Dynamics of Past Climate Changes: Lessons for the Future, Designed course proposal and syllabus.
ATOC 5800, Scientific Writing and Communication, redesigned course syllabus.

Classroom Teaching at Previous Institutions (UT Austin and U. of Hawaii)

OCN 105 Sustainability in a Changing World, Fall 2015, U. of Hawaii, co-developer and instructor.
GEO 391 Atmosphere-Ocean Interactions and Climate, Spring 2016, U. of Texas Austin, co-developer and instructor.
GEO 291 Paleoclimate dynamics and synthesis, Fall 2017, Spring 2018, Fall 2018, U. of Texas Austin, co-developer and instructor.

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Service

Department of Atmospheric and Oceanic Sciences

JEDI, Admissions, Examinations.

Scientific Community

Reviewer DOE, NSF, Nature, Nat. Geosci., J. of Climate, Geophys. Res. Lett., Clim. Dyn.	
Organizer Multi-year predictions workshop	2022
Contributing author IPCC AR6 Chapter 2: Changing state of the climate system.	2021
Contributing author IPCC AR5 Chapter 5: Information from Paleoclimate Archives.	2014
Member NOAA/CPC ENSO diagnostics panel	2011–present
Member CLIVAR Large "Initial-Condition" Earth System Model Ensembles.	2018–2020
Member NOAA CPC MAPP Drought Task Force.	2014–2019
Member UT Science Olympiad Team	2017–2019

† Taught as Special Topics in Atmospheric and Oceanic Sciences.