Dr. Peter Hoffmann | Curriculum Vitae

Climate Service Center Germany (GERICS)
Helmholtz-Zentrum hereon GmbH
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Education

Universität Hamburg **Hamburg, Germany**
Dr. rer. nat. in Meteorology at the Meteorological Institute 2009-2012
Title: Quantifying the influence of climate change on the urban heat island of Hamburg using different downscaling methods

Universität Hamburg **Hamburg, Germany**
Diplom in Meteorology at the Meteorological Institute 2003-2009
Title: Modifikation von Starkniederschlag durch urbane Gebiete
Minor: Astrophysics
BSc in Meteorology 2005
Title: The distribution of CAPE and Shear in the United States

University of Oklahoma **Norman, OK, USA**
Study abroad at the School of Meteorology 2005

Research Experience

Climate Service Center Germany (GERICS) **Hamburg, Germany**
Department Regional and Local Climate Change 10.2022 - Present
Junior Research Group Leader
BMBF project CoSyHealth - Conflicts and synergies between carbon-neutral and healthy city scenarios

Co-Coordinator WCRP CORDEX Flagship Pilot Study URBan environments and Regional Climate Change (URB-RCC)

Department Regional and Local Climate Change 04.2018 – 09.2022
Senior Scientist within the framework of the Helmholtz Institute for Climate Service Science (HICSS)
Projects: *LANDMATE & WCRP CORDEX Flagship Pilot Study LUCAS* - Impacts of land use changes on regional climate
CLICCS-C1 - Sustainable adaptation measures for urban areas

Universität Hamburg **Hamburg, Germany**

Meteorological Institute 03.2018 – 04.2018

PostDoc
Project: Scientific support of a research proposal

Department of Mathematics 05.2015 – 02.2018

PostDoc in Research Group Differential Equations and Dynamical Systems
Project: *UrbMod* - Development of multi-sectoral urban system model for well-being, project coordination

Deutscher Wetterdienst (DWD) **Hamburg, Germany**

Seewetteramt Hamburg 01.2014 – 04.2015

Research Scientist
Project: *DeMarine2* - coupling of wave model and ocean model

Commonwealth Scientific and Industrial Research Organisation **Aspendale, VIC, Australia**

CSIRO Marine and Atmospheric Research 07.2012 – 12.2013

PostDoc
Projects: *HRCPV* - high-resolution regional climate projections for Vietnam
NRM, ACCSP - regional climate projections for Australia
PACCSAP - regional climate projections for West Pacific

Universität Hamburg **Hamburg, Germany**

Meteorological Institute 04.2009 – 06.2012

Research assistant in the Mesoscale-Microscale Modelling group
Project: *KLIMZUG-NORD & CliSAP* – modelling of future urban climate

Teaching

University of Hamburg

Climate-KIC summer school "The Journey" (Teaching topics related to urban systems)	2018/17/16
Supervising MSc during the MathMods Modelling Camp:	2017 & 16 SS
Introduction to Matlab	2011 WS & SS
Tutoring Scientific Presentation	2008 SS
Tutoring Measurement Lab	2006 WS

Commonwealth Scientific and Industrial Research Organisation

2 months CCAM training for Vietnamese MSc and PhD students	2012

Honors and Awards

Contributing author WMO report on canopy layer UHI	2022
Co-Editor for special issue in Urban Science	2017
Visiting Scientist Osaka University (2 weeks)	2016
Co-Convener of a session at the Deutsche Klimatagung (DKT10)	2015
DAAD scholarship for study abroad at the University of Oklahoma	2005

Reviewer

Nature Climate Change, Journal of Climate, Urban Climate, International Journal of Environmental Research and Public Health, International Journal of Climatology, Landscape and Urban Planning, Theoretical and Applied Climatology, Atmosphere, Journal of Applied Meteorology and Climatology, Journal of Atmospheric and Oceanic Technology, Weather and Forecasting, Remote Sensing, Climate Services, Meteorological Applications, Journal of Environmental Management

Professional Memberships

Editorial Board of 'Atmosphere': *2019-present*
2nd Chairman of the Junge DMG (DMG youth chapter): *2018-2021*
Center for Earth System Research and Sustainability (CEN): *2017-present*
Board Member of DMG-Nord (DMG Chapter Northern Germany): *2016-present*
Deutsche Meteorologische Gesellschaft (DMG, German Meteorological Society): *2006-present*

