

Dr. rer. nat. Peter Hoffmann

Climate Service Center Germany (GERICS)
 Helmholtz-Zentrum Geesthacht
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Employment History

Since 05.2018	GERICS, Hamburg	Senior Scientist within the frame of the Helmholtz-Institut Climate Service Science (HICSS) Project: WCRP CORDEX Flagship Pilot Study LUCAS and LANDMATE (impact of land use changes on regional climate)
03.2018-04.2018	University of Hamburg	Post-Doc at the Meteorological Institute Project: Support project proposal
04.2015-02.2018	University of Hamburg	Post-Doc at the Department of Mathematics, Research Group Differential Equations and Dynamical Systems Project: UrbMod (urban system modeling, coupling of sectoral models)
01.2014-03.2015	DWD, Hamburg	Research Scientist at the Seewetteramt Project: DeMarine-2 (coupling wave and ocean model)
07.2012-12.2013	CSIRO, Aspendale	Post-Doc at CSIRO Marine and Atmospheric Research Projects: High-resolution downscaling projections for Vietnam (regional climate projections for Vietnam) NRM (regional climate projections for Australia), PACCSAP (regional climate projections for the West-Pacific)
04.2009-06.2012	University of Hamburg	Research Assistant at the Meteorological Institute, Mesoscale and Microscale Modelling Group Project: KLIMZUG-NORD (urban climate modeling)
01.2009-03.2009	Max-Planck-Institute for Meteorology, Hamburg	student assistant

2004-2008	University of Hamburg	student assistant in several groups at the Meteorological Institute
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Education

06.2012	University of Hamburg	PhD in Meteorology, Thesis: "Quantifying the influence of climate change on the urban heat island of Hamburg using different downscaling methods"
04.2009	University of Hamburg	Diploma in Meteorology (equivalent to MSc), Thesis: "Modifikation von Starkniederschlag durch urbane Gebiete" (German)
11.2007	University of Hamburg	Bachelor of Science in Meteorology, Thesis: "The distribution of CAPE and Shear in the United States"
04.2009-06.2012	University of Hamburg	PhD student at the Meteorological Institute
08.2005-12.2005	University of Oklahoma	study abroad at the School of Meteorology
10.2003-4.2009	University of Hamburg	Major: Meteorology, Minor: Astrophysics

Teaching

2017 & 2016	Climate-KIC summer school "The Journey"
2017 & 2016 SS	Supervising MSc for <i>MathMod</i> Modeling Camp
2012	2 months CCAM training for Vietnamese MSc- PhD students
2011 WS & SS	"Einführungen in Matlab" (Introduction to Matlab)
2008 SS	Tutoring "Wissenschaftliches Präsentation" (Scientific Presentation)
2006 WS	Tutoring "Instrumentenpraktikum" (Measurement Lab)

Professional Associations

Since 2018	2nd Chairman of jDMG (Youth Chapter of DMG)
Since 2016	Board Member of DMG Sektion Norddeutschland (DMG Chapter Northern Germany)
Since 2014	Visiting Scientist at CSIRO, Ocean and Atmosphere
Since 2017	International Society of Biometeorology
Since 2009	International Association for Urban Climate
Since 2006	Deutsche Meteorologische Gesellschaft (DMG, German Meteorological Society)

Reviewer

- Atmosphere, International Journal of Climatology, Journal of Applied Meteorology and Climatology, Theoretical and Applied Climatology, Journal of Atmospheric and Oceanic Technology, Weather and Forecasting, Landscape and Urban Planning, Remote Sensing, Urban Climate

IT

- Unix, Fortran, MPI, OpenMP, Matlab, R, IDL, Ferret, GraDs, CDO, Microsoft Office, ArcGIS, OASIS
- numerical Models: REMO (atmospheric model), METRAS (atmospheric model), CCAM (atmospheric model), WAM (wave model), HBM (ocean model), RegCM4 (atmospheric model), ICON (atmospheric model)

Language

- German: mother tongue
- English: fluent in speaking and writing

Publications

Hoffmann P., Merker C., Lengfeld K., Ament F. (2018): The Hamburg Tornado (7 June 2016) from the perspective of low-cost high-resolution radar data and weather forecast model. *Atmospheric Res.* 211, 1–11, doi: 10.1016/j.atmosres.2018.04.009

Yang L., **Hoffmann P.**, Scheffran J., Rühle S., Fischereit J., Gasser I. (2018): Simulating human exposure to environmental stresses in urban areas: An agent-based modeling framework. *Urban Sci.* 2, 36, doi: 10.3390/urbansci2020036

