

Prof Dr. Lars Ribbe

is a professor for integrated land and water resources management and director of the Institute for Technology and Resources Management in the Tropics and Subtropics (ITT), TH Köln (University of Applied Sciences) since 2009. His work areas include river basin assessment, modelling and management and he is specifically interested in developing knowledge systems which help decision makers to cope with prevailing water resources related challenges like water scarcity and drought, water use efficiency and water allocation. Recently he has been involved in bridging scientific and sectoral approaches in the context of the water, energy and food security Nexus by forming an interdisciplinary group on that matter at TH Köln.

After obtaining degrees in Chemistry (University of Bremen) and Master of Engineering (Cologne University of Applied Sciences) he received his PhD (Dr.rer.nat) in the field of Hydro-informatics at Friedrich Schiller University Jena, Germany. At ITT he is coordinating international master programs with relation to water and environmental sciences together with Jordan University, Vietnam Academy of Applied Sciences and the Autonomous University San Luis Potosi, Mexico as part of an international university network involving over 15 universities from around the globe. Furthermore, his current research is related to a systematic analysis of river basins with the aim to provide water governance support in Vietnam, Jordan, Chile, Brazil and the Nile Basin.

- coordinator of currently two large interdisciplinary research projects (more than 6 projects successfully finished; sum of third party funding obtain in 2010-2015 > 14 million Euro)
- Co-supervisor of 19 PhD Thesis (6 finished)
- main responsible researcher for 14 university partnerships in the field of Integrated water resources management – in each country pilot river basin case studies (www.basin-info.net)
- Author or co-author of more than 30 scientific publications related to integrated water resources planning and management (selection):

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- Nauditt, A., Birkel, C., Soulsby, C., Ribbe, L. (2017) Conceptual modelling to assess the influence of hydro-climatic variability on runoff processes in data scarce semi-arid Andean catchments. *Hydrological Sciences Journal* 62(4), pp. 515-532
- Nguyen, L.D., Karimanzira, D., Rauschenbach, T., Ribbe, L. (2017) Design and Application of an Adaptive Time Delay Model for Flow Routing in Prismatic Trapezoidal Geometry River Reach. *Water Resources Management*, pp. 1-12.
- Woldesenbet, T.A., Elagib, N.A., Ribbe, L., Heinrich, J. (2017). Hydrological responses to land use/cover changes in the source region of the Upper Blue Nile Basin, Ethiopia. *Science of The Total Environment*. pii: S0048-9697(16)32054-X. doi: 10.1016/j.
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- Al-Saidi, M., Elagib, N.A., Ribbe, L., Schellenberg, T., Roach, E., Oezhan, D., 2016. Water-Energy-Food Security Nexus in the Eastern Nile Basin: Assessing the Potential of Transboundary Regional Cooperation. *Water-Energy-Food Nexus: Theories and Practices* (Salam et al. Eds.), AGU Wiley Books, (Accepted).
- Lamberty, G., Zumbroich, T., Ribbe, L., Souvignet, M. (2016) Quantifying bias in hydromorphological monitoring: an evaluation of the German LAWA-OS method. *Environmental Earth Sciences*, 75 (22), art. no. 1435,
- Nguyen, L.D., Karimanzira, D., Rauschenbach, T., Ribbe, L. (2016) A procedure for approximating a complex hydrodynamic model by the adaptive time delay method (2016) *World Environmental and Water Resources Congress 2016: Professional Development, Innovative Technology, International Perspectives, and History and Heritage - Papers from Sessions of the Proceedings of the 2016 World Environmental and Water Resources Congress*, pp. 1-11.
- Siew, T.F., Aenis, T., Spangenberg, J. H., Nauditt A., Döll, P. Frank, S. Ribbe, L. Rodriguez-Labajos, B., Rumbaur, C., Settele, J., Wang, J. (2016). Transdisciplinary research in support of land and water management in China and Southeast Asia: evaluation of four research projects. *Sustainability Science*, Volume 11, Issue 5, pp 813-829. doi: 10.1007/s11625-016-0378-0
- Woldesenbet, T.A. , Elagib N., Ribbe, L., Heinrich, J. (2016): Gap filling and homogenization of climatological datasets in the headwater region of the Upper Blue Nile Basin, Ethiopia. *International Journal of Climatology*. doi: 10.1002/joc.4839
- Al-Zayed, I.S., Elagib, N.A., Ribbe L., Heinrich, J. (2016): Satellite-based evapotranspiration over Gezira Irrigation Scheme, Sudan: A comparative study. *Agricultural Water Management* 177, 66 - 76
- Bussmann A, Elagib N, Fayyad M, Ribbe L 2016: Sowing date determinants for Sahelian rainfed agriculture in the context of agricultural policies and water management. *Land Use Policy* 52:316–328
- Al Zayed, I.S., Elagib, N.A., Ribbe, L., Heinrich, J. 2015. Spatio-temporal performance of large-scale Gezira Irrigation Scheme, Sudan. *Agricultural Systems* 133 (2015) 131 – 142.
- Wagnitz, P., Nunez, J., Ribbe, L. 2014. Cost of environmental flow during water scarcity in the arid Huasco River basin, northern Chile, *Hydrological Sciences Journal* 59 (3-4): 700-712

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- Ahmed SM, Ribbe L. 2011. Analysis of water footprints of rainfed and irrigated crops in Sudan. *Journal of Natural Resources and Development*. 1(3):21-30 ([Link](#))
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