Selected Publications

Augustin J, Hischke S, **Hoffmann P**, Castro D, Obi N, Czerniejewski A, Dallner R, Bouwer LM (2024): Auswirkungen thermischer Belastungen auf die Gesundheit – eine bundesweite Analyse auf Grundlage von GKV-Routinedaten zwischen 2012-2021. Bundesgesundheitsbl., doi: 10.1007/s00103-024-03968-5

Katzfey J, Schlünzen KH, **Hoffmann P** (2024): Effects of urban areas on the diurnal cycle of temperature and precipitation in a global climate simulation. Q. J. R. Meteorol. Soc., 1–30, doi: 10.1002/qj.4847

Hoffmann P, Reinhart V, Rechid D, de Noblet-Ducoudré N, Davin EL, Asmus C, Bechtel B, Böhner J, Katragkou E, Luyssaert S (2023): High-resolution land use and land cover dataset for regional climate modelling: Historical and future changes in Europe. Earth Syst. Sci. Data, 15, 3819–3852, doi: 10.5194/essd-15-3819-2023

Reinhart V, **Hoffmann P**, Rechid D, Böhner J, Bechtel B (2022): High-resolution land use and land cover dataset for regional climate modelling: a plant functional type map for Europe 2015. Earth Syst. Sci. Data, 14, 1735–1794. doi: 10.5194/essd-14-1735-2022

Hoffmann P, et al. (2020): Multi-Domain Design Structure Matrix approach applied to urban system modeling. Urban Sci. 4, 28. doi: 10.3390/urbansci4020028

Davin EL, Rechid D, Breil M, Cardoso RM, Coppola E, **Hoffmann P**, et al. (2020): Biogeophysical impacts of forestation in Europe: first results from the LUCAS (Land Use and Climate Across Scales) regional climate model intercomparison. Earth Syst. Dynam. 11, 183–200. doi: 10.5194/esd-11-183-2020

Bechtel B, Alexander P, Beck C, Brousse O, Ching J, Demuzere M, Gál T, Hidalgo J, **Hoffmann P**, et al. (2019): Generating WUDAPT Level 0 data – current status of production and evaluation. Urban Clim. 27, 24–45. doi: 10.1016/j.uclim.2018.10.001

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

Hoffmann P, Merker C, Lengfeld K, Ament F (2018): The Hamburg Tornado (7th 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

Krefis AC, Fischereit J, **Hoffmann P**, et al. (2018): Temporal analysis of determinants for respiratory emergency department visits in a large German hospital. BMJ Open Respiratory Research 5, e000338. doi: 10.1136/bmjresp-2018-000338

Hoffmann P, Schoetter R, Schlünzen KH (2018): Statistical-dynamical downscaling of the urban heat island in Hamburg, Germany. Meteorol. Z. 27, 89–109. doi: 10.1127/metz/2016/0773

Hoffmann P, Katzfey JJ, McGregor JL, 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

Hoffmann P, Schlünzen KH (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

Hoffmann P, Krueger O, Schlünzen KH (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

Invited talks

Hoffmann P, Bouwer L, Nam C, Pfeifer S, Rechid D, Reinhart V, Jacob D (2019): How can Machine Learning algorithms be used to develop innovative climate service products? Japanese - German - French Conference AI for SDGs - How Can AI Help Solve Environmental Challenges?, 24.10.2019, Tokyo, Japan

Hoffmann P (2016): Klimaänderungen und Folgen in Hamburg. Grundeigentümerverein Stellingen Langenfelde von 1890 e.V., 14.11.2016, Hamburg

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

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

Hoffmann P (2014): Hamburgs Wärmeinsel in Gegenwart und Zukunft. Essener Klimagespräche, 23.9.2014, Universität Essen-Duisburg

