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EDUCATION

Ph.D. (Ocean and Atmospheric Science), Hokkaido University, Sapporo, Japan 2005
Thesis: *Role of the moisture field in large-scale surface heat exchanges*

M.Sc. (Ocean and Atmospheric Science), Hokkaido University, Sapporo, Japan 2002
Thesis: *Atlantic atmosphere-ocean response to tropical Pacific sea surface temperature variations*

B.Sc. (Applied Physics), Tokyo University of Science, Tokyo, Japan 2000
Thesis: *Ion-acoustic shock waves in a dusty plasma*

PROFESSIONAL EXPERIENCE

Associate Professor, Department of Plants, Soils, and Climate, Utah State University, Logan, UT, USA — Jul 2023–Present

Assistant Professor, Department of Plants, Soils, and Climate, Utah State University, Logan, UT, USA — Jan 2017–Jul 2023

Visiting Assistant Professor, Department of Soil and Environmental Sciences, National Chung Hsing University, Taichung, Taiwan — Feb 2023–Jul 2023

Postdoctoral Fellow, International Pacific Research Center, University of Hawai'i at Mānoa, Honolulu, HI, USA — Mar 2012–Dec 2016

Project Researcher, Atmosphere and Ocean Research Institute, University of Tokyo, Tokyo, Japan — Apr 2007–Mar 2012
*Formerly Center for Climate System Research (pre-2010)

Postdoctoral Fellow, Disaster Prevention Research Institute, Kyoto University, Kyoto, Japan — Dec 2005–Mar 2007

PUBLICATIONS

† indicates students or postdoctoral researchers I supervised or mentored during their involvement in the research.

Refereed Publications (Peer-reviewed):

1. *Vernon, B.*†, Zhang, W., **Chikamoto, Y.** (2025): Improving seasonal precipitation forecasts in the Western United States through statistical downscaling. *Environmental Research Letters*, ***20***, *064008, doi:10.1088/1748-9326/add02c*
2. Chang, H-I., **Chikamoto, Y.**, Wang, S-Y., Castro, C. L., LaPlante, M. D., Risanto, C. B., Huang, X., Bunn, P. (2024): Enhancing Extreme Precipitation Predictions With Dynamical Downscaling: A Convection-Permitting Modeling Study in Texas and Oklahoma. *Journal of Geophysical Research: Atmospheres*, ***129***, *e2023JD038765, doi:10.1029/2023JD038765*
3. **Chikamoto, Y.**, Wang, S-Y., Chang, H-I., Castro, C. L. (2024): Tropical Interbasin Interaction as Effective Predictors of Late-Spring Precipitation Variability in the Southern Great Plains. *Journal of Climate*, ***37***, *6061-6080, doi:10.1175/JCLI-D-24-0013.1*

4. *Wright, T. E.*†, **Chikamoto, Y.**, *Birch, J. D.*†, Lutz, J. A. (2024): Remote Sensing Detection of Growing Season Freeze-Induced Defoliation of Montane Quaking Aspen (Populus tremuloides) in Southern Utah, USA. *Remote Sensing*, ***16***, *3477, doi:10.3390/rs16183477*
5. Zhang, W., Wang, S-Y., **Chikamoto, Y.**, Gillies, R., LaPlante, M., Hari, V. (2024): A weather pattern responsible for increasing wildfires in the western United States. *Environmental Research Letters*, ***20***, *014007, doi:10.1088/1748-9326/ad928f*
6. *Birch, J. D.*†, **Chikamoto, Y.**, DeRose, R. J., Manvailer, V., Hogg, E. H., Karst, J., Love, D. M., Lutz, J. A. (2023): Frost-Associated Defoliation in Populus tremuloides Causes Repeated Growth Reductions Over 185 years. *Ecosystems*, ***26***, *843-859, doi:10.1007/s10021-022-00799-w*
7. **Chikamoto, Y.**, Zhang, W., Hipps, L., Wang, S-Y., Gillies, R. R., Bigalke, S. (2023): Interannual variability and trends of summertime PM2.5-based air quality in the Intermountain West. *Environmental Research Letters*, ***18***, *044032, doi:10.1088/1748-9326/acc6e0*
8. *Stuivenvolt-Allen, J.*†, Wang, S-Y., **Chikamoto, Y.**, Meyer, J. D. D., *Johnson, Z. F.*†, Deng, L. (2023): Growing Pacific Linkage with Western North Atlantic Explosive Cyclogenesis. *Journal of Climate*, ***36***, *7073-7090, doi:10.1175/JCLI-D-22-0784.1*
9. *Hasan, N. A.*†, **Chikamoto, Y.**, McPhaden, M. J. (2022): The influence of tropical basin interactions on the 2020–2022 double-dip La Niña. *Frontiers in Climate*, ***4***, *1001174, doi:10.3389/fclim.2022.1001174*
10. *Long, X.*†, Widlansky, M. J., Spillman, C. M., Kumar, A., Balmaseda, M., Thompson, P. R., **Chikamoto, Y.**, Smith, G. A., Huang, B., Shin, C-S., Merrifield, M. A., Sweet, W. V., Leuliette, E., Annamalai, H. S., Marra, J. J., Mitchum, G. (2021): Seasonal Forecasting Skill of Sea-Level Anomalies in a Multi-Model Prediction Framework. *Journal of Geophysical Research: Oceans*, ***126***, *e2020JC017060, doi:10.1029/2020JC017060*
11. *Stuivenvolt-Allen, J.*†, Wang, S-Y., *Johnson, Z. F.*†, **Chikamoto, Y.** (2021): Atmospheric Rivers Impacting Northern California Exhibit a Quasi-Decadal Frequency. *Journal of Geophysical Research: Atmospheres*, ***126***, *e2020JD034196, doi:10.1029/2020JD034196*
12. *Wilkins, E. J.*†, **Chikamoto, Y.**, Miller, A. B., Smith, J. W. (2021): Climate change and the demand for recreational ecosystem services on public lands in the continental United States. *Global Environmental Change*, ***70***, *102365, doi:10.1016/j.gloenvcha.2021.102365*
13. *Akbar, H.*†, Allen, L. N., Rosenberg, D. E., **Chikamoto, Y.** (2020): Ranchers Adapting to Climate Variability in the Upper Colorado River Basin, Utah. *Climate*, ***8***, *96, doi:10.3390/cli8090096*
14. **Chikamoto, Y.**, Wang, S-Y., Yost, M., Yocom, L., Gillies, R. R. (2020): Colorado River water supply is predictable on multi-year timescales owing to long-term ocean memory. *Communications Earth & Environment*, ***1***, *1-11, doi:10.1038/s43247-020-00027-0*
15. **Chikamoto, Y.**, *Johnson, Z. F.*†, Wang, S-Y., McPhaden, M. J., Mochizuki, T. (2020): El Niño–Southern Oscillation Evolution Modulated by Atlantic Forcing. *Journal of Geophysical Research: Oceans*, ***125***, *e2020JC016318, doi:10.1029/2020JC016318*
16. *Johnson, Z. F.*†, **Chikamoto, Y.**, Wang, S-Y., McPhaden, M. J., Mochizuki, T. (2020): Pacific decadal oscillation remotely forced by the equatorial Pacific and the Atlantic Oceans. *Climate Dynamics*, ***55***, *789-811, doi:10.1007/s00382-020-05295-2*
17. *Pokharel, B.*†, Wang, S-Y., Meyer, J., Marahatta, S., Nepal, B., **Chikamoto, Y.**, Gillies, R. (2020): The east–west division of changing precipitation in Nepal. *International Journal of Climatology*, ***40***, *3348-3359, doi:10.1002/joc.6401*
18. Cai, W., Wu, L., Lengaigne, M., Li, T., McGregor, S., Kug, J-S., Yu, J-Y., Stuecker, M. F., Santoso, A., Li, X., Ham, Y-G., **Chikamoto, Y.**, Ng, B., McPhaden, M. J., Du, Y., Dommenget, D., Jia, F., Kajtar, J. B., Keenlyside, N., Lin, X., Luo, J-J., Martín-Rey, M., Ruprich-Robert, Y., Wang, G., Xie, S-P., Yang, Y., Kang, S. M., Choi, J-Y., Gan, B., Kim, G-I., Kim, C-E., Kim, S., Kim, J-H., Chang, P. (2019): Pantropical climate interactions. *Science*, ***363***, *eaav4236, doi:10.1126/science.aav4236*
19. *Chien, Y-T.*†, Wang, S-Y., **Chikamoto, Y.**, Voelker, S. L., Meyer, J. D. D., Yoon, J-H. (2019): North American Winter Dipole: Observed and Simulated Changes in Circulations. *Atmosphere*, ***10***, *793, doi:10.3390/atmos10120793*
20. **Chikamoto, Y.**, Timmermann, A., Widlansky, M. J., Zhang, S., Balmaseda, M. A. (2019): A Drift-Free Decadal Climate Prediction System for the Community Earth System Model. *Journal of Climate*, ***32***, *5967-5995, doi:10.1175/JCLI-D-18-0788.1*
21. *Johnson, Z. F.*†, **Chikamoto, Y.**, Luo, J-J., Mochizuki, T. (2018): Ocean Impacts on Australian Interannual to Decadal Precipitation Variability. *Climate*, ***6***, *61, doi:10.3390/cli6030061*
22. Timmermann, A., An, S-I., Kug, J-S., Jin, F-F., Cai, W., Capotondi, A., Cobb, K. M., Lengaigne, M., McPhaden, M. J., Stuecker, M. F., Stein, K., Wittenberg, A. T., Yun, K-S., Bayr, T., Chen, H-C., **Chikamoto, Y.**, Dewitte, B.,

