PhD Research Position in Using Remote Sensing Data for Coastal Processes and Morphology
Reference: PhD-HYST 0817.11
Starting date: Immediately
Length of contract: 1 year (renewable, up to 3 years based on annual evaluation)

Research description: The Department of Hydrology and Hydraulic Engineering of the Vrije Universiteit Brussel (VUB) and the Earth & Life of the Université catholique de Louvain (UCL) invite applications for a PhD position to work on applying Remote Sensing data for coastal processes and morphology starting immediately. The successful candidate will participate in a research project, "RS4MoDy - Remote sensing data for investigating the morphodynamics of the Belgian multi-barred macro-tidal beach"', funded by the Belgian Science Policy Office (BELSPO) and work in a multidisciplinary team-working environment.

In macro-tidal coastal settings such as the Belgian coast, beaches are commonly characterized by multiple intertidal bars which play an important role in protecting the subaerial beach from storm erosion by reducing wave energy at the coast. This research project is to investigate the morphodynamics of macro-tidal barred beach from short (storm event) to long-term (>25-years), and to address the relative roles of meteorological-marine forcing factors in driving bar behaviour and evolution. The main objectives are: (1) to analyze historical and contemporary (up to 20 years) coastal morphology using a broad range of remote sensing data (e.g. LiDAR, aerial images, UAV surveys); (2) to investigate meteo-marine forcing and response parameters; (3) to analyze and model how the intertidal bars are structured in space and time based on a statistical analysis; (4) to develop a conceptual model of barred beach morphodynamics incorporating external forcing factors.

Required qualifications: The candidate holds a master degree in Physical Geography, Oceanography, Earth System Science, Engineering, or related fields. Additional background in coastal geomorphology and hydrodynamic studies as well as remote sensing processing will be an asset. Experience of appropriate data analysis and modeling software (e.g. MATLAB) is essential to the position. The candidate shall be able to carry out research investigation independently, and willing to work in a multidisciplinary team. He/she should be proficient in English, have excellent scientific writing, planning and communication skills, and be an enthusiastic team player.

To apply: Interested individuals should **send your application before October 15, 2017.** Applications must include: (1) motivation letter; (2) curriculum vitae; (3) study transcript of your latest degree; and (4) names and contact information for three referees.

Review of applications will begin immediately and continue until the position is filled. Direct application and enquiries should be sent via email to Prof. Dr. Margaret Chen (Margaret.Chen@vub.ac.be) and Prof. Dr. Patrick Bogaert (patrick.bogaert@uclouvain.be) with subject heading "PhD-HYST 0817.11".