

Personal Data

Name Wei Yang
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Education

Oct, 2002-2007 Ph.D of “Discrete-continuous downscaling model for generating daily rainfall series” at the *Chair of Hydrology and Geohydrology, Institute of Hydraulic Engineering, University of Stuttgart, Germany*

October 2000 Master of Science in Water Resources Engineering and Management, entitled as “Optimization of the Operation of a SBR Plant with Submerged Hollow Fibre Membranes”, at the *Chair of Sewage Technology, Institute for Sanitary Engineering, Water Quality and Solid Waste Management, University of Stuttgart, Germany*

Working experiences

May.2007 to present **Researcher**
Department of hydrology, Swedish Meteorological and Hydrological Institute (SMHI), Sweden

- Developing bias-correction method to scale GCM/RCM output for hydrological uses
- Application of large-scale circulation patterns to hydrological seasonal forecasting system
- Forest fire risk assessment
- Extreme rainfall analysis
- Multivariate analysis in bias-correction field
- Climate change impact studies in hydrology and forest fire risk

Jan.2004 to April.2007 **Research assistant for EU project “RIVERTWIN” - a Regional Model for Integrated Water Management in Twinned River Basins**
Chair of hydrology and geology at institute of hydraulic engineering, University of Stuttgart, Germany

- Applying fuzzy-logic method to classify atmospheric circulation patterns
- Downscaling time series of meteorological variables for selected catchments, Neckar basin in Germany, Western Europe; Chirchik basin in Uzbekistan, Central Asia, and Oueme basin in Benin, Western Africa.
- Set up a new copula-based multivariate precipitation downscaling model

Dec.2002 to Jul.2005 **Research assistant for EU project “STADEx “Statistical and Regional dynamical Downscaling of Extremes for European regions**
Department of Structure, Applied Science University of Stuttgart, Germany

- Analyzing time series of critical circulation patterns due to the climate changes
- Focusing on the impact of atmospheric circulation patterns on the extreme events in the past decades

- Setting up a new discrete-continuous stochastic downscaling model to generate daily rainfall

Teaching experiences

- 2010 Supervisor for thesis work, "Improving the Distribution Based Scaling Method for Bias Correction of Precipitation from climate models" by Södling, J., Linköping university (LiTH – AT – EX - - 2010/22 - - SE)
- 2003 to 2006 Teaching assistant at the Chair of hydrology and geology at institute of hydraulic engineering, University of Stuttgart, Germany

SCIENTIFIC JOURNALS (REVIEWED)

- Olsson, J., Arheimer, B., Borris, M., Donnelly, C., Foster, K., Nikulin, G., Persson, M., Perttu, A-M., Uvo, C.B., Viklander, M. and **Yang, W.** (2016): Hydrological Climate Change Impact Assessment at Small and Large Scales: Key Messages from Recent Progress in Sweden, *Climate* 2016, 4(3), 39, doi:10.3390/cli4030039
- Olsson, J., Uvo, C. B., Foster, K., and **Yang, W.** (2016): Technical Note: Initial assessment of a multi-method approach to spring-flood forecasting in Sweden, *Hydrol. Earth Syst. Sci.*, 20, 659-667, doi:10.5194/hess-20-659-2016
- Yang, W.**, Gardelin, M., Olsson, J., and Bosshard, T. (2015): Multi-variable bias correction: application of forest fire risk in present and future climate in Sweden, *Nat. Hazards Earth Syst. Sci.*, 15, 2037-2057, doi:10.5194/nhess-15-2037-2015
- Berg, P., Bosshard, T. and **Yang, W.** (2015): Model consistent pseudo-observations of precipitation for bias correcting regional climate models. *Climate*, 3, 118-132. DOI:10.3390/cli3010118.
- Wilk, J., Hjerpe, M., **Yang, W.** and Fan, H. (2014): Farm-scale adaptation under extreme climate and rapid economic transition. *Environment, Development and Sustainability*. DOI:10.1007/s10668-014-9549-2.
- Pisinaras, V., **Yang, W.**, Barring L. and Gemitzi, A. (2014): Conceptualizing and assessing the effects of installation and operation of photovoltaic power plants on major hydrologic budget constituents. *Science of the Total Environment*. DOI: 10.1016/j.scitotenv.2014.05.132.
- Donnelly, C., **Yang, W.** and Dahné, J. (2014): River discharge to the Baltic Sea in a future climate. *Climatic Change*, 122:157-170.
- Olsson, J., **Yang, W.** and Bosshard, T. (2013): Climate model precipitation in hydrological impact studies: limitations and possibilities. *Journal of Water Management and Research* 69: 221-230.
- Ruete, A., **Yang, W.**, Barring, L., Stenseth, N.C., and Snäll, T. (2012): Disentangling effects of uncertainties on population projections: climate change impact on an epixylic bryophyte. *Proceedings of the Royal Society*, 279 (1740): 3098-105. Doi: 10.1098/rspb.2012.0428.
- Graham, L.P., Andersson, L., Horan, M., Kunz, R., Lumsden, T., Schulze, R., Warburton, M., Wilk, J. and **Yang, W.** (2011): Using multiple climate projections for assessing hydrological response to climate change in the Thukela River Basin, South Africa. *Physics & Chemistry of the Earth, Parts A/B/C*, doi:10.1016/j.pce.2011.07.084.

