

Curriculum Vitae

Flavio Lehner, PhD

Assistant Professor

Department of Earth and Atmospheric Sciences
Cornell University
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EDUCATION

- 2013 PhD University of Bern, Climate and Environmental Physics and Oeschger Centre for Climate Change Research, Bern, Switzerland
- 2009 MS University of Bern, Climate and Environmental Physics and Oeschger Centre for Climate Change Research, Bern, Switzerland
- 2007 BS University of Basel, Department of Environmental Sciences, Basel, Switzerland

PROFESSIONAL APPOINTMENTS

- 2020- Assistant Professor, Cornell University, USA
- 2019-2020 Swiss NSF Ambizione Fellow, ETH Zürich, Switzerland
- 2018-2019 Project Scientist I, National Center for Atmospheric Research, USA
- 2016-2018 NOAA PACE Postdoctoral Fellow, National Center for Atmospheric Research, USA
- 2014-2016 Visiting Postdoctoral Fellow, National Center for Atmospheric Research, USA
- 2013-2014 Joint appointment as Science Officer, IPCC AR5 Working Group I Technical Support Unit and Postdoctoral Fellow, University of Bern, Switzerland

AWARDS AND HONORS

- 2019 US CLIVAR Early Career Scientist Leadership Award (\$1k)
- 2019 Finalist, project of the year 2018, Bureau of Reclamation (seasonal streamflow forecasting)
- 2016 NOAA Postdoc Applying Climate Expertise (PACE) Fellowship, 2016-2018 (\$120k)
- 2014 Swiss National Science Foundation Early Postdoc Mobility Fellowship, 2014-2016 (\$92k)
- 2013 WMO Research Award for Young Scientists, used for conference travel (\$1k)

GRANTS

- 2020 NOAA MAPP, 2020-2021 (Collaborator; \$360k)
- 2019 NOAA MAPP, 2019-2020 (Collaborator; \$360k)
- 2017 Swiss National Science Foundation Ambizione grant, 2019-2022 (PI; \$550k)
- 2017 Bureau of Reclamation Science and Technology, 2018-2020 (NCAR Co-PI; \$230k)
- 2017 Bureau of Reclamation Science and Technology, 2018-2020 (NCAR PI; \$170k)