Dommenget, D., Grothe, P., Guilyardi, E., Ham, Y-G., Hayashi, M., Ineson, S., Kang, D., Kim, S., Kim, W., Lee, J-Y., Li, T., Luo, J-J., McGregor, S., Planton, Y., Power, S., Rashid, H., Ren, H-L., Santoso, A., Takahashi, K., Todd, A., Wang, G., Wang, G., Xie, R., Yang, W-H., Yeh, S-W., Yoon, J., Zeller, E., Zhang, X. (2018): El Niño–Southern Oscillation complexity. *Nature, **559**, 535-545, doi:10.1038/s41586-018-0252-6*

23. **Chikamoto, Y.**, Timmermann, A., Widlansky, M. J., Balmaseda, M. A., Stott, L. (2017): Multi-year predictability of climate, drought, and wildfire in southwestern North America. *Scientific Reports, **7**, 6568, doi:10.1038/s41598-017-06869-7*
24. Ham, Y-G., **Chikamoto, Y.**, Kug, J-S., Kimoto, M., Mochizuki, T. (2017): Tropical Atlantic-Korea teleconnection pattern during boreal summer season. *Climate Dynamics, **49**, 2649-2664, doi:10.1007/s00382-016-3474-z*
25. Stuecker, M. F., Timmermann, A., Jin, F-F., **Chikamoto, Y.**, Zhang, W., Wittenberg, A. T., Widiasih, E., Zhao, S. (2017): Revisiting ENSO/Indian Ocean Dipole phase relationships. *Geophysical Research Letters, **44**, 2481-2492, doi:10.1002/2016GL072308*
26. **Chikamoto, Y.**, Mochizuki, T., Timmermann, A., Kimoto, M., Watanabe, M. (2016): Potential tropical Atlantic impacts on Pacific decadal climate trends. *Geophysical Research Letters, **43**, 7143-7151, doi:10.1002/2016GL069544*
27. Mochizuki, T., Kimoto, M., Watanabe, M., **Chikamoto, Y.**, Ishii, M. (2016): Interbasin effects of the Indian Ocean on Pacific decadal climate change. *Geophysical Research Letters, **43**, 7168-7175, doi:10.1002/2016GL069940*
28. Purich, A., England, M. H., Cai, W., **Chikamoto, Y.**, Timmermann, A., Fyfe, J. C., Frankcombe, L., Meehl, G. A., Arblaster, J. M. (2016): Tropical Pacific SST Drivers of Recent Antarctic Sea Ice Trends. *Journal of Climate, **29**, 8931-8948, doi:10.1175/JCLI-D-16-0440.1*
29. **Chikamoto, Y.**, Timmermann, A., Stevenson, S., DiNezio, P., Langford, S. (2015): Decadal predictability of soil water, vegetation, and wildfire frequency over North America. *Climate Dynamics, **45**, 2213-2235, doi:10.1007/s00382-015-2469-5*
30. Chikamoto, M. O., Timmermann, A., **Chikamoto, Y.**, Tokinaga, H., Harada, N. (2015): Mechanisms and predictability of multiyear ecosystem variability in the North Pacific. *Global Biogeochemical Cycles, **29**, 2001-2019, doi:10.1002/2015GB005096*
31. **Chikamoto, Y.**, Timmermann, A., Luo, J-J., Mochizuki, T., Kimoto, M., Watanabe, M., Ishii, M., Xie, S-P., Jin, F-F. (2015): Skilful multi-year predictions of tropical trans-basin climate variability. *Nature Communications, **6**, 6869, doi:10.1038/ncomms7869*
32. Imada, Y., Tatebe, H., Ishii, M., **Chikamoto, Y.**, Mori, M., Arai, M., Watanabe, M., Kimoto, M. (2015): Predictability of Two Types of El Niño Assessed Using an Extended Seasonal Prediction System by MIROC. *Monthly Weather Review, **143**, 4597-4617, doi:10.1175/MWR-D-15-0007.1*
33. Stevenson, S., Timmermann, A., **Chikamoto, Y.**, Langford, S., DiNezio, P. (2015): Stochastically Generated North American Megadroughts. *Journal of Climate, **28**, 1865–1880, doi:10.1175/JCLI-D-13-00689.1*
34. McGregor, S., Timmermann, A., Stuecker, M. F., England, M. H., Merrifield, M., Jin, F-F., **Chikamoto, Y.** (2014): Recent Walker circulation strengthening and Pacific cooling amplified by Atlantic warming. *Nature Climate Change, **4**, 888-892, doi:10.1038/nclimate2330*
35. Mochizuki, T., Kimoto, M., **Chikamoto, Y.**, Mori, M., Watanabe, M., Ishii, M. (2014): Error Sensitivity to Initial Climate States in Pacific Decadal Hindcasts. *Sola, **10**, 39-44, doi:10.2151/sola.2014-009*
36. **Chikamoto, Y.**, Kimoto, M., Ishii, M., Mochizuki, T., Sakamoto, T. T., Tatebe, H., Komuro, Y., Watanabe, M., Nozawa, T., Shiogama, H., Mori, M., Yasunaka, S., Imada, Y. (2013): An overview of decadal climate predictability in a multi-model ensemble by climate model MIROC. *Climate Dynamics, **40**, 1201-1222, doi:10.1007/s00382-012-1351-y*
37. Doblas-Reyes, F. J., Andreu-Burillo, I., **Chikamoto, Y.**, García-Serrano, J., Guemas, V., Kimoto, M., Mochizuki, T., Rodrigues, L. R. L., Oldenborgh, G. J. (2013): Initialized near-term regional climate change prediction. *Nature Communications, **4**, 1715, doi:10.1038/ncomms2704*
38. Mori, M., Kimoto, M., Ishii, M., Yokoi, S., Mochizuki, T., **Chikamoto, Y.**, Watanabe, M., Nozawa, T., Tatebe, H., T. Sakamoto, T., Komuro, Y., Imada, Y., Koyama, H. (2013): Hindcast Prediction and Near-Future Projection of Tropical Cyclone Activity over the Western North Pacific Using CMIP5 Near-Term Experiments with MIROC. *Journal of the Meteorological Society of Japan. Ser. II, **91**, 431-452, doi:10.2151/jmsj.2013-402*
39. **Chikamoto, Y.**, Kimoto, M., Ishii, M., Watanabe, M., Nozawa, T., Mochizuki, T., Tatebe, H., Sakamoto, T. T., Komuro, Y., Shiogama, H., Mori, M., Yasunaka, S., Imada, Y., Koyama, H., Nozu, M., Jin, F-f. (2012): Predictability of a Stepwise Shift in Pacific Climate during the Late 1990s in Hindcast Experiments Using MIROC. *Journal of the Meteorological Society of Japan. Ser. II, **90A**, 1-21, doi:10.2151/jmsj.2012-A01*
40. **Chikamoto, Y.**, Kimoto, M., Watanabe, M., Ishii, M., Mochizuki, T. (2012): Relationship between the Pacific and

