

The Department of Water, Atmosphere, Environment, Institute of Hydrobiology and Aquatic
Ecosystem Management is currently seeking a

Postgraduate Research Associate

Changing connectivity properties impacting resilience in riverine landscapes as socio-ecological systems (PhD-Position, project employment)

Reference code: 219

Extent of employment: 40 Hours per Week
Duration of employment: 1st of March 2020, limited to 28th of February 2023

Workplace: Vienna/Lunz

Gross monthly salary and pay grade in terms of collective agreement
for university staff (payable 14 times per year): B1, €2.864,50

The i-CONN project (<http://iconn.network/>):



In recent years, parallel developments in disciplines as disparate as Ecology, Geomorphology, Neuroscience, Social Science and Systems Biology have focused on what is termed connectivity. In its simplest form, connectivity is a description of the level of connectedness within a system, and can be quantified in terms of structural connectivity (SC) which describes how elements within a system are physically or spatially connected, and functional connectivity (FC) which describes how the strength/presence of these connections varies over space and time.

The ESR 8 project:

Different aspects of connectivity such as hydrological, landscape and ecological connectivity, is a key property of riverine landscapes driving exchange conditions with floodplains. Objectives:

- (1) to analyse the linkage between connectivity (and its properties – functional and structural components as well as feedback loops), resilience and stability in industrialized riverine landscapes (IRL) as socio-ecological systems including co-evolutionary aspects;
- (2) to determine the specific effects of river floodplain restoration on the resilience of ecological and social components of IRL and their interactions at different scales
- (3) to explore the role of changing connectivity (hydrological, ecological) of different landscape elements and their configuration on resilience aspects in IRL and how these interact with future drivers of change (climate change, land use change) and different ecosystem service profiles of IRL
- (4) to expand this knowledge to other systems with interlinked systems domains. The research will be based on an empirical study (ecological and social), targeted experimental work and modelling approach and will build on large available datasets and own data collections.

Responsibilities

- perform high quality research in the bespoke research project under the guidance of the supervisory team
- assist with the development of research goals and objectives
- develop and test new hypotheses, analysing scientific data from a variety of sources, assessing, and refining working hypotheses as appropriate

- ❖ meet the members of the supervisory team to discuss their research on a regular basis
- ❖ widen their personal knowledge in the research area and undertake complementary training
- ❖ directly contribute ideas to the direction of the research project supported by details and critical reference to previously published literature and knowledge exchange through the i-CONN network
- ❖ keep comprehensive, accessible, secure records of all experimental and modelling work, data, and analyses
- ❖ prepare regular research reports and participate in scheduled face-to-face and online meetings including presentation of research results
- ❖ liaise effectively with all members of the local and international research team
- ❖ participate in the activities of the Network as specified in the Grant Agreement and/or required by the node coordinator, including secondments in other network nodes and taking part in the network meetings and in the training activities
- ❖ write up the results of the research activity and present research papers and publications at meetings and conferences, as advised by the supervisors, and contribute to the overall goals of the network
- ❖ keep records of the activities, such as research, training, secondments, visits, and leave of absence
- ❖ be prepared to undertake some aspects of undergraduate student teaching, which may include small-group teaching (workshops and tutorials or laboratory class demonstrating

Person specification

The successful candidates must satisfy the eligibility criteria (see below) and have:

- ❖ a Master's degree (MSc) or equivalent in environmental science, ecology or a related field
- ❖ a keen interest in pursuing research in the development of Connectivity Science and in the area of research: ecology, biogeochemistry, ecohydrology, river restoration and global change in riverine landscapes
- ❖ experience in the quantitative study of environmental processes using for example a field-based study, experimental approaches, data synthesis and modelling-based approaches
- ❖ good computational skills including use of software such as R
- ❖ the ability to work independently and as a member of a research team
- ❖ excellent interpersonal and communication skills, and a willingness to interact cooperatively with academic and support staff
- ❖ a good command of English language, with excellent oral and written skills
- ❖ well-organised and highly-motivated with good time-management skills and the ability to focus on project objectives
- ❖ willingness to assist with day-to-day operation of the research group, to assume a share of group responsibilities, and to contribute to impact reports, dissemination and outreach activities, including updates of the i-CONN project website, secondment and training event reports, posters, etc.
- ❖ excellent written and verbal communication skills in English. It is a requirement that applicants can demonstrate that their ability to understand and express themselves in both written and spoken English is sufficient for them to derive the full benefit from the network training, and to embark on a PhD at the University of Natural Resources and Life Sciences, Vienna
- ❖ willingness to travel internationally for training events, secondments and conferences
- ❖ willingness to re-locate to reside within a reasonable distance of the University (or seconded institution) for the duration of the post

Applications can be submitted until: 30th of January 2020

University of Natural Resources and Life Sciences Vienna seeks to increase the number of its female faculty and staff members. Therefore qualified women are strongly encouraged to apply. In case of equal qualification, female candidates will be given preference unless reasons specific to an individual male candidate tilt the balance in his favour.

To register your interest in applying for this position, and to ask for any further information, please contact Dr. Thomas Hein (thomas.hein@boku.ac.at). To apply for this position, we require a copy of your CV, degree transcripts, motivation letter and the names of 2 referees. Please indicate in your motivation letter if you are interested in being considered of any of the other PhD positions in our network (and that you are happy for your data to be shared with the respective institution).

Please, send your application incl. motivation letter, CV, degree transcripts and the names of 2 referees to Dr. Thomas Hein (thomas.hein@boku.ac.at).

We regret that we cannot reimburse applicants travel and lodging expenses incurred as part of the selection and hiring process.

www.boku.ac.at