PUBLICATIONS

Published and in press

Underlined: PI-advised (P)ostdoc, (G)rad student, (U)ndergrad

- 2021 [56] Simpson, I. R., K. A. McKinnon, F. V. Davenport, M. Tingley, **F. Lehner**, A. Al Fahad, D. Chen (in press): Emergent constraints on the large scale atmospheric circulation and regional hydroclimate: do they still work in CMIP6 and how much can they actually constrain the future? *Journal of Climate*, DOI: XXX
- [55] Krikken, F., **F. Lehner**, K. Haustein, I. Drobyshev, G. J. van Oldenborgh (in press): Attribution of the role of climate change in the forest fires in Sweden 2018. *Natural Hazards and Earth System Sciences*, DOI: XXX
- [54] Ciavarella, A., D. Cotterill, P. Stott, S. Kew, S. Philip, G. J. van Oldenborgh, A. Skålevåg, P. Lorenz, Y. Robin, F. Otto, M. Hauser, S. I. Seneviratne, **F. Lehner**, O. Zolina (in press): Prolonged Siberian heat of 2020 almost impossible without human influence. *Climate Dynamics*, DOI: XXX
- [53] van Oldenborgh, G. J., F. Krikken, S. Lewis, N. J. Leach, **F. Lehner**, K. R. Saunders, M. van Weele, K. Haustein, S. Li, D. Wallom, S. Sparrow, J. Arrighi, R. P. Singh, M. van Aalst, S. Y. Philip, R. Vautard, F. E. Otto (in press): Attribution of the Australian bushfire risk to anthropogenic climate change. *Natural Hazards and Earth System Sciences*, DOI: 10.5194/nhess-2020-69
- [52] Bonan, D. B. (G), **F. Lehner**, M. Holland (2021): Partitioning uncertainty in projections of Arctic sea ice. *Environmental Research Letters*, DOI: 10.1088/1748-9326/abe0ec
- [51] Touma, D., S. Stevenson, **F. Lehner**, S. Coats (2021): Human-driven greenhouse gas and aerosol emissions cause distinct regional impacts on extreme fire weather. *Nature Communications*, DOI: 10.1038/s41467-020-20570-w
- 2020 [50] Brunner, L., A. G. Pendergrass, **F. Lehner**, A. L. Merrifield, R. Lorenz, R. Knutti (2020): Reduced global warming from CMIP6 projections when weighting models by performance and independence. *Earth System Dynamics*, DOI: 10.5194/esd-11-995-2020
- [49] Papalexiou, S. M., C. R. Rajulapati, M. P. Clark, **F. Lehner** (2020): Robustness of CMIP6 historical global mean temperature simulations: trends, long-term persistence, autocorrelation, and distributional shape. *Earth's Future*
- [48] Tokarska, K. B., V. K. Arora, N. P. Gillett, **F. Lehner**, J. Rogelj, C.-F. Schleussner, R. Séférian, R. Knutti (2020): Uncertainty in carbon budget estimates due to internal climate variability. *Environmental Research Letters*
- [47] Mankin, J. S., **F. Lehner**, S. Coats, K. A. McKinnon (2020): The value of initial condition large ensembles to robust adaptation decision-making. *Earth's Future*
- [46] Deser, C., A. S. Phillips, I. R. Simpson, N. Rosenbloom, D. Coleman, **F. Lehner**, A. Pendergrass (2020): Isolating the evolving contributions of anthropogenic aerosols and greenhouse gases: a new CESM1 Large Ensemble community resource. *Journal of Climate*
- [45] Schlunegger, S., K. B. Rodgers, J. L. Sarmiento, T. Ilyina, J. Dunne, Y. Takano, J. Christian, M. Long, T. L. Frölicher, R. Slater, **F. Lehner** (2020): Time of Emergence & Large Ensemble intercomparison for ocean biogeochemical trends. *Global Biogeochemical Cycles*

- [44] **Lehner, F.**, C. Deser, N. Maher, J. Marotzke, E. Fischer, L. Brunner, R. Knutti, E. Hawkins (2020): Partitioning climate projection uncertainty with multiple Large Ensembles and CMIP5/6. *Earth System Dynamics*
- [43] Rastogi, D. (G), **F. Lehner**, M. Ashfaq (2020): Revisiting recent United States heatwaves in a warmer and more humid climate. *Geophysical Research Letters*
- [42] Lukas, J., E. Gutmann, B. Harding, **F. Lehner** (2020): Climate change-informed hydrology. Chapter 11 in *Colorado River Basin Climate and Hydrology: State of the Science*, edited by J. Lukas and E. Payton, 384-449. Western Water Assessment, University of Colorado, Boulder.
- [41] Deser, C., **F. Lehner**, K. B. Rodgers, T. Ault, T. L. Delworth, P. N. DiNezio, A. Fiore, C. Frankignoul, J. C. Fyfe, D. E. Horton, J. E. Kay, R. Knutti, N. S. Lovenduski, J. Marotzke, K. A. McKinnon, S. Minobe, J. Randerson, J. A. Screen, I. R. Simpson and M. Ting (2020): Insights from Earth system model initial-condition large ensembles and future prospects. *Nature Climate Change*
- [40] Tokarska, K. B., M. B. Stolpe, S. Sippel, E. M. Fischer, C. J. Smith, **F. Lehner**, R. Knutti (2020): Past warming trend constrains future warming in CMIP6 models. *Science Advances*
- [39] Maher, N., **F. Lehner**, J. Marotzke (2020): Quantifying the role of internal variability in the climate we will observe in the coming decades. *Environmental Research Letters*
- [38] Fučkar, N. S., F. E.L. Otto, **F. Lehner**, I. Pinto, E. Howard, S. Sparrow, S. Li, D. Wallom (2020): On Heavy Precipitation in Mozambique, Zimbabwe and Zambia in February 2018. *Bulletin of the American Meteorological Society*
- [37] Pendergrass, A. G., G. A. Meehl, R. Pulwarty, M. Hobbins, A. Hoell, A. AghaKouchak, C. J.W. Bonfils, A. J. E. Gallant, M. Hoerling, D. Hoffmann, L. Kaatz, **F. Lehner**, D. Llewellyn, P. Mote, R. Neale, J. T. Overpeck, A. Sheffield, K. Stahl, M. Svoboda, M. C. Wheeler, A. W. Wood, C. A. Woodhouse (2020): Flash droughts present a new challenge for subseasonal-to-seasonal prediction. *Nature Climate Change*
- 2019 [36] **Lehner, F.**, A. W. Wood, J. A. Vano, D. M. Lawrence, M. P. Clark, J. S. Mankin (2019): The potential to reduce uncertainty in regional runoff projections from climate models. *Nature Climate Change*
- [35] Pendergrass, A. G., D. Colman, C. Deser, **F. Lehner**, N. Rosenbloom, and I.R. Simpson (2019): Nonlinear response of extreme precipitation to warming in CESM1. *Geophysical Research Letters*
- [34] Sippel, S., N. Meinshausen, A. Merrifield, **F. Lehner**, A. G. Pendergrass, E. Fischer, R. Knutti (2019): Uncovering the forced climate response from a single ensemble member using statistical learning. *Journal of Climate*
- [33] Guo, R., C. Deser, L. Terray, **F. Lehner** (2019): Human Influence on Winter Precipitation Trends (1921–2015) over North America and Eurasia Revealed by Dynamical Adjustment. *Geophysical Research Letters*
- [32] Moore, F., N. Obradovich, **F. Lehner**, P. Baylis (2019): Rapidly Declining Remarkability of Temperature Anomalies May Obscure Public Perception of Climate Change. *Proceedings of the National Academy of Science*
- 2018 [31] Otto, F., P. Wolski, **F. Lehner**, C. Tebaldi, G. van Oldenborgh, S. Hogesteegeer, R. Singh, P. Holden, N. Fuckar, R. Odoulami, M. New (2018): Anthropogenic influence on the drivers of the Western Cape drought 2015-2017. *Environmental Research Letters*