Atlantic stepwise climate change during the 1990s. *Geophysical Research Letters, **39**, doi:10.1029/2012GL053901*

41. Mochizuki, T., **Chikamoto, Y.**, Kimoto, M., Ishii, M., Tatebe, H., Komuro, Y., Sakamoto, T. T., Watanabe, M., Mori, M. (2012): Decadal Prediction Using a Recent Series of MIROC Global Climate Models. *Journal of the Meteorological Society of Japan. Ser. II, **90A**, 373-383, doi:10.2151/jmsj.2012-A22*
42. Tatebe, H., Ishii, M., Mochizuki, T., **Chikamoto, Y.**, Sakamoto, T. T., Komuro, Y., Mori, M., Yasunaka, S., Watanabe, M., Ogochi, K., Suzuki, T., Nishimura, T., Kimoto, M. (2012): The Initialization of the MIROC Climate Models with Hydrographic Data Assimilation for Decadal Prediction. *Journal of the Meteorological Society of Japan. Ser. II, **90A**, 275-294, doi:10.2151/jmsj.2012-A14*
43. Toyoda, T., Awaji, T., Sugiura, N., Masuda, S., Igarashi, H., Sasaki, Y., Hiyoshi, Y., Ishikawa, Y., Mochizuki, T., Sakamoto, T. T., Tatebe, H., Komuro, Y., Suzuki, T., Nishimura, T., Mori, M., **Chikamoto, Y.**, Yasunaka, S., Imada, Y., Arai, M., Watanabe, M., Shiogama, H., Nozawa, T., Hasegawa, A., Ishii, M., Kimoto, M. (2011): Impact of the Assimilation of Sea Ice Concentration Data on an Atmosphere-Ocean-Sea Ice Coupled Simulation of the Arctic Ocean Climate. *Sola, **7**, 37-40, doi:10.2151/sola.2011-010*
44. **Chikamoto, Y.**, Tanimoto, Y., Mukougawa, H., Kimoto, M. (2010): Subtropical Pacific SST Variability Related to the Local Hadley Circulation during the Premature Stage of ENSO. *Journal of the Meteorological Society of Japan. Ser. II, **88**, 183-202, doi:10.2151/jmsj.2010-205*
45. Mochizuki, T., Ishii, M., Kimoto, M., **Chikamoto, Y.**, Watanabe, M., Nozawa, T., Sakamoto, T. T., Shiogama, H., Awaji, T., Sugiura, N., Toyoda, T., Yasunaka, S., Tatebe, H., Mori, M. (2010): Pacific decadal oscillation hindcasts relevant to near-term climate prediction. *Proceedings of the National Academy of Sciences, **107**, 1833-1837, doi:10.1073/pnas.0906531107*
46. **Chikamoto, Y.**, Mukougawa, H., Kubota, T., Sato, H., Ito, A., Maeda, S. (2007): Evidence of growing bred vector associated with the tropical intraseasonal oscillation. *Geophysical Research Letters, **34**, doi:10.1029/2006GL028450*
47. **Chikamoto, Y.**, Tanimoto, Y. (2006): Air-sea humidity effects on the generation of tropical Atlantic SST anomalies during the ENSO events. *Geophysical Research Letters, **33**, doi:10.1029/2006GL027238*
48. **Chikamoto, Y.**, Tanimoto, Y. (2005): Role of Specific Humidity Anomalies in Caribbean SST Response to ENSO. *Journal of the Meteorological Society of Japan. Ser. II, **83**, 959-975, doi:10.2151/jmsj.83.959*

NON-REVIEWED PUBLICATIONS

1. Report to the Governor & Legislature, Utah's Land, Water, and Air. *Janet Quinney Lawson, Institute for Land, Water & Air, Utah State University*, 1–84, 2022. [link].
2. Report to the Governor on Utah's Land, Water, and Air. *Janet Quinney Lawson, Institute for Land, Water & Air, Utah State University*, 1–99, 2021. [link].
3. **Chikamoto, Y.**; Johnson, Z. F.; Wang, S.-Y. S.; McPhaden, M. J.; Mochizuki, T.: El Niño Southern Oscillation Evolution Modulated by Atlantic Forcing. *CLIVAR Exchanges*, 80, 19–22, 2021. DOI: 10.36071/clivar.80.2021.

