

Dr. Sven Wagner: List of Publications & Presentations (until 2014)

Peer reviewed publications

High resolution regional climate model simulations for Germany: part II — projected climate changes (Wagner S., Berg P., Kunstmann H., Schaedler G) Climate Dynamics, Volume 40, Issue 1, pp 415-427, <http://link.springer.com/article/10.1007/s00382-012-1510-1>, 2013.

High resolution regional climate model simulations for Germany: part I — validation (Berg P., Wagner S., Kunstmann H., Schaedler G) Climate Dynamics, Volume 40, Issue 1, pp 401-414, <http://link.springer.com/article/10.1007/s00382-012-1508-8>, 2013.

High resolution climate change impact analysis on medium sized river catchments in Germany: An ensemble assessment (Ott I., Duethmann D., Liebert J., Berg P., Feldmann H., Ihringer J., Kunstmann H., Merz B., Schaedler G., Wagner S.) Journal of Hydrometeorology, 14, 1175-1193, <http://journals.ametsoc.org/doi/abs/10.1175/JHM-D-12-091.1>, 2013.

Joint Climate-Hydrology Modelling: An Impact Study for the Data Sparse Environment of the Volta Basin in West Africa (Jung G., Wagner S., Kunstmann H.) Hydrology Research, Vol 43 No 3, pp 231–248, <http://www.sciencedirect.com/science/article/pii/S1474706508000703>, 2011.

Water balance estimation of a poorly gauged catchment in West Africa using dynamically downscaled meteorological fields and remote sensing information (Wagner S., Kunstmann H., Bárdossy A., Conrad C., Colditz R.) Physics and Chemistry of the Earth, 34, pp. 225-235, <http://www.sciencedirect.com/science/article/pii/S1474706508000703>, 2009. *

* Research award of VFF-IFU e.V. (endowed with 2000€) for the best peer reviewed publication at IMK-IFU in 2008

Modelling daily precipitation features in the Volta Basin in West Africa (Laux P., Wagner S., Wagner A., Jacobeit J., Bárdossy A., Kunstmann H.) International Journal of Climatology, doi 10.1002/joc.1852, <http://onlinelibrary.wiley.com/doi/10.1002/joc.1852/abstract;jsessionid=2AD0FF797FF84107DC4D5A5638A0F5E5.f02t0>, 2009.

Integration of Atmospheric Sciences and Hydrology for the Development of Decision Support Systems in Sustainable Water Management (Kunstmann H., Jung G., Wagner S., Clotey H.) Physics and Chemistry of the Earth, 33, pp. 165-174, <http://www.sciencedirect.com/science/article/pii/S1474706507000691>, 2008.

Model based distributed water balance monitoring of the White Volta catchment in West Africa through coupled meteorological-hydrological simulations (Wagner S., Kunstmann H., Bárdossy A.) Advances in Geosciences Volume 9, pp. 39-44, <http://www.adv-geosci.net/9/39/2006/adgeo-9-39-2006.pdf>, 2006.

Refereed conference publications

Hydrometeorological modelling for Poyang Lake region, China (Wagner S., Fersch B., Kunstmann H., Yuan F., Yang C., Yu Z.). IAHS Publ. 359, 152-157, 2013.

Impact of groundwater dynamics and soil-type on modelling coupled water exchange processes between land and atmosphere (Fersch B., Wagner S., Rummeler T., Gocchis D., Kunstmann H.) IAHS Publ. 359, 140-145, 2013.

A combined water and energy flux observation and modelling study at the TERENO-preAlpine observatory (Kunstmann H., Hingerl L., Mauder M., Wagner S., Rigon R) IAHS Publ. 359, 221-225, 2013.

Uncertainties in water balance estimations due to scarce meteorological information: a case study for the White Volta catchment in West Africa (Wagner S., Kunstmann H., Bárdossy A.) Proceedings of Symposium HS2004 at IUGG2007, Perugia, July 2007. IAHS Publ. 313, 2007.