- [30] Raible, C. C., M. Messmer, **F. Lehner**, T. F. Stocker, R. Blender (2018): Extratropical Cyclone statistics during the last millennium. *Climate of the Past*
- [29] Vano, J., M. Clark, J. Arnold, B. Nijssen, A. W. Wood, E. Gutmann, N. Addor, J. Hamman, **F. Lehner** (2018): Dos and Don'ts for using climate change information for water resource planning and management: guidelines for study design. *Climate Services*
- [28] Musselman, K. N., **F. Lehner**, K. Ikeda, M. Clark, A. Prein, C. Liu, M. Barlage, R. Rasmussen (2018): Projected increases and regime shifts in rain-on-snow flood potential over western North America. *Nature Climate Change*
- [27] **Lehner, F.**, C. Deser, I. R. Simpson, L. Terray (2018): Attributing the US Southwest's recent shift into drier conditions. *Geophysical Research Letters*
- 2017 [26] Pendergrass, A. G., R. Knutti, **F. Lehner**, C. Deser, B. M. Sanderson (2017): Precipitation variability increases in a warmer climate. *Scientific Reports*
- [25] **Lehner, F.**, A. W. Wood, D. Llewellyn, D. B. Blatchford, A. G. Goodbody, F. Pappenberger (2017): Mitigating the impacts of climate non-stationarity on seasonal streamflow predictability in the US Southwest. *Geophysical Research Letters*
- [24] **Lehner, F.**, S. Coats, T. F. Stocker, B. M. Sanderson, A. G. Pendergrass, C. C. Raible, J. E. Smerdon (2017): Projected drought risk in 1.5°C and 2°C warmer climates. *Geophysical Research Letters*
- [23] **Lehner, F.**, C. Deser, L. Terray (2017): Towards a new estimate of "time of emergence" of anthropogenic warming: insights from dynamical adjustment and a large initial-condition model ensemble. *Journal of Climate*
- [22] **Lehner, F.**, E. G. Wahl, A. W. Wood, D. B. Blatchford, D. Llewellyn (2017): Assessing recent declines in Upper Rio Grande River runoff efficiency from a paleoclimate perspective. *Geophysical Research Letters*
- [21] **Hydro2k consortium** (2017): Comparing proxy and model estimates of hydroclimate variability and change over the Common Era. *Climate of the Past*
- [20] Merrifield, A., **F. Lehner**, S.-P. Xie, C. Deser (2017): Removing circulation effects to assess central US land-atmosphere interactions in the CESM Large Ensemble. *Geophysical Research Letters*
- [19] Sanderson, B. M., Y. Xu, C. Tebaldi, M. Wehner, B. O'Neill, A. Jahn, A. Pendergrass, **F. Lehner**, W. G. Strand, L. Lin, R. Knutti, J.-F. Lamarque (2017): Community Climate Simulations to assess avoided impacts in 1.5 and 2 degree futures. *Earth System Dynamics*
- [18] Deser, C., R. Guo, **F. Lehner** (2017): The relative contributions of tropical Pacific sea surface temperatures and atmospheric internal variability to the recent global warming hiatus. *Geophysical Research Letters*
- [17] O'Neill, B., J. Done, A. Gettelman, P. Lawrence, **F. Lehner**, J.-F. Lamarque, L. Lin, A. Monaghan, K. Oleson, X. Ren, B. Sanderson, C. Tebaldi, M. Weitzel, Y. Xu, B. Anderson, M. Fix, S. Levis (2017): The Benefits of Reduced Anthropogenic Climate change (BRACE): A synthesis. *Climatic Change*
- 2016 [16] Camenisch, C., K. M. Keller, M. Salvisberg, B. Amann, M. Bauch, S. Blumer, R. Brázdil, S. Brönnimann, U. Büntgen, B. M. S. Campbell, L. Fernández-Donado, R. Glaser, F. González-Rouco, M. Grosjean, R. C. Hoffmann, H. Huhtamaa, F. Joos, A. Kiss, O. Kotyza, **F. Lehner**, J. Luterbacher, N. Maughan, R. Neukom, T. Novy, K. Pribyl, C. C. Raible, D. Riemann, M. Schuh, O. Wetter (2016): The 1430s: a cold period of extraordinary internal climate variability during the early Spörer Minimum with social and economic impacts in north-western and central Europe. *Climate of the Past*

