Dominik Wisser

Geospatial data analyst/Natural resources scientist

Dominik Wisser, Ph.D.

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Google scholar https://goo.gl/i3Qi3a

Skills

Geospatial data analyst/ data scientist with 15+ years of broad experience in modeling of natural systems. Strong analytical skills (statistics, remote sensing, geospatial data analysis, machine learning) applied to multiple domains (water resources, crop yield, climate change impact studies) and at multiple scales (local, regional, and global).

Experienced in data mining, handling, processing, and visualization (PowerBI, Tableau, RShiny). Strong programming and scripting skills (R, Python, Perl, NCAR-NCL, CDO), proficient with software packages (ArcGIS, ArcInfo, QGIS, GDAL), and operating systems (Unix/Linux, Windows, MacOS) and computing environments (AWS and GCC).

Effective communications skills, written, editorial and public speaking skills through teaching, supervision, research papers and conference presentations for audiences in diverse cultural backgrounds and difficult environments. Fluent in German (native language) and English. Advanced French, basic Dutch and Italian.

Experience

Food and Agricultural Organization (FAO) of the United Nations/
Livestock data analyst/Data Scientist
JAN 2019 - PRESENT, home based, Germany

Analyzed large agronomic and biophysical data sets from different sources. Developed models for estimating water use in livestock. Visualized data sets in several RShiny apps.

Food and Agricultural Organization (FAO) of the United Nations/
Natural Resources Consultant/Data Scientist
APRIL 2016 - Dec 2018, Rome, Italy

Developed models and tools to implement constraints of natural resources (land, water, yields) in economic models, based on a variety of hydrological, climate, and crop model data sets. Developed tools to calculate greenhouse gas emissions from the agricultural sector under future conditions.

Center for Development Research (ZEF) / Senior Researcher
NOVEMBER 2013 - MARCH 2016, Bonn, Germany

Lead climate change impact studies on water resources and crop production in West Africa as Hydrologist for the West African Service Center for Climate Change and Adapted Land Use (WASCAL). Supervised Ph.D. students in West Africa . Lead writing of several grant proposals.

Utrecht University / Postdoctoral Research Associate
FEBRUARY 2011 - OCTOBER 2012, Utrecht, The Netherlands

Developed models and tools for global, near-real-time water scarcity assessments based on in-situ information, satellite data, and hydrological models.

Institute for the Study of Earth, Oceans, and Space / Research Scientist/
Postdoctoral Research Associate

JANUARY 2006 - FEBRUARY 2011, Durham, New Hampshire (USA)

Developed methods to assess the impact of human interventions (irrigation and reservoirs) in the water cycle using macroscale hydrological models. Adapted and applied hydrological models to investigate the impacts of small reservoirs on food security. Adapted thermo-dynamic 1-D model to be used at the continental scale to analyze impacts of permafrost thawing on soil carbon. Participated in grant proposals with other teams.

Ruhr-University / Research Scientist
FEBRUARY 2002 - DECEMBER 2005, Bochum, Germany

Coordinated water resources assessments and developed water demand models for regions in Southern Europe with partners from five countries in the project 'Developing Strategies for Regulating and Managing Water Resources and Demand in Water Deficient Regions' (EU funded). Adapted hydro-economic models to include irrigation water requirements.

AHT International GmbH / Junior Consultant
APRIL 2001 - DECEMBER 2001, Lilongwe, Malawi

Collected data from multiple sources and agencies to assess the irrigation potential in Malawi, based on land and water constraints. Organized workshops and trained local experts in GIS, management of hydrological and meteorological data and software tools.

Education

Ruhr-University / Ph.D. (Dr. Ing.)
APRIL 2009, Bochum, Germany

Thesis: Modeling of Irrigation and Reservoirs in Regional and Global Water Cycle (Advisor: Prof. A. Schumann)

University of Stuttgart / M.Sc.
OCTOBER 1999 - FEBRUARY 2002, Stuttgart, Germany

Thesis: Modeling of the Lufira river catchment (Malawi) for the investigation of different land use scenarios (Advisor: Prof. A. Bárdossy)

University of Siegen / B.Sc. (Dipl.-Ing.)
OCTOBER 1994 - MARCH 1999, Siegen, Germany

Thesis: Statistical Analysis of Heavy Rainfall in Nairobi, Kenya (Advisor: Prof. J. Jensen). Visiting scientist at the Institute for Meteorological Training and Research in Nairobi, Kenya, 6 months)

Awards

2006: Ph. D. Scholarship, German Academic Exchange Service (DAAD), Visiting scholar at the Water Systems Analysis Group, University of New Hampshire, NH (USA)

2013: Affiliate Research Assistant Professor, Institute for the Study of Earth, Oceans, and Space. University of New Hampshire, NH (USA)

1998: DAAD Scholarship for the Institute for Meteorological Training and Research, Nairobi, Kenya

2014: Associate Editor, Journal of Hydrometeorology

Membership

American Geophysical Union (AGU)