Dr. Sven Wagner: List of Publications & Presentations (until 2014)

Other publications

Der Visionär – Zukunfts(alb)träume (Riepertinger R., **Wagner S.**, Kunstmann H.) Book chapter for „Katalog zur Bayerischen Landesausstellung Main und Meer, Schweinfurt, Germany, 2013

Flood hazard in a changing climate (Schaedler G., Berg P., DÜthmann D., Feldmann H., Ihringer J., Kunstmann H., Liebert J., Merz B., Ott I., **Wagner S.**) Technical report, Karlsruhe, Germany, http://www.cedim.de/download/Flood_Hazards_in_a_Changing_Climate.pdf, 2012

Water Balance in a Poorly Gauged Basin in West Africa Using Atmospheric Modelling and Remote Sensing Information (**Wagner S.**): Dissertation, Universitaet Stuttgart Mitteilungen / Institut für Wasserbau, Universität Stuttgart; H. 173, ISBN 978-3-933761-77-4. <http://elib.uni-stuttgart.de/opus/volltexte/2008/3615/>, 2008.

Räumlich statistische Untersuchung der Windverhältnisse auf dem Bodensee auf der Grundlage an Land gemessener Winde und des Windes in der freien Atmosphäre (**Wagner S.**, Bárdossy A., Appt J., Schickedanz U.) WB 2004/13, Institut für Wasserbau, Universität Stuttgart, 2004.

Lectures and professional trainings

Numerical Methods in Hydrological and Meteorological Modelling (**Wagner S.**) MSc. Geography, MSc. Climate and Environmental Sciences, 2 SWS, University of Augsburg, Germany, February 09-13, 2015.

Hydrometeorological modeling: principles and case studies (**Wagner S.**) Hohai University, Nanjing, China, October 18, 2013.

Engineering hydrology and climate (**Wagner S.**) Lahmeyer International GmbH, Bad Vilbel, Germany, June 06-07, 2013.

Regional climate simulations using WRF (**Wagner S.**) MICMoR Summer School, Garmisch-Partenkirchen, Germany, July 11-18, 2012.

Integration of MODIS derived land surface properties into a water balance simulation model (**Wagner S.**) University of Wuerzburg, Germany, July 25, 2008.

Hydro-Meteorological Decision Support for the Volta Basin (**Wagner S.**) United Nations University Institute for Natural Resources (UNU-INRA), Accra, Ghana & Direction Générale des Ressources en Eau (DGRE), Ouagadougou, Burkina Faso, January 14 -25, 2008.

PhD and M.Sc. supervisions

Impact of Climate Variability and Change on Hydrology and Water Resource Management in the Volta Basin (Annor T.) Federal University of Technology, Akure, Nigeria (PhD thesis), 2015.

Fully coupled atmospheric-hydrological simulations for the Mahanadi basin, India using WRF-HMS (Koppa A.) IIT Kharagpur, India (M.Sc. thesis), 2014.

Anwendung des flächendifferenzierten Wasser- und Energiehaushaltssimulationsmodell GEOTOP für das Einzugsgebiet der Ammer (Hingerl L.) University of Augsburg, Germany (M.Sc thesis), 2010.

Vergleich von regionalen Klimasimulationen für die hydrologische Klimaimpaktanalyse des Einzugsgebiet der Mulde (Ott, I) University of Augsburg, Germany (M.Sc. thesis), 2010.

Dr. Sven Wagner: List of Publications & Presentations (until 2014)

Conference contributions

2014

Development and application of a coupled atmospheric-hydrological model system suitable for regional spatial and climate relevant temporal scales (Wagner S., Fersch B., Kunstmann H., Yuan F., Yu Z.) REKLIM International Conference 2014: Our climate, our future, Berlin, Germany, October 06-09 (oral presentation), 2014.

The impact of groundwater-soil moisture coupling on WRF-Hydro modeled water budgets and surface exchange for the Ammer catchment in Southern Germany (Benjamin Fersch, Thomas Rummmler, David Gochis, Sven Wagner, Harald Kunstmann) REKLIM International Conference 2014: Our climate, our future, Berlin, Germany, October 06-09 (oral presentation), 2014.