- [15] **Lehner, F.**, G. Hegerl, A. Schurer, C. Deser, T. L. Frölicher (2016): Importance of ENSO phase during volcanic eruptions for detection and attribution. *Geophysical Research Letters*
- [14] **Lehner, F.**, C. Deser, B. M. Sanderson (2016): Future risk of record-breaking summer temperatures and its mitigation. *Climatic Change*
- [13] Chikamoto, M. O., A. Timmermann, M. Yoshimori, **F. Lehner**, A. Laurian, A. Abe-Ouchi, A. Mouchet, F. Joos, C. C. Raible, K. Cobb (2016): Intensification of tropical Pacific biological productivity due to volcanic eruptions. *Geophysical Research Letters*
- 2015 [12] Sanderson, B. M., K. W. Oleson, W. G. Strand, **F. Lehner**, B. C. O'Neill (2015): A new ensemble of GCM simulations to assess avoided impacts in a climate mitigation scenario. *Climatic Change*
- [11] PAGES2K-PMIP3: O. Bothe, S. Feng, L. Fernández Donado, E. Garcia Bustamante, J. Gergis, F. Gonzalez-Rouco, H. Goosse, G. Hegerl, A. Hind, J. Jungclaus, D. Kaufman, **F. Lehner**, N. McKay, A. Moberg, C. Raible, A. Schurer, J. Smerdon, L. von Gunten, S. Wagner, E. Warren, M. Widmann, P. Yiou, E. Zorita (2015): Continental-scale temperature variability in the PMIP3 simulation ensemble and PAGES 2K regional temperature reconstructions over the past millennium. *Climate of the Past*
- [10] Pendergrass, A., **F. Lehner**, B. M. Sanderson, Y. Xu (2015): Does extreme precipitation intensity depend on emissions scenario? *Geophysical Research Letters*
- [9] **Lehner, F.** and T. F. Stocker (2015): From local perception to global perspective. *Nature Climate Change*
- [8] Ortega, P., **F. Lehner**, D. Swingedouw, V. Masson-Delmotte, C. C. Raible, M. Casado, P. Yiou (2015): A model-tested North Atlantic Oscillation reconstruction for the past millennium. *Nature*
- [7] **Lehner, F.**, F. Joos, C. C. Raible, J. Mignot, A. Born, K. M. Keller, T. F. Stocker (2015): Climate and carbon cycle dynamics in a CESM simulation from 850-2100 CE. *Earth System Dynamics*
- [6] Keller, K., F. Joos, **F. Lehner**, C. C. Raible (2015): Detecting changes in ENSO characteristics 850-2100 CE: insights from the ocean carbon cycle. *Geophysical Research Letters*
- [5] Zanchettin D., O. Bothe, **F. Lehner**, P. Ortega, C. C. Raible, and D. Swingedouw (2015): Reconciling reconstructed and simulated features of the winter Pacific-North-American pattern in the early 19th century. *Climate of the Past*
- 2014 [4] Raible, C. C., **F. Lehner**, J. F. González-Rouco, L. Fernández-Donado (2014): Changing correlation structures of the Northern Hemisphere atmospheric circulation from 1000 to 2100 AD. *Climate of the Past*
- 2013 [3] **Lehner, F.**, A. Born, C. C. Raible, T. F. Stocker (2013): Amplified inception of European Little Ice Age by sea ice-ocean-atmosphere feedbacks. *Journal of Climate*
- 2012 [2] **Lehner, F.**, C. C. Raible, T. F. Stocker (2012): Testing the robustness of a precipitation proxy-based North Atlantic Oscillation reconstruction. *Quaternary Science Reviews*
- [1] **Lehner, F.**, C. C. Raible, D. Hofer, T. F. Stocker (2012): The freshwater balance of polar regions in transient simulations from 1500 to 2100 AD using a comprehensive coupled climate model. *Climate Dynamics*