Full List of Publications

Published paper

1. Langendijk G.S., Halenka T., **Hoffmann P.** et al. (2024): Towards better understanding the urban environment and its interactions with regional climate change - The WCRP CORDEX Flagship Pilot Study URB-RCC. Urban Climate, 10.1016/j.uclim.2024.102165
2. Augustin J., Hischke S., **Hoffmann P.**, Castro D., Obi N., Czerniejewski A., Dallner R., Bouwer L.M. (2024): Auswirkungen thermischer Belastungen auf die Gesundheit – eine bundesweite Analyse auf Grundlage von GKV-Routinedaten zwischen 2012-2021. Bundesgesundheitsbl., doi: 10.1007/s00103-024-03968-5
3. Wohland J., **Hoffmann P.**, Lima D.C.A., Breil M., Asselin O., Rechid D. (2024): Extrapolation is not enough: Impacts of extreme land-use change on wind profiles and wind energy according to regional climate models. Earth Syst. Dynam., 15, 1385–1400, doi: 10.5194/esd-15-1385-2024.
4. Katzfey J., Schlünzen K.H., **Hoffmann P.** (2024): Effects of urban areas on the diurnal cycle of temperature and precipitation in a global climate simulation. Q. J. R. Meteorol. Soc., 1–30, doi: 10.1002/qj.4847
5. Betant C.A., Weber T., **Hoffmann P.**, Ndao S., Ngongang D.R., Meukaleuni C., Djomou D., Lenouo A. (2024): Model Analysis of Coastal and Continental Impacts on Boundary Layer Meteorology over West Africa. Earth Syst. Environ., doi: 10.1007/s41748-024-00428-7
6. Katragkou E., Sobolowski S.P., Teichmann C., Solmon F., Pavlidis V., Rechid D., **Hoffmann P.**, Fernandez J., Nikulin G., Jacob D. (2024): Delivering an Improved Framework for the New Generation of CMIP6-Driven EURO-CORDEX Regional Climate Simulations. Bull. Amer. Meteor. Soc., 105, E962–E974, doi: 10.1175/BAMS-D-23-0131.1.
7. Asmus C., **Hoffmann P.**, Pietikäinen J.-P., Böhner J., Rechid D. (2023): Modeling and evaluating the effects of irrigation on land-atmosphere interaction in South-West Europe with the regional climate model REMO2020-iMOVE using a newly developed parameterization. Geosci. Model Dev., 16, 7311–7337, doi: 10.5194/gmd-16-7311-2023
8. **Hoffmann P.**, Reinhart V., Rechid D., de Noblet-Ducoudré N., Davin E.L., Asmus C., Bechtel B., Böhner J., Katragkou E., Luyssaert S. (2023): High-resolution land use and land cover dataset for regional climate modelling: Historical and future changes in Europe. Earth Syst. Sci. Data, 15, 3819–3852, doi: 10.5194/essd-15-3819-2023
9. Daloz A.S., Schwingshackl C., Mooney P., Strada S., Rechid D., Davin E.L., Katragkou E., de Noblet-Ducoudre N., Belda M., Halenka T., Breil M., Cardoso R.M., **Hoffmann P.**, Lima D.C.A., Meier R., Soares P.M.M., Sofiadis G., Strandberg G., Toelle M.H., Lund M.T. (2022): Land-atmosphere interactions in sub-polar and alpine climates in the CORDEX FPS LUCAS models: I. Evaluation of the snow-albedo effect. The Cryosphere, 16, 2403–2419, doi: 10.5194/tc-16-2403-2022
10. Mooney P.A., Rechid D., Davin E.L., Katragkou E., de Noblet-Ducoudré N., Breil M., Cardoso R.M., Daloz A.S., **Hoffmann P.**, Lima D.C., Meier R. (2022): Land–atmosphere interactions in sub-polar and alpine climates in the CORDEX Flagship Pilot Study Land Use and Climate Across Scales (LUCAS) models – Part 2: The role of changing vegetation. The Cryosphere, 16, 1383–1397, doi: 10.5194/tc-16-1383-2022

11. Reinhart V., **Hoffmann P.**, Rechid D., Böhner J., Bechtel B. (2022): High-resolution land use and land cover dataset for regional climate modelling: a plant functional type map for Europe 2015. Earth Syst. Sci. Data, 14, 1735–1794, doi: 10.5194/essd-14-1735-2022

12. Sofiadis G., Katragkou E., Davin E.L., Rechid D., de Noblet-Ducoudre N., Breil M., Cardoso R.M., **Hoffmann P.**, Jach L., Meier R., Mooney P.A. (2022): Afforestation impact on soil temperature in regional climate model simulations over Europe. Geoscientific Model Development 15, 95-616, doi: 10.5194/gmd-15-595-2022

13. Giorgi F., Coppola E., Jacob D., Teichmann C., Abba Omar S., Ashfaq M., Ban N., Bülow K., Bukovsky M., Buntemeyer L., Cavazos T., Ciarlo J., Da Rocha R.P., Das S., di Sante F., Evans J.P., Gao X., Giuliani G., Glazer R.H., **Hoffmann P.**, Im E., Langendijk G., Lierhammer L., Llopart M., Mueller S., Luna-Nino R., Nogherotto R., Pichelli E., Raffaele F., Reboita M., Rechid D., Remedio A., Remke T., Sawadogo W., Sieck K., Torres-Alavez J.A., Weber T. (2021): The CORDEX-CORE EXP-I initiative: Description and highlight results from the initial analysis. Bulletin of the American Meteorological Society doi: 10.1175/BAMS-D-21-0119.1