Regional water balance analysis with an atmosphere to groundwater coupled hydrometeorological model for the pre-alpine TERENO region (Benjamin Fersch, Thomas Rummmler, David Gochis, Sven Wagner, Harald Kunstmann) TERENO International Conference, Bonn, Germany, September 28, (oral presentation), 2014.

Coupling WRF and HMS: a model system allowing simulations of the full atmospheric and terrestrial water balance at regional spatial and climate relevant temporal scales (Wagner S., Fersch B., Kunstmann H., Yuan F., Yu Z.) 1st European Fully Coupled Atmospheric-Hydrological Modeling and WRF Hydro Users workshop, Rende (Cosenza), Italy, June 11-13 (oral presentation), 2014.

Saturated zone interaction within WRF-Hydro: from the bucket approach to a physically based distributed groundwater representation (Benjamin Fersch, Sven Wagner, Thomas Rummmler, David Gochis, Harald Kunstmann) 1st European Fully Coupled Atmospheric-Hydrological Modeling and WRF Hydro Users workshop, Rende (Cosenza), Italy, June 11-13 (oral presentation), 2014.

2013

Hydrometeorological modelling for Poyang Lake region, China (Wagner S., Fersch B., Kunstmann H., Yuan F., Yang C., Yu Z.) Sino-German Symposium, Shijiazhuang, Hebei, China, October 21-25 (oral presentation), 2013.

Observation and modelling of water and energy fluxes across compartments (Kunstmann H., Hingerl L., Mauder M., Wagner S., Rigon R.) Sino-German Symposium, Shijiazhuang, Hebei, China, October 21-25 (oral presentation), 2013.

Hydrometeorological modelling for Poyang Lake region, China (Wagner S., Fersch B., Kunstmann H., Yuan F., Yang C., Yu Z.) IAHS conference, Gothenborg, Sweden, July 22-26 (oral presentation), 2013.

Impact of groundwater dynamics and soil-type on modelling coupled water exchange processes between land and atmosphere (Fersch B., Wagner S., Rummmler T., Gochis D., Kunstmann H.) IAHS conference, Gothenborg, Sweden, July 22-26 (oral presentation), 2013.

A combined water and energy flux observation and modelling study at the TERENO-preAlpine observatory (Kunstmann H., Hingerl L., Mauder M., Wagner S., Rigon R.) IAHS conference, Gothenborg, Sweden, July 22-26 (oral presentation), 2013.

Copula-based approaches in hydrometeorology: RCM bias correction and precipitation data fusion (Kunstmann H., Vogl S., Laux P., Ganquan M., Wagner S., Knoche R.) 11th International Precipitation Conference, Wageningen, Netherlands, Jul 01-03 (oral presentation), 2013.

Statistical bias correction of WRF precipitation fields for Germany through Copula-based assimilation of REGNIE observation data (Ganquan M., Laux P., Vogl S., Wagner S., Kunstmann H.) 11th International Precipitation Conference, Wageningen, Netherlands, Jul 01-03 (poster presentation), 2013.

Dr. Sven Wagner: List of Publications & Presentations (until 2014)

2012

Coupled atmospheric-hydrological modeling for feedback investigations in the Poyang lake catchment, China (Wagner S., Fersch B., Kunstmann H., Yang C., Yuan F., Yu Z.) **AGU Fall meeting San Francisco, USA**, December 03-07 (poster presentation), 2012.

Coupling approaches for groundwater-soil-atmosphere interaction in a pre-Alpine environment (Fersch B., Wagner S., Rummler T., Gochis D., Kunstmann H.) **AGU Fall meeting San Francisco, USA**, December 03-07 (poster presentation), 2012.

Wie beeinflusst der Klimawandel die Hochwassergefahr in kleineren und mittleren Flusseinzugsgebieten? (Schaedler G., Duethmann D., Liebert J., Ott I., Wagner S.) **9. Deutsche Klimatagung, Freiburg, Germany**, October 09-12 (oral presentation), 2012.