Submitted and in preparation

Gallant, A., S. Power, B. J. Henley, D. C. Verdon-Kidd, A. Pitman, D. G. C. Kirono, M. Adamu, C. Holgate, L. Ashcroft, K. Allen, P. Hope, A. S. Kiem, A. King, **F. Lehner**, A. G. Pendergrass, A. S. Taschetto, A. M. Ukkola, T. R. Vance, N. Wright (submitted): Multi-year droughts through an Australian lens

Röthlisberger, M., M. Hermann, C. Frei, **F. Lehner**, E. M. Fischer, R. Knutti, H. Wernli (submitted): A new framework for identifying and investigating seasonal climate extremes

Lanson, A., P. Pfleiderer, **F. Lehner**, C.-F. Schleussner (submitted): Uncertainty in near-term temperature evolution must not obscure assessments of climate mitigation benefits

Heinze-Deml, C., S. Sippel, A. G. Pendergrass, **F. Lehner**, N. Meinshausen (submitted): Latent Linear Adjustment Autoencoders v1.0: A novel method for estimating and emulating dynamic precipitation at high resolution

Fučkar, N. S., F. E. L. Otto, **F. Lehner**, O. P. Dube, A. Maviza, M. N. Chisola, M. Allen, M. New (submitted): Attribution of 2019 low precipitation in a wider Angola Low region

Stevenson, S., S. Coats, D. Touma, J. Cole, **F. Lehner**, J. Fasullo, B. Otto-Bliesner (submitted): 21st Century megadrought: a new normal, with more frequent extremes

Lehner, F., S. Coats (in preparation): Non-linear drought response to anthropogenic forcing

Lehner, F., and co-authors (in preparation): The role of atmospheric circulation in present and future persistent temperature anomalies over Siberia

Non-peer reviewed publications (selection)

Lehner, F., C. Deser (submitted): Uncertainty in climate change projections: the role of internal variability. *Book chapter*

Tweshiningilwa Nghikembua, M., **F. Lehner**, W. Ottichilo, L. Marker, S. C. Amstrup (2018): The impact of climate change on the conservation and survival of the cheetah. In: Marker, L., Boast, L. and Schmidt-Kuentzel, A. (Eds.): *The Biology and Conservation of Cheetahs*

Amstrup, S. and **F. Lehner** (2017): Anthropogenic Ocean Change: the consummate threat to marine mammal welfare. In: Butterworth, A. (Ed.): *Marine Mammal Welfare*

