

Opis delovnega mesta mladega raziskovalca/ke (Description of the Young Researcher's position)

1. Članica UL (UL member):

Fakulteta za gradbeništvo in geodezijo / Faculty of Civil and Geodetic Engineering

2. Ime, priimek in elektronski naslov mentorja/ice (Mentor's name, surname and email):

Nejc Bezak, nejc.bezak@fgg.uni-lj.si

3. Raziskovalno področje (Research field):

2.20 Vodarstvo (Hydrology)

4. Opis delovnega mesta mladega raziskovalca/ke (Description of the Young Researcher's position):

Vključuje morebitne dodatne pogoje, ki jih mora izpolnjevati kandidat/ka za mladega raziskovalca/ko, ki niso navedeni v razpisu za mlade raziskovalce.

slo:

Mladi raziskovalec oziroma mlada raziskovalka (MR) se bo usposabljal z raziskovalnim delom v okviru raziskovalnega programa P2-0180 Vodarstvo in geotehnika: orodja in metode za analize in simulacije procesov ter razvoj tehnologij. Program pokriva inženirske (tehniške) in naravoslovne vsebine, povezane z vodo in vodarstvom. V okviru dela na doktorski disertaciji in študiji na 3. stopnji bo MR sodeloval pri aktivnostih Unesco katedre za zmanjševanje tveganj ob vodnih ujmah (www.unesco-floods.eu) in drugih mednarodnih in domačih raziskovalnih projektih in strokovnih nalogah.

Prednost pri izbiri bodo imeli kandidati s poglobljenim znanjem s širšega področja hidrologije in željo po izvajanju eksperimentalnega dela (laboratorij ali/in terensko delo) in/ali razvojem naprednih modelov in statističnih analiz s tega področja. MR naj bi imel izkazano sposobnost za samostojno delo (samoiniciativnost), odlično znanje angleškega jezika (tako pisanje kot branje) in zanimanje za raziskovalno delo v naravi in/ali laboratoriju. MR bo deloval v krogu drugih mladih raziskovalnih sodelavcev in spoznal različne raziskovalne tehnike. Predviden je vpis ali na doktorski študijski program Grajeno okolje ali na program Varstvo okolja. Doktorska disertacija bo v dogovoru s kandidatom oz. kandidatko usmerjena ali v raziskovanje hidroloških procesov v naravnem okolju ali na reševanje inženirskih problemov s širšega področja hidrologije, oboje skladno s predznanji kandidata. Pričakovani profil MR je magistrska izobrazba na področju inženirskih znanosti (npr. vodarstvo, (okoljsko) gradbeništvo, inženirska geologija) ali naravoslovja (npr. uporabna fizika, uporabna matematika). Zaželeno je predznanje programskega jezika R (ali podobnih jezikov) in izkušnje z GIS orodji.

Tema doktorske naloge bo predvidoma usmerjena v področje uporabe zelene infrastrukture za obvladovanje tveganj povezanih z naravnimi nesrečami kot so poplave, suše, hudourniški izbruhi. Poudarek bo (glede na predznanja MR) na eni izmed naslednjih točk: i) eksperimentalno delo oziroma terenske meritve, ii) modeliranje oziroma statistične analize javno dostopnih hidro-meteoroloških podatkov, iii) razvoj in preskušanje uporabnosti in družbene sprejemljivosti izbranih zelenih ukrepov v povezavi z naravnimi nesrečami.

eng:

Young Researcher (MR) will be trained through research work in the framework of the Research Programme P2-0180 Water Science and Technology, and Geotechnical Engineering: Tools and Methods for Process Analyses and Simulations, and Development of Technologies. The Programme covers engineering (technical) and natural sciences aspects in the field of hydrology, water science and technology. As a part of the doctoral thesis and research conducted in the scope of the MR education the candidate will participate in the activities of the UNESCO Chair on Water-related Disaster Risk Reduction (www.unesco-floods.eu), and other international and national research and applied projects.

Preference will be given to candidates with in-depth knowledge of the broader field of hydrology and a desire to carry out experimental work (laboratory and/or field work) and/or to develop advanced models and statistical investigations in this scientific field. MR should have demonstrated ability for independent work (self-initiative), excellent knowledge of English (both writing and reading) and interest in research work in nature and/or laboratory. The MR will work in the circle of other young research associates and learn about various research techniques. Foreseen is the enrolment into the doctoral studies Built Environment or to Environment Protection. In agreement with the candidate, the dissertation will either focus on research of hydrological processes in natural environment or to solve engineering problems in the broader field of hydrology, both in accordance with the candidate's prior knowledge. Expected MR profile is a MSc degree in engineering sciences (e.g., water management, civil engineering, environmental engineering, engineering geology) or natural sciences (e.g., applied physics or applied

mathematics). Pre-knowledge of the R programming language (or similar) and experience with GIS tools are desirable.

The topic of the PhD thesis is expected to focus on the use of green infrastructure to manage risks related to natural disasters such as floods, droughts, and torrential outbursts. The focus will be (depending on the previous education and expertise of the MR) on one of the following points: i) experimental work or field measurements, ii) state-of-the-art modelling (small- or large-scale) or statistical analysis of available hydro-meteorological data, iii) development and testing of the applicability and social acceptability of selected green measures in relation to natural disasters.