14. Reinhart V., Fonte C., **Hoffmann P.**, Bechtel B., Rechid D., Böhner J. (2021): Comparison of ESA Climate Change Initiative Land Cover to CORINE Land Cover over Eastern Europe and the Baltic States from a regional climate modeling perspective. Int. J. Appl. Earth Obs. Geoinf. 94, 102221. doi: 10.1016/j.jag.2020.102221

15. Teichmann C., Jacob D., Remedio A.R., Remke T., Buntemeyer L., **Hoffmann P.**, Kriegsmann A., Lierhammer L., Bülow K., Weber T., Sieck K., Rechid D., Langendijk G.S., Coppola E., Giorgi F., Ciarlo J., Raffaele F., Giuliani G., Xuejie G., Sines T.R., Alavez J.A.T., Das S., di Sante F., Pichelli E., Glazer R., Ashfaq M., Bukovsky M., Im E.-S. (2020): Assessing mean climate change signals in the global CORDEX-CORE ensemble. Clim. Dyn. doi: 10.1007/s00382-020-05494-x

16. Evans J.P., Di Virgilio G., Hirsch A.L., **Hoffmann P.**, Remedio A.R., Ji F., Rockel B., Coppola E. (2020): The CORDEX-Australasia ensemble: evaluation and future projections. Clim. Dyn. doi: 10.1007/s00382-020-05459-0

17. Breil M., Rechid D., Davin E.L., de Noblet-Ducoudré N., Katragou E., Cardoso R., **Hoffmann P.**, Jach L.L., Soares P., Sofiadis G., Strada S., Strandberg G., Toelle M., Warrach-Sagi K. (2020): The opposing effects of afforestation on the diurnal temperature cycle at the surface and in the atmospheric surface layer in the European summer. J. Climate 33, 9159-9179. doi: 10.1175/JCLI-D-19-0624.1

18. **Hoffmann P.**, Nomaguchi Y., Hara K., Sawai K., Gasser I., Albrecht M., Bechtel B., Fischereit J., Fujita K., Gaffron P., Quante M., Scheffran J., Schlünzen K.H., von Szombathely M. (2020): Multi-Domain Design Structure Matrix approach applied to urban system modeling. Urban Sci. 4, 28. doi: 10.3390/urbansci4020028

19. Katzfey J.J., Schlünzen K.H., **Hoffmann P.**, Thatcher M. (2020): How an urban parameterization affects a high-resolution global climate simulation. Q. J. R. Meteorol. Soc. 146, 3808– 3829. doi: 10.1002/qj.3874

20. Steuri B., Blome T., Bülow K., El Zhobi J., **Hoffmann P.**, Petersen J., Pfeifer S., Rechid D., Jacob D. (2020): Behind the scenes of an interdisciplinary effort: conception, design and production of a flyer on climate change for the citizens of Hamburg. Adv. Sci. Res. 17, 9–17. doi: 10.5194/asr-17-9-2020

21. Davin E.L., Rechid D., Breil M., Cardoso R.M., Coppola E., **Hoffmann P.**, Jach L.L., Katragkou E., de Noblet-Ducoudré N., Radtke K., Raffa M., Soares P.M.M., Sofiadis G., Strada S., Strandberg G., Tölle M.H., Warrach-Sagi K., Wulfmeyer V. (2020): Biogeophysical impacts of forestation in Europe: first results from the LUCAS (Land Use and Climate Across Scales) regional climate model intercomparison. Earth Syst. Dynam. 11, 183–200. doi: 10.5194/esd-11-183-2020

22. Remedio A.R., Teichmann C., Buntemeyer L., Sieck K., Weber T., Rechid D., **Hoffmann P.**, Nam C., Kotova L., Jacob D. (2019): Evaluation of a new CORDEX simulations using an updated Köppen-Trewartha climate classification. Atmosphere 10, 726. doi: 10.3390/atmos10110726

23. Krefis A.C., Fischereit J., **Hoffmann P.**, Pinnschmidt H., Sorbe C., Augustin M., Augustin J. (2019): Prädiktoren der Inanspruchnahme von kardiovaskulären und respiratorischen Notfallaufnahmen – welchen Einfluss hat die Umwelt? Das Gesundheitsweisen 83, 105-113. doi: 10.1055/a-1005-7161

24. Di Virgilio G., Evans J.P., Di Luca A., Olson R., Argüeso D., Kala J., Andrys J., **Hoffmann P.**, Katzfey J.J., Rockel B. (2019): Evaluating reanalysis-driven CORDEX regional climate models over Australia: model performance and errors. Clim. Dyn. 53, 2985–3005. doi: 10.1007/s00382-019-04672-w