Lehner, F., C. Deser, L. Terray (2016): Detection and attribution of extreme temperature using an analogue-based dynamical adjustment technique. *40th NOAA Climate Diagnostics and Prediction Workshop Digest*

Elmore, A., **F. Lehner**, J. Franke (2013): Data sharing: a key in future climate science. *PAGES newsletter*, 21, 92-93

TALKS

Invited, external institutions

- 2021 PNNL, Richland, USA (Mar 9, *upcoming*)
- 2021 Cervest, London, UK (Feb 5)
- 2020 Department Computational Hydrosystems, Helmholtz Centre for Environmental Research, Leipzig, Germany (Jun 23)
- 2020 Department of Meteorology, University of Reading, Reading, UK (May 26)
- 2019 Climate and Environmental Physics, University of Bern, Bern, Switzerland (Nov 18)
- 2019 GLASS panel meeting, NCAR, Boulder, USA (Aug 7)
- 2019 Earth and Atmospheric Sciences department, Cornell University, Ithaca, USA (Apr 15)
- 2019 Monash University, Melbourne, Australia (Feb 12, Feb 14)
- 2018 USGS, Denver, USA (Nov 1)
- 2018 INSTAAR, University of Colorado, Boulder, USA (Oct 1)
- 2018 University of Arizona, Tucson, USA (Mar 29)
- 2017 American Geophysical Union fall meeting, New Orleans, USA (December 12)
- 2017 Southern Nevada Water Authority, Las Vegas, USA (Feb 9, May 23)
- 2017 Bureau of Reclamation Regional Office, Boulder City, USA (Feb 8)
- 2016 Bureau of Reclamation Area Office, Yuma, USA (Sep 15)
- 2016 College of Engineering, Mathematics and Physical Sciences, University of Exeter, Exeter, UK (Jun 22)
- 2015 International Pacific Research Center, University of Hawaii, Honolulu, USA (Oct 6)
- 2012 Laboratoire des Sciences du Climat et de l'Environnement, Paris, France (Sept 20)
- 2009 Institute of Low-Temperature Science, Hokkaido University, Sapporo, Japan (Oct 11)

Conference talks (selection)

- 2018 S2S/S2D workshop, Boulder, USA (September 19)
- 2018 AGCI drought meeting, Aspen, USA (September 13)
- 2018 Western Snow Conference, Albuquerque, USA (April 17)
- 2017 American Geophysical Union fall meeting, New Orleans, USA (December 11)
- 2016 American Geophysical Union fall meeting, San Francisco, USA (December 12)
- 2016 IMAGE workshop: Uncertainty and Causality Assessment in Modeling Extreme and Rare Events, Boulder, USA (April 25-28)
- 2016 International Detection and Attribution Group meeting, Boulder, USA (Feb 1)
- 2015 NOAA Climate Diagnostics and Prediction Workshop, Denver, USA (Oct 27)
- 2015 CESM Meeting, Breckenridge, USA (Jun 16)
- 2015 CESM Land Model Working Group meeting, Boulder, USA (Mar 3)
- 2014 PMIP3 meeting, Namur, Belgium (May 28)
- 2014 EGU General Assembly 2014, Vienna, Austria (Apr 29)
- 2013 CESM Paleoclimate Working Group Meeting, Bern, Switzerland (Aug 28)
- 2013 C2SM Symposium 'The Water Cycle in a Changing Climate', Zurich, Switzerland (Jul 1)
- 2013 PAGES Young Scientists Meeting and Open Science Meeting, Goa, India (Feb 15)
- 2012 EGU General Assembly 2012, Vienna, Austria (Apr 24)
- 2012 ESF Conference 'Modes of Variability in the Climate System: Past-Present-Future', Obergurgl, Austria (May 28)
- 2010 EGU General Assembly 2010, Vienna, Austria (May 3 and 6)
- 2009 EGU General Assembly 2009, Vienna, Austria (Apr 23)

Campus or department

- 2021 EWRS Seminar, Cornell University, Ithaca, USA (Mar 25)