PRESENTATIONS

1. **[Poster]** Chikamoto, Y., S.-Y. Wang, H.-I. Chang, S. C. Castro: Seasonal Predictability of Late-Spring Precipitation in the Southern Great Plains. *EGU General Assembly 2025*, 2025-04-27 to 2025-05-02, Vienna, Austria and Online.
2. **[Oral]** Chikamoto, Y.: Utah State University's Multi-Year to Decadal Forecasting Project. *Colorado River Climate and Hydrology Work Group*, 2025-01-29 to 2025-01-30, Salt Lake City, Utah, USA.
3. **[Poster]** Chikamoto, Y., S.-Y. Wang, H.-I. Chang, S. C. Castro: Influence of Tropical Inter-Basin Interaction on Late-Spring Precipitation Variability in the Southern Great Plains. *105th AMS Annual Meeting*, 2025-01-12 to 2025-01-16, New Orleans, Louisiana, USA & Online.
4. **[Oral]** Chikamoto, Y.: Influence of Tropical Inter-Basin Interaction on Late-Spring Precipitation Variability in the Southern Great Plains. *2024 International Workshop on Interbasin Interaction, Its Impacts on Predictability, and Related Climate Phenomena*, 2024-12-16 to 2024-12-17, Fukuoka, Japan.
5. **[Oral]** Chikamoto, Y.: Great Salt Lake/Colorado River climate forecasting. *Spring Runoff Conference*, 2024-03-26 to 2024-03-27, Logan, Utah, USA.
6. **[Poster]** Chikamoto, Y., H.-I. Chang, S. S.-Y. Wang, C. Castro, M.D. LaPlante, C. B. Risanto, X. Huang,, P. Bunn: Enhancing Subseasonal Climate Predictions through Dynamical Downscaling: A Case Study in the Southern Plains of the United States. *EGU General Assembly 2024*, 2024-04-14 to 2024-04-19, Vienna, Austria and Online.
7. **[Oral]** Chikamoto, Y.: Platform for drought early warning. *Colorado River Climate and Hydrology Work Group*, 2022-11-16 to 2022-11-17, Salt Lake City, Utah, USA.

8. **[Invited Oral]** Chikamoto, Y.: Assessing multi-year predictability of the Colorado River water supply using a drift-free decadal climate prediction system. *Societally-Relevant Multi-Year Climate Predictions Workshop*, 2022-03-28 to 2022-03-30, Boulder, Colorado, USA and Virtual.
9. **[Invited Oral]** Chikamoto, Y.: El Niño-Southern Oscillation Evolution Modulated by Atlantic Forcing. *24th Prediction and Research Moored Array in the Tropical Atlantic/Tropical Atlantic Variability Meeting*, 2021-05-10 to 2021-05-14, Online (Online).
10. **[Invited Oral]** Chikamoto, Y.: Multi-year predictability of Colorado River water supply. *2021 Utah Water Conservation Forum*, 2021-05-13, Online (Online).
11. **[Poster]** Chikamoto, Y.: Multi-year predictability of Colorado River water supply using a drift-free decadal climate prediction system. *EGU General Assembly 2021*, 2021-04-19 to 2021-04-30, Online (Online).
12. **[Oral]** Chikamoto, Y.: Multi-year Predictability of the Colorado River Water Supply. *2021 Climate Prediction Applications Science Workshop*, 2021-04-20, Online (Online).
13. **[Poster]** Chikamoto, Y.: El Niño-Southern Oscillation Evolution Modulated by Atlantic Forcing. *WCRP-CLIVAR Workshop on Climate Interactions Among the Tropical Basins*, 2021-02-24 to 2021-02-26, Online (Online).
14. **[Oral]** Chikamoto, Y.: Climate Model Performances in Simulating Streamflow Variability in American West. *2nd CESM2 Large Ensemble Workshop*, 2021-02-17 to 2021-02-19, Online (Online).
15. **[Oral]** Chikamoto, Y.: Multi-year Predictability of the Colorado River Water Supply. *2020 Colorado River Hydrology Research Symposium*, 2020-10-19, Webinar (Online).
16. **[Oral]** Chikamoto, Y.: Drought in Utah: Current Conditions and Outlooks. *Drought in the Southwest, Current Conditions and Outlook*, 2020-06-29, Webinar (Online).
17. **[Poster]** Chikamoto, Y.: A drift-free climate prediction system using ocean assimilation approach in the Community Earth System Model. *AGU Fall Meeting 2019*, 2019-12-09 to 2019-12-13, San Francisco, California, USA.
18. **[Poster]** Chikamoto, Y.: A drift-free climate prediction system using ocean assimilation approach in the Community Earth System Model. *EGU General Assembly 2019*, 2019-04-07 to 2019-04-12, Vienna, Austria.
19. **[Invited Oral]** Chikamoto, Y.: Research on decadal climate prediction system development and earth system predictability. *Autumn Meeting 2018, Meteorological Society of Japan*, 2018-10-29 to 2018-11-01, Sendai, Japan.
20. **[Poster]** Chikamoto, Y.: Multi-year prediction of climate, drought, and wildfire in southwestern North America using CESM. *International Conferences on Subseasonal to Decadal Prediction*, 2018-09-17 to 2018-09-21, Boulder, Colorado, USA.
21. **[Invited Oral]** Chikamoto, Y.: Climate variability and predictability. *International Conference on Resilient Design & Climate Change Adaptation*, 2018-08-17, Busan, South Korea.
22. **[Oral]** Chikamoto, Y.: Multi-year prediction of climate, drought, and wildfire in southwestern North America using CESM. *AOGS 15th Annual Meeting*, 2018-06-03 to 2018-06-08, Honolulu, Hawaii, USA.
23. **[Poster]** Chikamoto, Y.: Multi-year prediction of climate, drought, and wildfire in southwestern North America using CESM. *EGU General Assembly 2018*, 2018-04-08 to 2018-04-13, Vienna, Austria.
24. **[Invited Oral]** Chikamoto, Y.: Climate Variations and Predictions. *The 2018 Utah Water Users Workshop*, 2018-03-19 to 2018-03-21, St. George, Utah, USA.
25. **[Oral]** Chikamoto, Y.: Tropical decadal predictability associated with Atlantic-Pacific interaction. *Tropical Interbasin Interactions*, 2018-01-20 to 2018-01-21, Xiamen, China.
26. **[Invited Oral]** Chikamoto, Y.: Multi-year prediction of climate, drought, and wildfire in southwestern North America using CESM. *International Coupled Data Assimilation Symposium & the 11th National Ocean Data Assimilation Conference of China*, 2017-11-05 to 2017-11-08, Qingdao, China.
27. **[Oral]** Chikamoto, Y.: Potential Tropical Atlantic Impacts on tropical Pacific decadal climate trends. *ENSO Complexity Workshop*, 2017-10-16 to 2017-10-20, Busan, South Korea.
28. **[Invited Oral]** Chikamoto, Y.: Skillful multi-year predictions of tropical trans-basin climate variability. *16th CAS-TWAS-WMO Forum, International Symposium on Advances in Seasonal to Decadal Prediction*, 2017-09-18 to 2017-09-20, Beijing, China.
29. **[Oral]** Chikamoto, Y.: Multi-year predictions of North American climate, drought, and wildfire. *CESM Workshop 2017*, 2017-06-19 to 2017-06-22, Boulder, Colorado, USA.
30. **[Invited Oral]** Chikamoto, Y.: Skillful multi-year predictions of tropical Atlantic-Pacific interaction. *JpGU-AGU Joint Meeting 2017*, 2017-05-20 to 2017-05-25, Makuhari, Chiba, Japan.
31. **[Invited Oral]** Chikamoto, Y.: Prospects for future water availability in Utah. *Spring Runoff Conference*, 2017-03-28 to 2017-03-29, Utah State University, Logan, Utah, USA.
32. **[Oral]** Chikamoto, Y.: Skillful multi-year predictions of tropical trans-basin climate variability. *Joint US-Japan*

Workshop on Climate Change and Variability, 2016-03-21 to 2016-03-22, Scripps Institution of Oceanography, San Diego, California, USA.

