Johannes Brenner

Junior Researcher | Eco-Hydrology

Professional career

2014

Junior Research Assistent, EURAC, Institute for Alpine Environment, Bozen/Bolzano.

eco-hydrological simulations with GEOtop and SWAT, eco-hydrologic climate impact studies at catchment scale, data management, organisation/realisation of field work (LTsER site Matsch/Mazia).

Education | Academic Training

2014

Seminars and Workshops.

e.g. School on Data analysis and programming with R (University of Bolzano, 3days), Managing Open Science (EURAC research, 1day), Tri-Nationaler Workshop - Hydrologische Prozesse im Hochgebirge im Wandel der Zeit (Obergurgl, AT, 3days).

2015

SummerSchool, "Facing Natural Hazards", Potsdam.

hosting institutions: IASS, PIK, GFZ, AWI, University of Potsdam

2015

MasterClass, "Climate Services", European Academy (EURAC), Bozen/Bolzano. organized within the EUPORIAS project.

2011 - 2014

Scientific Assistent, Institute of Earth and Environmental Science, Working Group Hydrology and Climatology, University of Potsdam.

installation and maintenance of a micro-rain radar (Sölden, Austria), contribution to an open source library for processing weather radar data (wradlib), data analysis (R), literature review (Mendelev).

<u>2011</u>–2014

Master's programme Geoecology, Institute of Earth and Environmental Science, University of Potsdam, Graduation with distinction (1.2).

Thesis: "Spatial variability and temporal trends of soil moisture and evapotranspiration in an inneralpine dry catchment". Supervised by Prof. Axel Bronstert & Dr. Giacomo Bertoldi.

2011

Internship, Potsdam Institute for Climate Impact Research (PIK), Potsdam.

Processing and analysis of climate and land use data as input for the Dynamic Global Vegetation Model LPJ with the statistic computing language R. Supervised by Dr. Kirsten Thonike.

2010

Field Work, Nacimiento, Chile.

Determining soil hydraulic (e.g. hydraulic conductivity), terrain and vegetation characteristics in a forest catchment for parametrisation of the hydrological model WASA-Sed.

2009

Tutor "mathematics for Geoecologists", Institute of Earth and Environmental Science, University of Potsdam.

2007-2011

Bachelor's programme Geoecology, Institute of Earth and Environmental Science, University of Potsdam.

Thesis: "Modelling of sediment transport in a deforested catchment with WASA-Sed (Nacimiento, Chile)" Supervised by Prof. Axel Bronstert & Dr. Christian Mohr (Institute of Earth and Environmental Science, University of Potsdam). Funded by DAAD scholarship "Thesis abroad".

Skills

IT applications and development

HydroModels GEOtop, SWAT, WASA-Sed Geoinfo QGIS, GRASS, SAGA, ArcGIS

DataAnalysis R, Concave Programming Python, Fortran

Operating GNU/Linux (Ubuntu, RedHat), Tools GitHub, Mendeley, Overleaf

Systems Windows

2014

2014

2015

2014

2014

2012

Office LibreOffice, MicrosoftOffice, Inkscape Edition LATEX, Markdown

Foreign Languages

German Native Mother Tongue

English Fluent Daily practice, scientific writing

French B1 Level Studied 5 years in school

Italian A2 Level Lived 3 years in South Tyrol (Italy)

Participation in Research Projects

MONALISA, "Monitoring key evironmental parameters in the alpine environment involving science, technology and application".

Junior Researcher responsible for eco-hydrological modeling for different land uses (apple orchards, Alpine grassland - meadow and pasture), data management and analysis.

HiResAlp, "An innovative framework for the integration of multi-source data to determine soil moisture and evapotranspiration at high resolution in Alpine regions". Junior Researcher responsible for field activities and point-scale/distributed eco-hydrological modeling in the LTsER site Mazia/Matsch.

HydroAlp, "Modelling the interactions between water cycle, vegetation and climate in Alpine Environments".

Master Student responsible for climate change impact assessment with the hydrological model GEOtop, results available via WEB-GIS.

Publications & Conference Proceedings

Bertoldi G, Brenner J, Notarnicola C, Greifeneder F, Nicolini I, Della Chiesa S, Niedrist G, Tappeiner U, Monitoring soil moisture patterns in alpine meadows using ground sensor networks and remote sensing techniques., Geophysical Research Abstracts, Vol. 17, 2015, European Geosciences Union, General Assembly 2015 - Vienna, Austria, 12–17 April 2015 (poster).

Brenner J, Bertoldi G, Della Chiesa S, Niedrist G, Tappeiner U, Bronstert A, Modellazione degli impatti del cambiamento climatico sulla distributione spaziale dell'evapotranspirazione, dell'umidita del terreno e del manto nevoso in una vallata alpina, Atti del XXXIV Convegno Nazionale di Idraulica e Construzioni Idrauliche, Bari, 07–10 Sept 2014.

Brenner J, Bertoldi G, Della Chiesa S, Niedrist G, Tappeiner U, Bronstert A, Modeling impacts of climate change on evapotranspiration and soil moisture spatial patterns in an alpine catchment, Geophysical Research Abstracts, Vol. 16, 2014, European Geosciences Union, General Assembly 2014, Vienna, Austria, 27 April—2nd May 2014 (talk).

Brenner J, Faul F, Ittner S, Scheiffele L, Schlingmann A, Voß S, Weißhuhn P and Zoerner M (2012), Ecosystem Services from Agro- and Forest Ecosystems, openLandscape Wiki, Leibniz Centre for Agricultural Landscape Research (ZALF).

References

1 **Prof. Dr. Axel Bronstert**, *University of Potsdam*, Institute of Earth- and Environmental Sciences, axelbron@uni-potsdam.de.

2	2	Dr. Giacomo Bertoldi , European Academy Environment, Giacomo.Bertoldi@eurac.edu.	Bozen/Bolzano,	Institute for A	Alpine