25. Bechtel B., Alexander P., Beck C., Brousse O., Ching J., Demuzere M., Gál T., Hidalgo J., **Hoffmann P.**, Middel A., Mills G., Ren C., See L., Sismanidis P., Verdonck M.-L., Xu G., Xu Y. (2019): Generating WUDAPT Level 0 data – current status of production and evaluation. Urban Clim. 27, 24–45. doi: 10.1016/j.uclim.2018.10.001

26. Krefis A.C., Fischereit J., **Hoffmann P.**, Pinnschmidt H., Sorbe C., Augustin M., Augustin J. (2018): Temporal analysis of determinants for respiratory emergency department visits in a large German hospital. BMJ Open Respiratory Research 5, e000338. doi: 10.1136/bmjresp-2018-000338

27. **Hoffmann P.**, Merker C., Lengfeld K., Ament F. (2018): The Hamburg Tornado (7th 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

28. **Hoffmann P.**, Schoetter R., Schlünzen K.H. (2018): Statistical-dynamical downscaling of the urban heat island in Hamburg, Germany. Meteorol. Z. 27, 89–109. doi: 10.1127/metz/2016/0773

29. Yang L., **Hoffmann P.**, Scheffran J., Rühe 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

30. 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

31. **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

32. 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

33. 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): Conceptional modeling approach to health related urban well-being. Urban Sci. 1, 17. doi: 10.3390/urbansci1020017

34. **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

35. 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

36. 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

37. 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

38. 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

39. 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

40. 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.

41. 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.

42. **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

43. 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

44. **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

45. 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 Chapter

46. Gresse E.G., Schrum C., Hanf F.S., Jantke K., Pein J., Hawxwell T., **Hoffmann P.**, Bolaños T.G., Gaby S. Langendijk G.S., Schneider U.A., Huang-Lachmann J.-T., Neuburger M., Umaña C.R., Seiffert R., Wickel M., Sillmann J., Scheffran J., Held H. (2023): Chapter 4: Toward a Sustainable Adaptation Plausibility Framework. In: Engels A., Marotzke J., Gresse E.G., López-Rivera A., Pagnone A.,

Wilkens J. (eds.) (2023): Hamburg Climate Futures Outlook 2023. The plausibility of a 1.5°C limit to global warming—Social drivers and physical processes. Cluster of Excellence Climate, Climatic Change, and Society (CLICCS). Hamburg, Germany.

47. Schlünzen et al. (2023): Guidance on Measuring, Modelling and Monitoring the Canopy Layer Urban Heat Island (CL-UHI). WMO Report No. 1292
48. 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. (pp. 63-68). doi:10.2312/warnsignal.klima.extremereignisse.09
49. **Hoffmann P.** (2018): Zukünftige Hitzewellen und Dürren in Vietnam. In: Lozán J.L., Breckle S.-W., Kasang D. (eds) Warnsignale Klima: Extremereignisse. (pp. 92-99). doi:10.2312/warnsignal.klima.extremereignisse.12.
50. 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.
51. **Hoffmann P.**, Schlünzen K.H. (2010): Das Hamburger Klima. Beitrag zu Hamburgs Natur im Überblick (edtl. H.-H. Poppendieck)

Conference Paper

52. **Hoffmann P.**, Nomaguchi Y., Fritz S., Scheffran J., Hara K. (2023): Integrating future design into the development of model-based climate services for future urban planning. 13th International Symposium on Environmentally Conscious Design and Inverse Manufacturing (EcoDesign2023), Nara, Japan
53. Reinhart V., **Hoffmann P.**, Bechtel B., Rechid D., Boehner J. (2020): Accuracy assessment of ESA CCI LC over Eastern Europe and the Baltic States from a climate modelling perspective – identification of spatial inaccuracy patterns and misclassification issues using a fuzzy comparison method. 3rd Baltic Earth Conference Earth system changes and Baltic Sea coasts

Invited talks

1. **Hoffmann P.**, Bouwer L., Christine Nam C., Pfeifer S., Rechid D., Reinhart V., Jacob D. (2019): How can Machine Learning algorithms be used to develop innovative climate service products? Japanese - German - French Conference AI for SDGs - How Can AI Help Solve Environmental Challenges?, 24.10.2019, Tokyo, Japan
2. **Hoffmann P.** (2016): Klimaänderungen und Folgen in Hamburg. Grundeigentümerverein Stellingen Langenfelde von 1890 e.V., 14.11.2016, Hamburg
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