33. **[Invited Oral]** Chikamoto, Y.: Decadal potential predictability of soil water, vegetation, and wildfire frequency over North America. *Climate Predictions: Improving our Understanding of Processes and Mechanisms to Make Better Predictions*, 2015-06-07 to 2015-06-12, Aspen, Colorado, USA.
34. **[Poster]** Chikamoto, Y., A. Timmermann, S. Stevenson, P. DiNezio,, S. Langford: Decadal Potential Predictability of Soil Water, Vegetation, and Wildfire Frequency over North America. *2014 AGU Fall Meeting*, 2014-12-15 to 2014-12-19, San Francisco, California, USA.
35. **[Oral]** Chikamoto, Y.: Decadal predictability of mega-droughts in North America. *International Workshop on Climate System Modeling*, 2014-03-10 to 2014-03-11, Honolulu, Hawaii, USA.
36. **[Oral]** Chikamoto, Y., A. Timmermann, N. Schneider, M. Widlansky,, S. Langford: System for Interannual-to-Decadal Climate Prediction Using the Earth System Model CESM. *2014 Ocean Science Meeting*, 2014-02-23 to 2014-02-28, Honolulu, Hawaii, USA.
37. **[Oral]** Chikamoto, Y., M. Kimoto, M. Ishii, M. Watanabe,, T. Mochizuki: Impact of North Atlantic Warming on Pacific Stepwise Climate Change during the 1990s. *Asian Oceania Geosciences Society 10th Annual Meeting*, 2013-06-24 to 2013-06-28, Brisbane, Australia.
38. **[Oral]** Chikamoto, Y., A. Timmermann, S. Stevenson,, P. DiNezio: Decadal potential predictability of North American hydrology in CESM. *18th Annual CESM Workshop*, 2013-06-17 to 2013-06-20, Breckenridge, Colorado, USA.
39. **[Oral]** Chikamoto, Y., A. Timmermann,, S. Stevenson: Decadal predictability of land hydrology over North America in CESM. *European Geosciences Union General Assembly 2013*, 2013-04-07 to 2013-04-12, Vienna, Austria.
40. **[Poster]** Chikamoto, Y., M. Kimoto, M. Ishii, M. Watanabe, T. Mochizuki,, A. Timmermann: Relationship of predictability between the Pacific and Atlantic climate change. *3rd International Conference on Earth System Modelling*, 2012-09-17 to 2012-09-21, Hamburg, Germany.
41. **[Oral]** Chikamoto, Y., M. Kimoto, M. Ishii, M. Watanabe, T. Mochizuki,, A. Timmermann: Relationship of a stepwise shift between the tropical Pacific and the Atlantic climate. *2012 Summer Workshop on ENSO at the University of Hawaii*, 2012-06-20 to 2012-06-22, Honolulu, Hawaii.
42. **[Oral]** Chikamoto, Y., M. Kimoto, M. Ishii, M. Watanabe, T. Nozawa, T. Mochizuki, H. Tatebe, T. T. Sakamoto,, H. Shiogama: Predictability of a stepwise shift in Pacific climate during the late 1990s. *International Workshop on Climate Change Projection and High Performance Computing*, 2012-03-12 to 2012-03-15, Maui, Hawaii, USA.
43. **[Poster]** Chikamoto, Y., M. Kimoto, M. Ishii, M. Watanabe, T. Nozawa, T. Mochizuki, H. Tatebe, T. T. Sakamoto,, H. Shiogama: Predictability of a stepwise shift in Pacific climate during the late 1990s in hindcast experiments using MIROC. *AGU Fall Meeting*, 2011-12-05 to 2011-12-09, San Francisco, California, USA.
44. **[Poster]** Chikamoto, Y., M. Kimoto, M. Ishii, M. Watanabe, T. Nozawa, T. Mochizuki, H. Tatebe, T. T. Sakamoto, Y. Komuro, H. Shiogama, M. Mori, S. Yasunaka, Y. Imada, H. Koyama,, M. Nozu: Team MIROC: Predictability of a stepwise shift in Pacific climate during the late 1990s in hindcast experiments by MIROC. *WCRP OSC Climate Research in Service to Society*, 2011-10-24 to 2011-10-28, Denver, Colorado, USA.
45. **[Poster]** Chikamoto, Y., M. Kimoto, M. Watanabe, M. Ishii,, T. Mochizuki: Team MIROC: Multi-year predictability of tropical Atlantic climate variability. *WCRP OSC Climate Research in Service to Society*, 2011-10-24 to 2011-10-28, Denver, Colorado, USA.
46. **[Poster]** Chikamoto, Y., Y. Tanimoto, H. Mukougawa,, M. Kimoto: Subtropical Pacific SST Variability Related to the Local Hadley Circulation during the Premature Stage of ENSO. *AGU Fall Meeting*, 2009-12-14 to 2009-12-18, San Francisco, California, USA.
47. **[Oral]** Chikamoto, Y., M. Kimoto, T. Mochizuki,, M. Ishii: Simple ensemble generation method for decadal climate variability. *The Eighth Workshop on Decadal Climate Variability; Decadal Climate Predictability and Prediction: Where Are We?*, 2009-10-12 to 2009-10-15, St. Michaels, Maryland, USA.
48. **[Poster]** Chikamoto, Y., M. Kimoto, M. Watanabe, M. Mori, M. Ishii,, T. Mochizuki: Ensemble Generation Method for Decadal Climate Prediction. *IAMAS/IAPSO/IACS Joint Assembly*, 2009-07-01 to 2009-07-31, Montreal, Canada.
49. **[Oral]** Chikamoto, Y.: Ensemble Generation Method for Near-term Climate Prediction. *International Workshop on Global Change Projection*, 2009-02-01 to 2009-02-28, Yokohama, Japan.
50. **[Poster]** Chikamoto, Y., H. Mukougawa, T. Kubota, H. Sato, A. Ito,, S. Maeda: Evidence of Unstable Mode Associated with Tropical Intraseasonal Oscillation. *AGU Fall Meeting*, 2006-12-01 to 2006-12-31, San Francisco, California, USA.

51. **[Oral]** Chikamoto, Y., H. Mukougawa, T. Kubota, H. Sato, A. Ito,, S. Maeda: Evidence of Unstable Mode Associated with Tropical Intraseasonal Oscillation. *4th KAGI21 International Symposium*, 2006-12-01 to 2006-12-31, Kyoto, Japan.
52. **[Poster]** Chikamoto, Y., Y. Tanimoto: The remote influence of El Niño and La Niña on the tropical Atlantic air-sea system. *IUGG*, 2003-07-01 to 2003-07-31, Sapporo, Japan.
53. **[Poster]** Chikamoto, Y., Y. Tanimoto: The responses of atmosphere-ocean system in the Atlantic associated with El Niño and La Niña. *EGS-AGU-EUG Joint Assembly*, 2003-04-01 to 2003-04-30, Nice, France.