High resolution RCM simulations for Germany: validation and projected climate changes (Wagner S., Berg P., Schaedler G., Kunstmann H.) **Geophysical Research Abstracts Vol. 14, EGU2012-11221, EGU General Assembly, Vienna, Austria**, April 23-27 (poster presentation), 2012.

Coupled hydro-meteorological simulations for the Poyang lake region, China (Wagner S., Fersch B., Kunstmann H., Yang C., Yuan F., Yu Z.): **Geophysical Research Abstracts Vol. 14, EGU2012-8847, EGU General Assembly, Vienna, Austria**, April 23-27 (oral presentation), 2012.

Climate change impact on medium and small sized river catchments in Germany: An ensemble assessment (Ott I., Duethmann D., Liebert J., Berg P., Feldmann H., Ihringer J., Kunstmann H., Merz B., Schaedler G., Wagner S.) **Geophysical Research Abstracts Vol. 14, EGU2012-9559, EGU General Assembly, Vienna, Austria**, April 23-27 (poster presentation), 2012.

Uncertainties in discharge projections in consequence of climate change (Liebert J., Duethmann D., Berg P., Feldmann H., Ihringer J., Kunstmann H., Merz B., Ott I., Schaedler G., Wagner S.) **Geophysical Research Abstracts Vol. 14, EGU2012-11089, EGU General Assembly, Vienna, Austria**, April 23-27 (poster presentation), 2012.

An ensemble assessment of the climate change impact on flood hazard for three small to medium sized catchments in Germany (Duethmann D., Ott I., Liebert J., Berg P., Feldmann H., Ihringer J., Kunstmann H., Merz B., Schaedler G., Wagner S.) **REKLIM workshop, Lueneburg, Germany**, March 19-21 (poster presentation), 2012.

Climate Scenarios on a regional scale – Looking for an UHI ‘forecasting model’ (Fallmann J., Wagner S.) **3rd Project Meeting of EU- Project 3CE292P3: UHI - Development and application of mitigation and adaptation strategies and measures for counteracting the global UHI phenomenon – CENTRAL Europe, Budapest, Hungary**, February 28-29 (oral presentation), 2012.

2011

Hydro-meteorological simulations for the Poyang lake region using WRF and HMS (Wagner S., Fersch B., Kunstmann H.) **Sino-German Symposium, Garmisch-Partenkirchen, Germany**, October 24-28 (oral presentation), 2011.

Wie ändern sich die Charakteristika von Hochwasserereignissen unter dem Klimawandel und mit welchen Unsicherheiten sind solche Aussagen behaftet? (Liebert J., Berg P., Duethmann D., Ihringer J., Kunstmann H., Merz B., Ott I., Schaedler G., Wagner S.) **Acqua alta, Hamburg, Germany**, October 11-13 (oral presentation and conference proceeding), 2011.

High resolution regional climate modeling for flood hazard impact study in Germany (Wagner S., Berg P., Duethmann D., Liebert J., Ott, I., Kunstmann H.) **Geophysical Research Abstracts Vol. 13, EGU2011-10858, EGU General Assembly, Vienna, Austria**, April 04-08 (poster presentation), 2011.

High Resolution Joint Water and Energy Balance Observation and Modeling in a Prealpine Environment (Kunstmann H., Hingerl L., Wagner S., Mauder M., Rigon R.) **Geophysical Research Abstracts Vol. 13, EGU2011-3908, EGU General Assembly, Vienna, Austria**, April 04-08 (poster presentation), 2011.

Dr. Sven Wagner: List of Publications & Presentations (until 2014)

Uncertainty aspects of changes in flood hazard in medium size river catchments for the near future (Berg P., Duethmann D., Liebert J., Ott I., **Wagner S.**) **DKKV 11. Forum Katastrophenvorsorge, Potsdam, Germany**, January 18-19 (poster presentation), 2011.

2010

High resolution regional climate modeling for flood hazard impact study in Germany (**Wagner S.**, Berg P., Duethmann D., Ihringer J., Kunstmann H., Liebert J., Merz B., Schaedler G., J. Werhahn) **AGU Fall meeting San Francisco, USA**, December 11-17 (poster presentation), 2010.