Wiesner S., Bechtel B., Fischereit J., Grützun V., **Hoffmann P.**, Rechid D., Schlünzen K.H., Thomsen S. (2018): Is it possible to distinguish global and regional climate change from urban land cover induced signals? A mid-latitude city example. *Urban Sci.* 2, 12, doi: 10.3390/urbansci2010012

Hoffmann P., Fischereit J., Heitmann S., Schlünzen K.H., Gasser I. (2018): Modeling exposure to heat stress with a simple urban model. *Urban Sci.* 2, 9, doi: 10.3390/urbansci2010009

Yang L.E., **Hoffmann P.**, Scheffran J. (2017): Health impacts of smog pollution: Understanding the human dimensions of exposure. *The Lancet Planetary Health* 1, e132–e133. doi: 10.1016/S2542-5196(17)30067-0

von Szombathely M., Albrecht M., Antanaskovic D., Augustin J., Augustin M., Bechtel B., Bürk T., Fischereit J., Grawe D., **Hoffmann P.**, Krefis A.C., Kaveckis G., Oßenbrügge J., Scheffran J., Schlünzen K.H. (2017): Conceptual modeling approach to health related urban well-being. *Urban Sci.* 1, 17, doi: 10.3390/urbansci1020017

Hoffmann P., Schoetter R., Schlünzen K.H. (2016): Statistical-dynamical downscaling of the urban heat island in Hamburg, Germany. *Meteorol. Z.* doi: 10.1127/metz/2016/0773

Hoffmann P., Katzfey J.J., McGregor J.L., Thatcher M. (2016): Bias and variance correction of sea surface temperatures used for dynamical downscaling. *J. Geophys. Res. Atmos.* 121, 12877–12890, doi: 10.1002/2016JD025383

Katzfey J.J., Nguyen K.C., McGregor J., **Hoffmann P.**, Ramasamy S., Nguyen H.T., Nguyen H.V., Mai K.V., Nguyen T. V., Ba K.T., Van T. V., Phan T.V., Nguyen T.Q., Thanh N.D., Trinh L.T. (2016): High-resolution projections for Vietnam - Methodology and evaluation for current climate. *Asia-Pac. J. Atmos. Sci.* 52, 91–106, doi: 10.1007/s13143-016-0011-2

Gebhardt C., Pleskachevsky A., Rosenthal W., Lehner S., **Hoffmann P.**, Kieser J., Bruns T. (2016): Comparing ocean wavelengths simulated by the wave model CWAM and TerraSAR-X satellite data. *Ocean Model.* 103, 133–144, doi: 10.1016/j.ocemod.2015.10.003

Thevakaran A., McGregor J. L., Katzfey J., **Hoffmann P.**, Suppiah R., Sonnadara D. U. J. (2016): An assessment of CSIRO Conformal Cubic Atmospheric Model simulations over Sri Lanka. *Clim. Dynam.* 46, 1861–1875, doi: 10.1007/s00382-015-2680-4

Pleskachevsky A., Lehner S., Gebhardt C., Rosenthal W., Kieser J., Bruns T., **Hoffmann P.**, Schwarz E., Krause D. (2015): Validation of the High-Resolution Sea State Forecast Model CWAM using Satellite-based Radar Measurements. *Proceedings of the 14th International Workshop on Wave Hindcasting and Forecasting*, Key West, Florida

Boettcher M., **Hoffmann P.**, Lenhart H.-J., Schlünzen K.H., Schoetter R. (2015): Influence of large offshore wind farms on North German climate. *Meteorol. Z.* 24, 465–480, doi: 10.1127/metz/2015/0652

Hennemuth B., Bender S., Bülow K., Dreier N., **Hoffmann P.**, Keup-Thiel E., Mudersbach C. (2015): Collecting statistical methods for climate data – service for adaptation projects. *Am. J. Clim. Change* 4, 9–21, doi: 10.4236/ajcc.2015.41002

Grose M.R., Bhend J., Argueso D., Ekström M., Dowdy A., **Hoffmann P.**, Evans J.P., Timbal B. (2015): Climate change and eastern Australian rainfall: context and comparison of global climate model and downscaling studies. *Aust. Met. Oceanogr. J.* 65, 72–89.

Schoetter R., Grawe D., **Hoffmann P.**, Kirschner P., Grätz A., Schlünzen K.H. (2013): Impacts of local adaptation measures and regional climate change on perceived temperature. *Meteorol. Z.* 22, 117–130, doi: 10.1127/0941-2948/2013/0381.