- 2019 Institute for Atmospheric and Climate Science, ETH, Zürich, Switzerland (Oct 14)
- 2019 CESM tutorial applications talk, NCAR, Boulder, USA (Aug 7)
- 2019 Keynote NCAR Water System Retreat, NCAR, Boulder, USA (Jan 30)
- 2018 Mesoscale & Microscale Meteorology seminar, NCAR, Boulder, USA (Jun 28)
- 2018 Water System retreat, NCAR, Boulder, USA (Jan 16)
- 2017 Climate Global Dynamics research reports, NCAR, Boulder, USA (Feb 2)
- 2015 Climate Global Dynamics seminar, NCAR, Boulder, USA (Nov 17)
- 2015 Climate Science & Applications Program, NCAR, Boulder, USA (Jun 23)
- 2015 Climate Global Dynamics research reports, NCAR, Boulder, USA (Feb 5, Dec 11)
- 2012 Oeschger Centre for Climate Change Research Plenary Meeting, University of Bern, Bern, Switzerland (Feb 1)

TEACHING

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| Cornell University | Introduction to programming (spring 2021)
Guest lecture in Earth System Modeling (Natalie Mahowald; spring 2021) |
| NCAR | Lecture on Large Ensembles (CESM workshop 2018) |
| Summer school | Co-leader workshop "Predictability - Lorenz Model", Swiss Climate Summer School 2013 (1 day) |
| University of Bern | Assistant "Introduction to Climate Modelling, Computer Lab" (2 semesters)

Physics recitation sessions (2 semesters)

Physics lab classes (6 semesters) |
| High School | Geography and informatics for seniors, Basel, Switzerland (2007-2010) |

FIELD RESEARCH EXPERIENCE

- 2018 Assistant, dendrochronology field trip Colorado, University of Arizona, USA (Aug)
- 2009 Science assistant, research cruise ARK-XXIV/1 (RV Polarstern) in the Greenland Sea, Alfred Wegener Institute for Polar and Marine Research, Germany (May-Jun)
- 2008 Science assistant, glaciology field campaign Rhone Glacier, Swiss Federal Institute of Technology (ETH), Switzerland (Aug)

SERVICE TO PROFESSION

Reviewing

Journal of Climate, Nature, Nature Communications, Nature Climate Change, Proceedings of the National Academy of Sciences, Science Advances, Climate of the Past, Climatic Change, Climate Dynamics, Journal of Geophysical Research, Bulletin of the American Meteorological Society, International Journal of Climatology, Earth and Planetary Science Letters, Geophysical Research Letters, Climate Research, Ocean Science, Quaternary Science Review, Journal of Hydrologic Engineering, Water Resources Research, Journal of Hydrometeorology, Journal of Applied Meteorology and Climatology

Other services

Scientific organizing committee for WCRP workshop on 'Explaining and Predicting Earth System Change' (2021)

Member, NSF URGE pod Cornell EAS (2021)

Member, Graduate Admissions Committee Cornell EAS (2021)

Member, NOAA Drought Task Force (2021-)

Guest editor, Journal of the American Water Resources Association (2021-)

Co-advisor to Msc student Nina Horat, ETH Zürich (2020-2021)

Member, NOAA CMIP6 Task Force (2019-2021)

Contributing Author, IPCC AR6 WG1, Chapter 10: Linking global to regional climate change (2019-2021)

Scientific organizing committee for NCAR/LDEO CMIP6 Hackathon (2019)

Scientific organizing committee member for SMILE workshop on Large Ensembles, Munich, Germany (2019)

Development of a repository of Large Ensembles with Earth System Models for community use (2018-)

Mentor to NCAR ASP Graduate Visitor Program student Deeksha Rastogi from University of Tennessee Knoxville (2019)

Convener of sessions and splinter meetings on Large Ensembles at AGU 2018 and EGU 2019, EGU 2020 (2018-2020)

Scientific organizing committee member for US CLIVAR workshop on Large Ensembles, Boulder, USA (2018-2019)

Invited climate science expert, Polar Bears International campaign, Churchill, Canada (2016, 2018)

Scientific organizing committee member for SPARC regional workshop, Boulder, USA (2015)

Undergraduate representative in search committee for tenure-track assistant professorship for 'Climate Impacts in Mountain Regions', University of Bern, Bern, Switzerland (2009)