Precipitation Feedbacks in the Haihe River and Poyang Lake Regions (PreFeed) (Kunstmann H, **Wagner S.**, Fersch B., Fei Yuan, Chuanguo Yang, Zhongbo Yu) **Sino-German Symposia Munich, Germany**, December 07-12 (oral presentation), 2010.

Precipitation Feedbacks in the Haihe River and Poyang Lake Regions (PreFeed): A Project Overview (Kunstmann H, **Wagner S.**, Fersch B.) **NSFC-DFG Sino-German Symposia, Nanchang, China**, October 21-26 (oral presentation), 2010.

Bias correction of RCM data for use in hydrological catchment modeling (Berg P., Duethmann D., Feldmann H., Ihringer J., Kunstmann H., Liebert J., Merz B., Schaedler G., **Wagner S.**) **Geophysical Research Abstracts Vol. 12, EGU2010-10850, 2010, EGU General Assembly, Vienna, Austria**, May 02-07 (oral presentation), 2010.

The CEDIM-project Flood risk in a changing climate (Berg P., Duethmann D., Ihringer J., Kunstmann H., Liebert J., Merz B., Schaedler G., **Wagner S.**) **Geophysical Research Abstracts Vol. 12, EGU2010-10789, 2010, EGU General Assembly, Vienna, Austria**, May 02-07 (poster presentation), 2010.

2009

Impact of climate change on regional flood hazard in Germany (**Wagner S.**) **NCCR Climate Summer School, Grindelwald, Switzerland**, August 30 – September 04 (poster presentation), 2009.

Uncertainty assessment of hydrological predictions due to sparse precipitation stations (**Wagner S.**, Kunstmann H., Bárdossy A.) **IAHS, Hyderabad, India**, September 07-11 (oral presentation), 2009.

2008

Propagation of precipitation uncertainties in distributed water balance assessments of a data sparse semi arid environment (Kunstmann H., **Wagner S.**, Bárdossy A.) **IAHS- Hydropredict 2008, Prague, Czech Republic**, September 15 (**Key note lecture**), 2008.

Water balance in a poorly gauged basin in West Africa using atmospheric modelling and remote sensing information (**Wagner S.**, Kunstmann H., Bárdossy A.) **German-African GLOWA Projects, International Conference, Ouagadougou, Burkina Faso**, August 25-28 (poster presentation), 2008.

Propagation of precipitation uncertainties in water balance estimations. (**Wagner S.**, Kunstmann H., Bárdossy A.) **German-African GLOWA Projects, International Conference, Ouagadougou, Burkina Faso**, August 25-28 (poster presentation), 2008.

Instruments for Hydrometeorological Decision Support in Sustainable Water Management for the Volta Basin (**Wagner S.**, Laux P., Jung G., Kunstmann H.) **German-African GLOWA Projects, International Conference, Ouagadougou, Burkina Faso**, August 25-28 (poster presentation), 2008.

Modelling Daily Precipitation Features for Agricultural Decision Support in the Volta Basin (Laux P., Kunstmann H., **Wagner S.**, Bárdossy A.) **German-African GLOWA Projects, International Conference, Ouagadougou, Burkina Faso**, August 25-28 (poster presentation), 2008.

Propagation of precipitation uncertainties in water balance estimations (**Wagner S.**, Kunstmann H., Bárdossy A.) **Geophysical Research Abstracts, Vol. 10, EGU2008-A-03785, EGU General Assembly, Vienna, Austria**, April 13-18 (poster presentation), 2008.

Dr. Sven Wagner: List of Publications & Presentations (until 2014)

2007

Water balance estimation in a poorly gauged basin using atmospheric modelling and remote sensing information (**Wagner S.**, Kunstmann H., Bárdossy A., Conrad C., Colditz R.) **AMMA 2nd International Conference, Karlsruhe, Germany**, November 26-30 (oral presentation), 2007.