Wetterhall, W., Graham, LP., Andréasson, J., Rosberg, J. and **Yang, W.**(2011): Using ensemble climate projections to assess probabilistic hydrological change in the Nordic region. *Nat. Hazards Earth Syst. Sci.*, 11, 2295-2306, doi:10.5194/nhess-11-2295-2011.

Olsson, J., **Yang, W.**, Graham, LP., Rosberg, J. and Andréasson, J.(2010): Using an ensemble of climate projections for simulating recent and near-future hydrological change to lake Vänern in Sweden. *Tellus A*, Vol. 63, issue 1, pp. 126-137.

Yang, W., Andréasson, J., Graham, L. P., Olsson, J., Rosberg, J and Wetterhall, F. (2010): Distribution based scaling to improve usability of regional climate model projections for hydrological climate change impacts studies. *Hydrol. Res.*, 41.3-4.

Yang, W., Bárdossy, A., and Caspary, H-J. (2010): Downscaling daily precipitation time series using a combined circulation- and regression-based approach. *Theoretical and Applied Climatology* Vol. 102, Numbers 3-4, 439-454, DOI: 10.1007/s00704-010-0272-0.

Proceedings and conference contributions:

Berg, P., Bosshard, T and **Yang, W.** (2015): Construction of high resolution model consistent pseudo-observations of precipitation and their use for bias correction. European Geosciences Union General Assembly, Vienna, 12 – 17 April 2015

Nikulin, G., Bosshard, T., **Yang, W.**, Bärring, L., Wilcke, R., Vrac, M., Vautard, R., Noel, T., Gutiérrez, JM., Herrera, S., Fernández, J., Haugen, JF., Benestad, R., Landgren, OA., Grillakis, M., Ioannis, T., Koutroulis, A., Dosio, A., Ferrone, A and Switanek, M. (2015): Bias Correction Intercomparison Project (BCIP): an introduction and the first results. European Geosciences Union General Assembly, Vienna, 12 – 17 April 2015

Nikulin, G., Bosshard, T., Wilcke, R., **Yang, W.**, Kjellström, E. and Bärring, L. (2015): Uncertainties in projected climate changes of the rainy season over West Africa related to bias adjustment. European Geosciences Union General Assembly, Vienna, 12 – 17 April 2015.

Yang, W., Olsson, J., Bosshard, T., Berg, P. and Arheimer, B. (2014): Multi-variable bias correction of RCMs for Climate Change Impact Studies. European Geosciences Union General Assembly, Vienna, 27 April – 02 May 2014.

Bosshard, T., **Yang, W.**, Sjökvist, E., Arheimer, B. and Graham, LP. (2014): Bias-correction of CORDEX-MENA projections using the Distribution Based Scaling method. European Geosciences Union General Assembly, Vienna, 27 April – 02 May 2014.

Graham, LP., Andersson, L., Horan, M., Kunz, R., Lumsden, T., Schulze, R., Warburton, M., Wilk, J. and **Yang, W.** (2010): Using multiple climate projections for assessing hydrological response to climate change in the Thukela River Basin, South Africa. *Physics & Chemistry of the Earth for the 11th WATERNET/WARFSA/GWP-SA symposium 2010 in Victoria Falls.*

Donnelly, C., Dahne, J., Rosberg, J., Strömqvist, J., **Yang, W.**, and Arheimer, B. (2010): High-resolution, large-scale hydrological modelling tools for Europe. *Global change: Facing Risks and Threats to Water Resources (Proc. of the Sixth World FRIEND Conference, Fez, Morocco, October 2010).* IAHS Publ. 340, 2010, 553-560.

Donnelly, C., Dahne, J., Lindström, G., Rosberg, J., Strömqvist, J., Pers, C., **Yang, W.** and Arheimer, B. (2009): An evaluation of multi-basin hydrological modelling for predictions in ungauged basins. *New Approaches to Hydrological Prediction in Data-sparse Regions (Proc. of Symposium HS.2 at the Joint IAHS & IAH Convention, Hyderabad, India, September 2009).* IAHS Publ. 333, 2009, 112-120.

Yang, W., Andréasson, J., Graham, L. P., Olsson, J., Rosberg, J and Wetterhall, F. (2008): A scaling method for applying RCM simulations to climate change impact studies in hydrology. In: XXV Nordic Hydrological conference Nordic Association for Hydrology Reykjavik, Iceland, August 11-13, Vol. 1, pp. 256-265.

Yang, W., Bardossy, A., Caspary, H (2005): Downscaling daily precipitation for flood risk estimation using copulas. Presentation of RIVERTWIN project and current research about climate downscaling at the European Geosciences Union General Assembly, Vienna, 24 - 29 April 2005.

Bardossy, A., Caspary, H., **Yang, W.** (2004): Downscaling daily precipitation for flood risk estimation. Presentation of current research about climate downscaling at the European Geosciences Union General Assembly, Nice, 25 - 30 April 2004