

Prague, November 22, 2019

**Dean**

of the Faculty of Civil Engineering CTU in Prague, Thákurova 7, 166 27 Prague 6,  
welcomes applications for a position of:

**Junior Postdoctoral Researcher  
in the framework of the Operational Programme Research, Development and  
Education call “International Mobility of Researchers” P2K141**

Place: CTU in Prague, Faculty of Civil Engineering, Dep. of Hydraulics and Hydrology

Duration: 6 months

Contract type: Full-time

Expected starting date: 2 - 5/2020

Salary based on the conditions of the call covering the cost of living in the Czech Republic is 2.400 EUR brutto (app. 1.750 EUR netto) per month (plus family allowance 390 EUR brutto per month).

**Description of the research:**

- Your research will focus on the development of a real-time reconstruction procedure for rainfall mapping at city scale using path-integrated rainfall observations retrieved from microwave links, radio connections used within cellular backhaul.
- Several techniques for reconstructing rainfall spatial distribution from path-integrated observation of commercial microwave links have been developed during last decade. However, obtaining reliable rainfall gridded product in the real-time mode is still a challenge. The desired technique should be able to assimilate high number of observations from microwave link network and ground stations and provide in near real-time (delay max. 1 min) the rainfall gridded product with high temporal and spatial resolution (1 min / 500 x 500 m<sup>2</sup>). The method will be developed and validated on real dataset from the city of Prague containing observations from approx. 800 CMLs and 23 rain gauges.
- You will be part of the interdisciplinary research team ([www.tel4rain.cz](http://www.tel4rain.cz)) consist of hydrologists, urban water engineers, radio engineers and IT specialists as well as with relevant stakeholders (e.g. City of Prague and T-Mobile CZ,). The position requires good interpersonal skills with the desire and the ability to work collaboratively and effectively in a team environment. The candidate will be encouraged to collaborate actively with our international partners and expected to present the results on a relevant international scientific conference and/or in a

peer-reviewed journal.

**Conditions of the contract:**

- Candidate is a junior postdoctoral researcher possessing the degree of Ph.D. or equivalent degree based on the ISCED (International Standard Classification of Education) in the relevant discipline.
- Candidate must be a researcher from a foreign country complying with the programme definition, or a Czech researcher who has spent at least 2 years during the period of past 3 years doing research under a minimum of half-time contract of employment or Ph.D. studies (or equivalent) abroad.
- Candidate is expected to show a publication record of at least 2 publications in peer reviewed journals indexed in the Web of Science over the period of the past 3 years.
- The ideal candidate must have a recent Ph.D. degree in applied mathematics, geostatistics, data analysis, meteorology, hydrology, remote sensing or similar discipline. Programming skills are required (preferably R or Python), academic skills proven by relevant publication record are desired.

**Required documents:**

- Application for the position
- Professional CV including list of publications
- Copies of the education certificates
- Documents proving employment in research or Ph.D. studies abroad
- Motivation letter
- Consent with the processing of personal data for the purposes of this call

**Contact:**

The application and required documents can be sent to Ms. Eva Šestáková (e-mail [eva.sestakova@fsv.cvut.cz](mailto:eva.sestakova@fsv.cvut.cz)) until December, 22nd. 2019. **Write the sign P2K141.**

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