

Vacancy Announcement: PhD/Postdoc position in “Multi-scale Modelling of Water Resources in China”

Department/faculty: Civil Engineering and Geosciences

Working hours: 38 hours per week

Contract: 4 years

Salary: €2042 to €2612 per month gross

Project description

The range of space-based observations valuable for studies in water resources management has steadily increased over the past decade, and now includes measurements of total water storage (GRACE), soil moisture (Metop, SMOS), precipitation (TRMM), and others. While there is great potential in these data sets, much of what can be achieved remains unrealised because the various measurements have not been sufficiently integrated. This project will seek to address this by assimilating data from many different satellite missions with in-situ data and regional hydrology models to create an improved assessment of basin-scale water resources. The region of interest will be selected areas in northern China, where accurate knowledge of the water resources is critical to the protection of these ecologically sensitive areas. The project is supported by the NWO Joint Scientific Thematic Research Programme (JSTP). The work will be conducted as a joint research effort with Tsinghua University in Beijing, and the Water Resources Management group at CiTG. As such, the student will interact closely with the various co-investigators of the project, including potential travel to China.

Geoscience & Remote Sensing at TU Delft

The Department of Geoscience and Remote Sensing is one of the six departments that comprise the Faculty of Civil Engineering and Geosciences (CiTG) at TU-Delft. The department conducts research across a broad range of disciplines related to the Earth sciences, such as 1) Optical, Laser and Acoustic Remote Sensing; 2) Mathematical Geodesy and Positioning; 3) Physical and Space Geodesy; and 4) Atmospheric Studies. The project will take place within the Physical and Space Geodesy (PSG) section, which is dedicated to the observation, modelling and analysis of static and time-varying gravity fields, as well as to the integrated modelling of space-geodetic data, in order to assess the physics and dynamics of the Earth. The section is truly international in composition and is involved in a broad range of research projects, including novel approaches for global and regional gravity field modelling; the processing and analysis of spaceborne, airborne, and terrestrial geodata sets; and the application of modern mathematical and statistical theories.

Requirements

Applicants are expected to have a university degree (MSc) in geodesy, remote sensing, hydrology, water resources management, or another field related to the project goals. Preferred candidates will have experience in one or more of the following areas: satellite data processing, computer programming (Fortran, C/C++), hydrological modelling, probability/statistics, and estimation theory. Applicants must also be proficient in spoken and written English. While the preference for the position is for a PhD student, qualified postdoctoral candidates will also be considered.

Conditions of employment

TU Delft offers an attractive benefits package, including a flexible work week, free high-speed Internet access from home (with a contract of two years or longer), and the option of assembling a customised compensation and benefits package (the 'IKA'). Salary and benefits are in accordance with the Collective Labour Agreement for Dutch Universities.

Information and application

For more information about this position, please contact Dr. Brian Gunter, phone: +31 (0)15-2782565, e-mail: b.c.gunter@tudelft.nl. To apply, please send your CV, a statement of purpose, a list of courses in the B.Sc. and M.Sc. Program including marks, and the names and contact information of at least two references to Dr. Gunter, b.c.gunter@tudelft.nl. Review of the applications will begin September 1, 2012; however, applications will still be accepted after this date until the position is filled. When applying for this position, please refer to vacancy number CITG12-19. To learn more about the Department of Geoscience & Remote sensing, please visit www.grs.citg.tudelft.nl.