SUPERVISED STUDENT PRESENTATIONS

1. **[Poster]** Vernon, B., Zhang, W., and Y. Chikamoto: Improving Seasonal Forecasts in the Western United States through Statistical Downscaling. *AGU Annual Meeting*, December 09, 2024–December 13, 2024, Washington, D.C..
2. **[Poster]** Vernon, B., Zhang, W., and Y. Chikamoto: Statistical Downscaling as a tool for Improving Seasonal Forecasting in the Western United States. *Spring Runoff Meeting*, March 26, 2024–March 27, 2024, Logan, Utah.
3. **[Poster]** Hasan, N. A., Y. Chikamoto, M.J. McPhaden, J.-Y. Lee, Y.-Y. Kim, and W. Park: Influence of Tropical Basin Interactions on the 2020–23 La Niña. *Ocean Sciences Meeting*, February 18, 2024–February 23, 2024, New Orleans, Louisiana.
4. **[Poster]** Johnson, Z. F., Y. Chikamoto, J. J. Luo, and T. Mochizuki: Ocean Impacts on Australian Interannual to Decadal Precipitation Variability. *American Geophysical Union Fall Meeting*, December 09, 2019–December 13, 2019, San Francisco, California.
5. **[Poster]** Johnson, Z. F., Y. Chikamoto, J. J. Luo, and T. Mochizuki: Ocean Impacts on Australian Interannual to Decadal Precipitation Variability. *American Meteorological Society*, January 06, 2019–January 10, 2019, Phoenix, Arizona.
6. **[Poster]** Johnson, Z. F., J. J. Luo, and Y. Chikamoto: Ocean Impacts on Australian Interannual to Decadal Precipitation Variability. *Asia Oceania Geosciences Society*, June 03, 2018–June 08, 2018, Honolulu, Hawaii.

RESEARCH GRANT ACTIVITY

Competitive Grants

- **U.S. Geological Survey and Utah Center for Water Resources Research (G21AP10623-04):** Assessing the Impacts of Persistent La Niña on Utah's Drought Risk to Strengthen Community Resilience, **PI**, **Total: $60,798**, *September 2024–August 2025*.
- **Utah Agricultural Experiment Station Seed Grant:** Developing a Climate-Smart Weather Metric to Mitigate Growing Season Freeze Damage, **PI**, **Total: $70,506**, *August 2024–June 2026*.
- **Department of the Interior, Bureau of Reclamation, WaterSMART Program (R24AP00321):** Enhancing Multi-Year-to-Decadal Forecasting for the Colorado River Water Supply and Large Reservoirs, **PI**, **Total: $382,843**, *July 2024–September 2026*.
- **Utah State University, Extension Water Initiative:** Predicting Spring Runoff for Utah Water Managing Water Resources in Utah, **Co-PI**, **Total: $66,984**, *May 2024–April 2026*.
- **National Science Foundation, Civic Innovation Challenge (2228718):** Securing the Future of the Great Salt Lake Basin Through Effective Water and Land Use Partnerships, **Co-PI**, **Total: $50,000**, *October 2022–March 2023*.
- **Department of Energy (DESC0016605):** A Framework for Improving Analysis and Modeling of Earth System and Intersectoral Dynamics at Regional Scales, **Co-PI**, **Total: $10,500,000**, *September 2022–August 2025*.
- **U.S. Geological Survey and Utah Center for Water Resources Research (G21AP10623-04):** Developing High-Resolution Seasonal Snow Forecasts for Utah's Watersheds, **Co-PI**, **Total: $60,000**, *September 2022–August 2023*.
- **Department of the Interior, Bureau of Reclamation, WaterSMART Program (R22AP00220):** A platform for drought forecast in Intermountain West with the optimized multi-model ensemble approach, **Co-I**, **Total: $259,370**, *May 2022–March 2024*.
- **Utah Agricultural Experiment Station Seed Grant:** Modeling the Climate-Water-Food Nexus in the Intermountain West: A Drought Perspective, **Co-I**, **Total: $40,000**, *August 2021–July 2023*.
- **Utah State University, Cedar Mountain Initiative:** Climate Drivers for Widespread Aspen Defoliation Events in the Cedar Mountain Area, **PI**, **Total: $71,883**, *July 2021–June 2024*.

- **Department of the Interior, Bureau of Reclamation (R19AP00149):** A platform toward an early warning system for shortages in Colorado River water supply, **PI**, **Total: $191,250**, *August 2020–September 2022*.
- **Department of Defense, Strategic Environmental Research and Development Program (RC20-3056):** Useful Prediction of Climate Extreme Risk for Texas-Oklahoma at 4–6 Years, **Co-PI**, **Total: $697,531**, *August 2020–September 2023*.
- **Utah Agricultural Experiment Station Seed Grant:** Improving Multi-Year Hydrological Predictability in the Intermountain West, **PI**, **Total: $52,158**, *August 2020–July 2022*.
- **Department of the Interior, Bureau of Reclamation, WaterSMART Program (R18AC00018):** Synthesizing drought characteristics prediction to inform drought resiliency decisions from days to years, **Co-PI**, **Total: $201,768**, *September 2018–September 2020*.

Non-competitive Grants

- **Utah Agricultural Experiment Station:** Climate Impact on Prolonged Drought Forecast and Subsequent Natural Disasters in the American West, **PI**, **Total: $50,000**, *July 2022–June 2027*.
- **Utah Agricultural Experiment Station Equipment Grant:** Intel Parallel Studio XE Cluster Edition for Linux-Floating Academic 2 seat pack, **PI**, **Total: $7,400**, *April 2019–April 2019*.
- **Utah Agricultural Experiment Station:** Climate Predictability and its Impact on Regional Natural Resources, **PI**, **Total: $50,000**, *July 2017–June 2022*.

STUDENT MENTORING

Thesis and Dissertation Supervision

- Bradley Vernon (2025): *Improving Seasonal Precipitation Forecasts in the Western United States Through Statistical Downscaling*. M.Sc. in Climate Science, Thesis, USU.
- Kenneth K. Pomeyie (2024): *Impact of Snow Accumulation on Structural Integrity: Present and Future Perspectives*. Ph.D. in Mathematics and Statistics, Dissertation, USU.
- Krishna Borhara (2024): *El Niño Prediction at 1- and 3-year Lead Times Driven by the Western North Pacific Precursor and Their Impacts*. Ph.D. in Climate Science, Dissertation, USU.
- Anthony Reis (2024): *Multidecadal Data Demonstrates the Role of Climate and Natural History Traits in Shaping Butterfly Phenology*. M.Sc. in Ecology, Thesis, USU.
- Naveen Duhan (2023): *Machine Learning and Data Mining in Complex Genomics Big Data: Developing Efficient Tools to Advance Computational Systems Biology*. Ph.D. in Plant Science (Bioinformatics and Computational Biology), Dissertation, USU.
- Jacob Stuivenvolt-Allen (2022): *Impacts of the Changing Pacific on North American Drought, Atmospheric Rivers, and Explosive Cyclones*. Ph.D. in Climate Science, Dissertation, USU.
- Zachary F. Johnson (2020): *Remote Ocean Forcing on Interannual-to-Decadal Climate Variability Through Inter-basin Interactions*. Ph.D. in Climate Science, Dissertation, USU.
- Henrik Panosyan (2020): *A Stratospheric Approach to Diagnose the North American Winter Dipole*. M.Sc. in Climate Science, Thesis, USU.
- Emily J. Wilkins (2020): *Using Social Media to Assess the Impact of Weather and Climate on Visitation to Outdoor Recreation Settings*. Ph.D. in Environment and Society, Dissertation, USU.
- Hadia Akbar (2019): *Ranchers Adapting to Climate Variability in the Upper Colorado River Basin, Utah*. M.Sc. in Water Resources Engineering, Thesis, USU.
- Boniface O. Fosu (2018): *Towards the Prediction of Climate Extremes with Attribution Analysis Through Climate Diagnostics and Modeling: Cases from Asia to North America*. Ph.D. in Climate Science, Dissertation, USU.