Hoffmann P., Schlünzen K.H. (2013): Weather pattern classification to represent the urban heat island in present and future climate. *J. Appl. Meteorol. Climatol.* 52, 2699–2714, doi: 10.1175/JAMC-D-12-065.1

Schoetter R., **Hoffmann P.**, Rechid D., Schlünzen K.H. (2013): Evaluation and bias correction of regional climate model results using model evaluation measures. *J. Appl. Meteorol. Climatol.* 51, 1670–1684. doi: 10.1175/JAMC-D-11-0161.1

Hoffmann P., Krueger O., Schlünzen, K.H. (2012): A statistical model for the urban heat island and its application to a climate change scenario. *Int. J. Climatol.* 32, 1238–1248, doi: 10.1002/joc.2348

Schlünzen K.H., **Hoffmann P.**, Rosenhagen G., Riecke W. (2010): Long-term changes and regional differences in temperature and precipitation in the area of Hamburg, *Int. J. Climatol.*, 30: 1121–1136, doi: 10.1002/joc.1968

Book contributions

Hermans A., Boettcher M., **Hoffmann P.** (2018) Landnutzungsänderungen und regionale Extremereignisse am Beispiel Norddeutschland. In: Lozán J.L., Breckle S.-W., Kasang D. (eds) Warnsignale Klima: Extremereignisse. In press

Hoffmann P. (2018) Zukünftige Hitzewellen und Dürren in Vietnam. In: Lozán J.L., Breckle S.-W., Kasang D. (eds) Warnsignale Klima: Extremereignisse. In press

Schlünzen K. H., Riecke W., Bechtel B., Boettcher M., Buchholz S., Grawe D., **Hoffmann P.**, Petrik R., Schoetter R., Trusilova K., Wiesner S. (2018): Stadtklima in Hamburg. In: von Storch H., Meinke I., Claußen M. (eds) Hamburger Klimabericht – Wissen über Klima, Klimawandel und Auswirkungen in Hamburg und Norddeutschland. (pp. 37-53). Springer Spektrum, Berlin, Heidelberg.

Hoffmann P., Schlünzen K.H. (2010): Das Hamburger Klima. Beitrag zu Hamburgs Natur im Überblick (edtl. H.-H. Poppendieck, 1 chapter)

Selected talks and posters

Hoffmann P., Merker C., Lengfeld K. (2017): High-resolution forecasts and radar observations of the 7 June 2016 Hamburg Tornado. Conference on Predictability and Multi-Scale Prediction of High Impact Weather, 11.9.2017, Landshut (oral)

Hoffmann P., Fischereit J., Heitmann S., Schlünzen K.H., Gasser I. (2017): Using a simple city model for heat stress exposure modelling. International Congress of Biometeorology, 5.9.2017, Durham, UK (oral)

Hoffmann P. (2016): Towards modelling the health-related urban well-being. 18.10.2016, Osaka University, Japan (invited talk)

Hoffmann P. (2015): Aktuelle und zukünftige Wärmeinsel von Hamburg. DMG-Kolloquium, 12.5.2015, Seewetteramt Hamburg (invited talk)

Hoffmann P., Katzfey J.J., Ngyuen K.C., McGregor J.L., Thatcher M. (2013): Bias and variance corrected sea surface temperatures for use in downscaling. International Conference on Regional Climate. CORDEX 2013, 24.-28.6.2013, Brussels, Belgium. (poster)

Hoffmann P., Katzfey J.J., Ngyuen K.C., McGregor J.L., Thatcher M. (2013): High-resolution Climate Projections for Vietnam Using Bias and Variance Corrected SSTs. AOGS Conference 2013, 24.-28.6.2013, Brisbane, Australia. (oral)

Hoffmann P., Flagg D.D., Grawe D., Katzfey J.J., Kirschner P., Linde M., Schlünzen K.H., Schoetter R. (2011): Statistical-dynamical downscaling for the future urban climate of Hamburg, Germany. Abstract GC21E-07 presented at 2011 Fall Meeting, AGU, 5.-9.12.2011, San Francisco, Calif. (oral)

Hoffmann P., Krueger O., Schlünzen K.H., Schoetter R. (2010): Statistical downscaling of the urban heat island of Hamburg using a statistical model and regional climate model results. Abstract GC51A-0744 presented at 2010 Fall Meeting, AGU, 13.-17.12.2010, San Francisco, Calif. (poster)