Ruth Lorenz

Curriculum Vitae

Work Experience

02/2016–today **Senior Research Assistant**, Institute for Atmospheric and Climate Sciences, ETH Zurich, Switzerland, Research Group "Climatephysics".
- Data Analysis of large climate model datasets
  - Analyze and visualize climate model data, investigate new ways how to better combine multi-model ensembles (e.g. CMIP)
  - Write manuscripts for publication in scientific journals
- Contribute to development of climate model evaluation tool
  - Implement, test, and publish computer code
  - Coordinate with project partners
- Present work at scientific conferences and workshops
- Supervise students on Bachelor and Masters level.

01/2013–12/2015 **PostDoc/Research Associate**, ARC Centre of Excellence for Climate System Science and Climate Change Research Center, UNSW Australia, Sydney, Australia, Research Program "The role of land surface forcing and feedbacks for regional climate".
- Run and evaluate global climate model experiments
- Analyze climate model and observational data with focus on climate extremes
- Write scientific publications and present work at scientific conferences

04/2009–12/2012 **Research Assistant**, Institute for Atmospheric and Climate Sciences, ETH Zurich, Switzerland, Research Group "Land-Climate Dynamics".
- Run regional climate model experiments
- Analyze climate model data looking into heat waves and droughts
- Write scientific publications
- Teaching assistant for various courses on Bachelor and Masters level

04/2007–08/2007 **Intern**, Potsdam Institute for Climate Impact Research, Potsdam, Germany, Research domain "Transdisciplinary Concepts and Methods".
Write report on ethics and climate change

2002–2007 **Cashier**, Orell Fussli Buchhandlungs AG, Zurich, Switzerland.

Education

10/2009–12/2012 **Doctor of Science**, *Institute for Atmospheric and Climate Sciences*, ETH Zurich, Switzerland.

10/2007–12/2009 **Master of Science ETH in environmental sciences**, *ETH Zurich*, Switzerland.
Major in "Atmosphere and Climate", Minor in "Global change and sustainability"

10/2003–02/2008 **Bachelor of Science ETH in environmental sciences**, *ETH Zurich*, Switzerland, 01/2006–06/2006, Exchange semester, Lund University, Sweden.

09/2002	**Matura**, *Kantonsschule Oerlikon*, Switzerland.
	Swiss high school degree with emphasis on mathematics and sciences

Skills

Languages	○ German: Native
	○ English: Fluent
	○ French: Basic knowledge
	○ Swedish: Basic knowledge
Computer skills	○ Python, R, NCL, and shell scripts for Data Analysis and Visualization
	○ Numerical Modelling, regional and global climate models (FORTRAN) including preparation of input data
	○ Revision control systems (git, svn)
	○ Unix/Linux, Mac and Windows
Recreational Activities	Basketball, Hiking, Yoga, Reading

Extracurriculor Activities

2017–2018	**Upper Mittelbau Representative**, Institute for Atmospheric and Climate Sciences, deputy.
05/2015 – 10/2015	**Scientific Committee member**, CAWCR Annual Workshop.
03/2015 – 12/2015	**Representative**, Early Researcher Committee.
11/2013	**Co-Organizer**, Early Career Researcher Workshop.
03/2008 – 03/2012	**Boardmember**, ETH Alumni of the environmental sciences and -engineer students.

Main Publications

Lorenz R., N. Herger, J. Sedláček, E. M. Fischer, V. Eyring, and Knutti, R. (2018), Prospects and caveats of weighting climate models for summer maximum temperature projections over North America, *J.* Geophys. Res. Atmos., **123**, 4509-4526, doi:10.1029/2017JD027992.

Lorenz, R., A. J. Pitman, and S. A. Sisson (2016), Does Amazonian deforestation cause global effects; can we be sure?, *J.* Geophys. Res. Atmos., **121**, 5567–5584, doi:10.1002/2015JD024357.

Pitman A. J. and R. Lorenz (2016), Scale dependence of the simulated impact of Amazonian deforestation on regional climate, *E*nviron. Res. Lett., **11**, 094025

Lorenz, R. et al. (2016), Influence of land-atmosphere feedbacks on temperature and precipitation extremes in the GLACE-CMIP5 ensemble, *J.* Geophys. Res., **121**, 607–623, doi:10.1002/2015JD024053.

Lorenz, R., A. J. Pitman, A. L. Hirsch, and J. Srbinovsky (2015), Intraseasonal versus interannual measures of land-atmosphere coupling strength in a global climate model: GLACE-1 versus GLACE-CMIP5 experiments in ACCESS1.3b, *J.* Hydromet., **16**, 2276–2295, doi:10.1175/JHM-D-14-0206.1

Lorenz, R., and A. J. Pitman (2014), Effect of land-atmosphere coupling strength on impacts from Amazonian deforestation, *Geophys. Res. Lett.*, **41**, 5987–5995,doi:10.1002/2014GL061017

Lorenz, R., A. J. Pitman, M. G. Donat, A. L. Hirsch, J. Kala, E. A. Kowalczyk, R. M. Law, and J. Srbinovsky (2014), Representation of climate extreme indices in the ACCESS1.3b coupled atmosphere-land surface model, *Geosci. Model Dev.*, **7**, 545–567, doi:10.5194/gmd-7-545-2014

Lorenz, R., E. L. Davin, D. M. Lawrence, R. Stöckli, and S. I. Seneviratne (2013), How Important is Vegetation Phenology for European Climate and Heat Waves? *J.* Climate, **26**, 10077–10100, doi: http://dx.doi.org/10.1175/JCLI-D-13-00040.1

Lorenz, R., E. L. Davin, and S. I. Seneviratne (2012), Land-climate coupling in Europe: An analysis with a coupled biosphere-atmosphere regional climate model. *J.* Geophys. Res., **117**, D20109, doi:10.1029/2012JD017755

Lorenz, R., E. B. Jaeger, and S. I. Seneviratne (2010), Persistence of heat waves and its link to soil moisture memory. *Geophys. Res. Lett.*, **37**, L09703, doi:10.1029/2010GL042764

Main oral presentations

Lorenz, R., R. Knutti, Can we beat climate model democracy in ensemble projections? EGU General Assembly 2018, Vienna, Austria.

Lorenz R., J. Sedláček, E. M. Fischer, V. Eyring, and R. Knutti, "Simple" weighting method for combining multi-model projections, Is it possible to decrease spread in temperature projections over North America? AGU Fall Meeting 2016, San Francisco, USA.

Lorenz R., R. Knutti, J. Sedláček, B. M. Sanderson, E. M. Fischer, A simple weighting method for combining multimodel projections. The 13th International meeting on statistical climatology 2016, Canmore, Canada.

Lorenz, R., A. J. Pitman and S. A. Sisson, Does Amazonian deforestation cause global teleconnections? EGU General Assembly 2015, Vienna, Austria.

Lorenz, R., E. L. Davin, D. M. Lawrence, R. Stčkli, and S. I. Seneviratne, How important are phenological feedbacks for European climate and heat waves? Australian Meteorological and Oceanographic Society National Conference 2013, Melbourne, Australia.

Lorenz, R., E. B. Jaeger, and S. I. Seneviratne, Persistence of heat waves and its link to soil moisture memory. EGU General Assembly 2010, Vienna, Austria.