Major Advisor

- Zachary F. Johnson, Ph.D. (Climate), 2017–2020
- Henrik Panosyan, M.Sc. (Climate), 2018–2020
- Sakshi Solanki, Ph.D. (Climate), 2021
- A K M Nahid Hasan, Ph.D. (Climate), 2021–present
- Timothy E. Wright, Ph.D. (Climate), 2021–present

- David Evans, Ph.D. (Climate), 2021–present

Co-advisor

- Bradley Vernon, M.Sc. (Climate), 2022–2025
- Bradley Vernon, Ph.D. (Climate), 2025–present

Committee Member

- Boniface O. Fosu, Ph.D. (Climate), 2017–2018
- Hadia Akbar, M.Sc. (Water Resources Engineering), 2018–2019
- Emily Wilkins, Ph.D. (Environment and Society), 2017–2020
- Jacob Stuivenvolt-Allen, Ph.D. (Climate), 2021–2022
- Kenneth K. Pomeyie, Ph.D. (Statistics), 2021–2024
- Krishna Borhara, Ph.D. (Climate), 2021–2024
- Naveen Duhan, Ph.D. (Plant Science), 2022–2023
- Raghav Kataria, Ph.D. (Plant Science), 2023–present
- Motasem Abualqumboz, Ph.D. (Civil & Environmental Engineering), 2022–present
- Grace Affram, Ph.D. (Climate), 2023–present
- Soren Struckman, Ph.D. (Ecology), 2023–present
- Anthony Reis, M.Sc. (Ecology), 2023–2024
- Anthony Reis, Ph.D. (Biology), 2025–present
- Cody Ratterman, Ph.D. (Climate), 2024–present
- Casey Olson, M.Sc. (Climate), 2024–present

Undergraduate Mentoring

- Bradley Vernon, Climate, Fall 2021
- Casey Olson, Climate, Spring 2022
- Aaron Weaver, Climate, Spring 2024

TEACHING EXPERIENCE

Regular Courses at Utah State University

- **PSC 4810/6810: Climate and Climate Change**; Fall 2019, Fall 2020, Fall 2021; Utah State University.
- **PSC 4840/5850/6840: Atmospheric Dynamics** (formerly *Climate Dynamics*); Fall 2024; Utah State University.
- **PSC 4860/4900/5860/6860: Atmospheric Thermodynamics** (formerly *Climate Thermodynamics*); Fall 2020, Fall 2021, Fall 2023, Spring 2025; Utah State University.
- **PSC 4880/5880/6880: Earth System Science**; Spring 2018, Spring 2019, Spring 2020, Spring 2021, Spring 2023, Spring 2024, Spring 2025; Utah State University.
- **PSC 4740/4900: Climate Science Practicum**; Fall 2021, Spring 2022, Spring 2024; Utah State University.
- **PSC 6125: Climate Modeling and Simulation**; Fall 2017, Fall 2018, Fall 2020, Fall 2021, Fall 2022; Utah State University.
- **PSC 6890/7890: Plants, Soils, and Climate Graduate Seminar**; Fall 2017, Spring 2018; Utah State University.
- **PSC 7900: Climate Model Application**; Spring 2018; Utah State University.
- **PSC 7900: Tropical Ocean-Atmosphere Interaction**; Fall 2019, Spring 2022; Utah State University.

Guest Lectures

- **Guest Lecture for Climate Modeling and Simulation**, December 11, 2024, Department of Integrated Climate System Science, Pusan National University, South Korea.
- **Guest Lecture for Climate System Science**, December 13, 2024, Research Center for Climate Sciences, Pusan National University, South Korea.
- **Guest Lecture for Climate and Climate Change**, Summer 2023, Department of Soil and Environmental Science, National Chung Hsing University, Taiwan.

- **Guest Lecture for CESM Summer School**, August 9–11, 2018, Institute for Basic Science, Pusan National University, South Korea.
- **Guest Lecture for CAS 6001: Climate Adaptation Science Colloquium**, Fall 2017, Utah State University.
- **Guest Lecture for PHYS 3880: Advanced Physics Laboratory**, Spring 2022, Utah State University.
- **Guest Lecture for WATS 3000: Oceanography**, Spring 2022, Utah State University.
- **Instructor of Unix Shell**, September 9–10, 2017, Utah State University.
- **Guest Lecture for Japanese High School Lecture: Is the Earth warming?**, October 10, 2014, Honolulu, Hawaii.
- **Guest Lecture for Meteorological Society of Japan: Predictability and Dynamics**, August 6–8, 2007, 19th Summer School, Hokkaido, Japan.

Teaching Assistant Experience

- **Teaching Assistant**, April 2002–March 2005, Hokkaido University, Japan
  Graduate-level classes including programming, GrADS, Linux, dynamic meteorology, ocean dynamics, and CTD observations.
- **Teaching Assistant**, April–September 2001, 2002, Hokkaido University, Japan
  Undergraduate lab instruction on fluid dynamics, weather map drawing, and ocean salinity analysis.

HONORS & AWARDS

- **Syono Award:** Research on decadal climate prediction system development and earth system predictability, *The Meteorological Society of Japan*, 2018.
- **Journal of the Meteorological Society of Japan Award in 2013:** Mori, M., M. Kimoto, M. Ishii, S. Yokoi, T. Mochizuki, **Y. Chikamoto**, M. Watanabe, T. Nozawa, H. Tatebe, T. T. Sakamoto, Y. Komuro, Y. Imada, and H. Koyam, (2013): Hindcast Prediction and Near-Future Projection of Tropical Cyclone Activity over the Western North Pacific Using CMIP5 Near-Term Experiments with MIROC, *J. Meteor. Soc. Japan*, Vol. 91, pp.431–451, doi:10.2151/jmsj.2013-402.

OUTREACH

- **Media Service:** Cache Valley hits record-breaking levels of wintertime ozone, *Highlander Magazine*, Apr 19, 2023.
- **Media Service:** USU researchers say they can forecast droughts years in advance, *NewScientist*, Oct 22, 2020.
- **Media Service:** Scientists say they can predict Colorado River's annual water supply. What does that mean for agriculture, wildfires?, *DeseretNews*, Oct 20, 2020.
- **Media Service:** USU researchers say they can forecast droughts years in advance, *KSL News*, Oct 20, 2020.
- **Media Service:** USU team creates tool to predict drought and water flow along the Colorado River, *Cache Valley Daily*, Oct 19, 2020.
- **Media Service:** Distant seas might predict Colorado River droughts, *Science*, Oct 15, 2020.
- **Radio Guest:** KRCL RadioActive, Oct 14, 2020.
- **Press Release:** The Colorado River's water supply is predictable owing to long-term ocean memory, *USU Today*, Oct 9, 2020.
- **Media Service:** Utah's weather and climate — Dry times ahead, *Utah Public Radio*, June 30, 2020.
- **Media Service:** How oceans impact Western reservoirs and rivers, *High Country News*, Sept 8, 2017.
- **Research Highlight:** Atlantic/Pacific climate contrast affects multi-year predictability of US drought and wildfire, *US CLIVAR*, Aug 1, 2017.
- **Press Release:** Research team predicts multi-year U.S. drought and fire conditions, *USU Today*, July 31, 2017.
- **Press Release:** Extending climate predictability beyond El Niño, *University of Hawaii at Manoa*, April 21, 2015.

