Vacancy for a Remote Sensing Researcher

Project: "Development of a Garden Monitor for Flanders based on Remote Sensing"

The *Division Forest, Nature & Landscape* and the *Spatial Applications Division Leuven* (SADL) of the Department of Earth & Environmental Sciences of KU Leuven are looking for a research associate to develop a spatially-explicit reference garden map for Flanders based on remote sensing data. This work will be executed within the frame of a recently accepted STEREO BELSPO project. Garden information will be derived from orthophotos, airborne LiDAR data and available satellite imagery. Specific attention will be on exploring the added value of Pleiades and Sentinel2 satellite imagery using sub-pixel and object-based classification techniques. The integrated use of aerial and satellite observations will be developed in a proof-of-concept study at a case city scale (i.e. Leuven) and later on upscaled to the rest of Flanders. The work will be performed in close collaboration with the Informatie Vlaanderen Agency and the Environment, Nature and Energy Department of the Flemish Government.

Rationale

The Flemish minister of Environment expresses in several of her policy documents the importance of the green network as a fundamental condition for the local environmental quality of life (LEQL). Gardens, or private green spaces, are strategic spaces for the LEQL. To optimize these gardens' contribution to LEQL, environmental and spatial policy requires spatially-explicit garden data for policy preparation, execution and evaluation. Until now, such data is missing for Flanders. The aim of this project is as such to make an attempt to provide this information via remote sensing.

Tasks

Your tasks are:

- perform the remote sensing analysis (including image pre-processing) required to develop a garden reference map
- explore the specific potential of Pleiades and Sentinel2 imagery for characterizing gardens
- coordinate and assist in collecting in situ reference data on garden location and characteristics
- closely collaborate with project partners
- transfer your expertise in geo-ICT to the rest of the research team
- communicate project results to BELSPO, project partners and relevant stakeholders and on scientific conferences, through presentations, reports and articles

Profile

- You hold a MSc or PhD degree (or equivalent relevant experience) in bio-science or civil engineering, geography, earth observation/remote sensing, geomatics or closely related field
- You have experience and proven expertise in remote sensing data management and data processing and related software packages
- You are responsible, can work both independently and in a team, show initiative and seize opportunities
- You have good written and oral communication skills in English
- You can get things done

Offer

You start with a 1-year contract, possibly renewable after a positive evaluation. The salary is competitive and the starting date negotiable (but not earlier than January 2018).

[For those interested: the option to perform a PhD within the frame of this contract is not excluded, yet depending on securing additional funding]

Description of the Research Units

KU Leuven is a university research and education institution with an international character. The KU Leuven Department of Earth and Environmental Sciences has the mission to carry out state-of-the-art scientific research with respect to the functioning of geo- and ecosystems at different spatial and temporal scales, including the interaction between humans and the environment and the sustainable management of natural resources.

The Forest, Nature and Landscape division at KU Leuven has a proven track record in research with respect to the sustainable management of natural resources and functioning of natural and manmade ecosystems at different spatial and temporal scales. The group works on natural habitats, forests, agricultural land and urban green and their ecosystem services, as well as on the development of methodological tools needed to analyse and quantify science in these fields, such as Geographic Information Systems (GIS), Decision Support Systems (DSS), multi-criteria analysis, Life Cycle Assessment (LCA) and remote sensing.

The Spatial Applications Division Leuven is a long standing cooperative initiative of several research groups of the Department of Earth & Environmental Sciences of KU Leuven. The overall topic is Geographic Information Science and Technologies (GI S&T) and their applications for physical land management and socio-economic assessments.

For further information please contact

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Application procedure

Application deadline 1/12/2017

Application via the KU Leuven jobsite: https://icts.kuleuven.be/apps/jobsite/vacatures/54359959