Uncertainties in water balance estimations due to scarce meteorological information: a case study for the White Volta catchment in West Africa (**Wagner S.**, Kunstmann H., Bárdossy A.) International Union of Geodesy and Geophysics **IUGG General Assembly, Perugia, Italy**, July 2-13 (poster presentation), 2007.

Water balance simulations in a poorly gauged basin using different meteorological and land surface data sources (**Wagner S.**, Kunstmann H., Bárdossy A., Conrad C.) Geophysical Research Abstracts, Vol. 9, 08304, **EGU General Assembly, Vienna, Austria**, April 15-20 (oral presentation), 2007.

2006

Hydrometeorological Decision Support for Sustainable Water Management (**Wagner S.**, Kunstmann H., Laux P., Jung G.) Veranstaltungsreihe „Betrifft Wasser: EZ trifft Wissenschaft“, der Deutschen Gesellschaft für Technische Zusammenarbeit **GTZ Eschborn, Germany**, Oktober 31 (poster presentation), 2006.

A New Hydrometeorological Decision Support System for Sustainable Water Management in the Volta Basin (Kunstmann H., **Wagner S.**, Jung G., Laux P., Clottey H.) **GLOWA-Volta Incentive Workshop, Accra, Ghana**, September 25-27 (oral presentation), 2006.

Model based distributed water balance monitoring of the White Volta Basin in West Africa through coupled meteorological-hydrological simulations (**Wagner S.**, Kunstmann H., Bárdossy A.) **AMMA meeting on Land-surface processes, Garmisch-Partenkirchen, Germany**, May 9 (poster presentation), 2006.

Integration of Atmospheric Sciences and Hydrology for the Development of Decision Support Systems in Sustainable Water Management (Kunstmann H., **Wagner S.**, Jung G., Laux P., Clottey H.) Geophysical Research Abstracts, Vol. 8, 03434, **EGU General Assembly, Vienna, Austria**, April 02-07 (oral presentation), 2006.

Model based distributed water balance monitoring for the White Volta catchment in West Africa through coupled meteorological-hydrological simulations (**Wagner S.**, Kunstmann H., Bárdossy A., Clottey H.) Geophysical Research Abstracts, Vol. 8, 03607, **EGU General Assembly, Vienna, Austria**, April 02-07 (oral presentation), 2006.

2005

Gekoppelte meteorologisch-hydrologische Simulationen zur flächendifferenzierten Wasserhaushaltsbilanzierung am Bsp. Volta/Westafrika (**Wagner S.**, Kunstmann H., Bárdossy A.) **9. Workshop zur großskaligen Modellierung in der Hydrologie, Freudenstadt, Germany**, November 10-11 (oral presentation), 2005.

WaSiM Anwendungen und Erweiterungen (Kunstmann H., **Wagner S.**) **WaSiM-Workshop, Zürich, Switzerland**, March 17-18 (poster presentation), 2005.

Dr. Sven Wagner: List of Publications & Presentations (until 2014)

Invited presentations

Klimawandel weltweit und regional (Wagner S) SEAP_Alps Auftaktveranstaltung: Klimawandel weltweit und regional – Klimaschutz und Klimaanpassung für Weyarn, Energiewende Oberland, January 28 (invited oral presentation), 2014.

Klimawandel weltweit und regional (Wagner S) SEAP_Alps Workshop: Klimawandel weltweit und regional – Anpassungsstrategien für unsere Stadt, Energiewende Oberland, Geretsried, Germany, January 22 (invited oral presentation), 2014.

WaSiM simulations for the Ammer catchment driven by high resolution RCM data (Wagner S., Ott I., Kunstmann H.): KLIWA Fachgespräch, Karlsruhe, Germany, July 05 (invited oral presentation), 2012.

Einfluss der Klimaänderung auf Wasserhaushalt und Wasserkraft: Ergebnisse regionaler Klimaszenarien (H. Kunstmann, G. Smiatek, A. Marx, S. Wagner), EON Wasserkraft, Landshut, Germany, February 02 (invited oral presentation), 2008.