Robert Ladwig

Hydrologist

Berlin, Germany

About me

My PhD research is about the impact of adaptive water management measures on urban surface water systems. Here, I am exploring water management measures using numerical models to mitigate unwanted consequences, for instance eutrophication, and investigating the impact of climate change on the thermal stratification of urban lakes. My background is in groundwater modeling and applied hydrogeology.

Skills

- GIS
- MODFLOW-2005
- OpenGeoSys
- TELEMAC-MASCARET
- General Lake Model
- Python
- R
- MATLAB

(*)[The skill scale is from 0 (Fundamental Awareness) to 6 (Expert).]

Research interests

Hydrology, Water Resources Management, Computational Fluid Dynamics, Physical Limnology, Climate Change, Hydrogeology, Ecological Modeling

Education

since 2015 — Ph.D. candidate in Civil Engineering — TU Berlin
Impact of adaptive water management measures in times of climate change on interfaces in urban lakes

2012-2015 — Master of Science in Hydrology — TU Dresden
Optimal management of arid coastal aquifers with the use of density-dependent groundwater flow modeling and artificial neural networks

2009-2012 — Bachelor of Science in BioGeoSciences — FSU Jena
Spatiotemporal status of the heavy metal contamination in natural and contaminated test sites

Publications in peer-reviewed journals

2018 — Ladwig, R., Furusato, E., Kirillin, G., Hinkelmann, R., Hupfer M.: Climate Change Demands Adaptive Management of Urban Lakes: Model-Based Assessment of Management Scenarios for Lake Tegel (Berlin, Germany). Water 10, 168

2017 — Ladwig, R., Heinrich, L., Singer, G., Hupfer M.: Sediment core data reconstruct the management history and usage of a heavily modified urban lake in Berlin, Germany. Environ Sci Pollut Res. 24: 25166-25178

Experience

9-11/17 — Special research student — Saitama Univ., Japan
research stay at working group Eiichi Furusato

since 7/15 — Research assistant — IGB Berlin
RTG 'Urban Water Interfaces' (DFG), working group Michael Hupfer 'Biogeochemical Processes in Sediments and Lake Management'

5-7/15 — Research assistant — Chair of Hydrology, TU Dresden
modeling and economic evaluation of groundwater management scenarios (saltwater intrusion)

11-12/13 — Student assistant — Institut für Wasser und Boden Dr. Uhlmann, Dresden
stream gauging, data analysis

9-10/13 — Internship — Catchment Hydrology, UFZ Halle
isotope analysis, chemical analysis, field sampling

8/11-2/12 — Student assistant — MPI Biogeochemistry Jena
technical work

Attended Conferences

2017 — Poster — Nagoya, Japan
ELR2017NAGOYA and ICLEE 8th Conference

2017 — Oral presentation — Vienna, Austria
EGU General Assembly 2017

2016 — Oral presentation — Vienna, Austria
DGL Tagung Wien

2016 — Oral presentation — Moscow, Russia
The Sixth German-Russian Week of the Young Researcher 'Urban Studies: The City of the Future'

Languages

German (native), English (fluent, level C1), French and Japanese (beginner)