WORKSHOP/MEETING/VISIT

- **Seminar:** Earth System Predictability on Interannual to Decadal Timescales: Concepts and Application. *IBS Center for Climate Physics, Busan, South Korea, December 19, 2024*.
- **Seminar:** Overview of Tropical Inter-Basin Interactions from the Perspective of Atlantic Impacts on the Pacific. *National Central University, Taoyuan City, Taiwan, June 6, 2023*.
- **Seminar:** Decadal Climate Prediction: A New Interdisciplinary Challenge in Earth System Science. *National Chung Hsing University, Taichung, Taiwan, June 1, 2023*.

- **Invited Seminar:** Multi-year Predictability of Colorado River Water Supply Driven by Remote Ocean Impact. *Department of Atmospheric Sciences, University of Utah, Salt Lake City, UT, January 26, 2022*.
- **Invited Seminar:** Colorado River Water Supply is Predictable on Multi-year Timescales Owing to Long-term Ocean Memory. *Department of Civil and Environmental Engineering, Utah State University, UT, October 13, 2021*.
- **Invited Seminar:** Earth System Predictability on Interannual-to-Decadal Timescales. *NOAA Geophysical Fluid Dynamics Laboratory Seminar, Princeton, NJ, March 4–6, 2020*.
- **Proposal Writing Seminar,** Utah State University, Logan, Utah, October 25, 2019.
- **UCAR Annual Members Meeting** in 2018, 2023, 2024.
- **Pan-tropical Inter-basin Climate Interactions,** *Maison Glad, Jeju, Korea, August 22–25, 2018*.
- **Seminar:** Decadal Climate Prediction and Application. *National Taiwan University, Taipei, Taiwan, March 9, 2018*.
- **Seminar:** Decadal Climate Prediction and Application. *National Central University, Taoyuan City, Taiwan, March 8, 2018*.
- **Advancing SmartTech in Agricultural Production and Marketing,** *National Chung Hsing University, Taichung, Taiwan, March 5–7, 2018*.
- **Seminar:** Earth System Predictability Beyond Decadal Climate Prediction. *Hokkaido University, Hokkaido, Japan, June 29, 2017*.
- **Seminar:** Decadal Climate Prediction and Application. *University of Tokyo, Chiba, Japan, June 27, 2017*.
- **2017 Proposal Writing Institute,** *Utah State University, Logan, Utah, May 15–June 8, 2017*.
- **Climate Adaptation Science Research Forum,** *Utah State University, Logan, Utah, April 19, 2017; February 6, 2019*.
- **Science-Management-Policy Exchange,** *Moab Public Library, Moab, Utah, March 3, 2017*.
- **Software/Data Carpentry Instructor Training,** *Utah State University, Logan, Utah, February 9–10, 2017*.

PROFESSIONAL ACTIVITIES AND TECHNICAL SKILLS

- Completed the Software Carpentry instructor training program, *August 7, 2017*.
- Completed the Empowering Teaching Excellence Foundations of USU teaching workshop, *August 14, 2017*.
- Attended the Hybrid Face-to-Face Teaching Tips Workshop, Utah State University, Logan, Utah, *August 11, 2020*.
- Completed the Introduction to Leading at USU: Mindset of a Leader, *March 3, 2022*.
- Served on the Committee for Utah State University Student Scholarship, *2022, 2023, 2024*.
- Contributing author for the IPCC WG1 Fifth Assessment Report, Chapter 11: Near-term Climate Change: Projections and Predictability.
- Session convener/co-convener: *American Geophysical Union (AGU) Fall Meeting (2014, 2019), EGU General Assembly (2018, 2019, 2021, 2022, 2023, 2024), JpGU Meeting (2018), AOGS Annual Meeting (2018)*.
- Received young scientist funding from the Kyoto University Active Geosphere Investigation for the 21st Century COE Program (*April 2006–March 2007*).
- Peer reviewer for journals: *Science, Nature Climate Change, Nature Communications, Science Advances, Scientific Reports, Geophysical Research Letters, npj Climate and Atmospheric Science, Journal of Climate, Climate Dynamics, Weather and Forecasting, Journal of the Atmospheric Sciences, Journal of Geophysical Research: Atmospheres, Journal of Applied Meteorology and Climatology, Journal of Atmospheric and Solar-Terrestrial Physics, International Journal of Climatology, Journal of the Meteorological Society of Japan, Sustainability, Scientific Online Letters on the Atmosphere, Journal of Oceanography, Hydrology and Earth System Sciences, Land, Advances in Meteorology*.
- Reviewed proposals for: *NERC Discovery Science Fellowship Proposals; NSF (Climate and Large-Scale Dynamics, Paleoclimate); Research Council of Norway; Israel-US Binational Industrial Research and Development Foundation; Utah Agricultural Experiment Station*.
- Panel reviewer for: *NASA Research Opportunities in Space and Earth Science (ROSES), A.50: Subseasonal-to-Seasonal Hydrometeorological Prediction*; *USU, Office of Research, Seed Grant Program*.
- Contributor to providing CMIP5 decadal prediction datasets for the Japanese model, MIROC.
- Member of: *American Geophysical Union, American Meteorological Society, European Geophysical Union, Japan Meteorological Society, Oceanographic Society of Japan*.
- Numerical modeling: Programming skills in *Fortran, C, MPI, GrADS, Python, and NCL for UNIX, Linux, and supercomputers*, related to climate model prediction.

FIELDS OF INTEREST

- **Climate Dynamics:** Understanding the physical processes governing atmospheric and oceanic circulation patterns, including variability on intra-seasonal to multi-decadal timescales.
- **Seasonal-to-Decadal Climate Prediction:** Developing and evaluating forecast systems that bridge the gap between weather prediction and long-term climate projections, using both statistical and dynamical approaches.
- **Earth System Predictability:** Investigating the sources and limits of predictability in the coupled Earth system, including interactions between the atmosphere, ocean, land, and biosphere.
- **Initialization for Climate Systems:** Exploring initialization strategies in coupled models to improve forecast skill, with a focus on ocean memory and subsurface conditions.
- **Atmosphere–Ocean Interaction:** Examining how surface and subsurface ocean variability influence atmospheric circulation and hydroclimate patterns, particularly in relation to ENSO and inter-basin teleconnections.
- **Hydroclimate Variability and Water Resources:** Assessing climate-driven variability in precipitation, snowpack, and drought, and its implications for water supply management and ecosystem resilience in semi-arid regions.

CITATION INDICES

Metric	Google Scholar	Scopus
Citations	4,628	3,749
h-index	26	25
i10-index	37	–
Documents	–	48

As of May 1, 2025

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