The Skolkovo Institute of Science and Technology - Skoltech (Moscow, Russia) and the Bruno Kessler Foundation - FBK (Trento, Italy) have undersigned a collaboration to jointly finance a PhD position in the Geospatial and Geoinformatics fields. They are currently looking for a motivated

PhD candidate in 3D scene understanding and classification

In the past years different activities were conducted related to 3D scene understanding, image classification and object extraction. Scene analysis and point cloud classification is more and more becoming a very important and crucial task with applications in urban planning, space, precision farming, robotics, augmented reality, etc.
Recent advances in machine learning, photogrammetric image analysis and computer science have proven that complex real-world tasks can be automatically performed by a computer employing dedicated training methods and training data.
Starting from these considerations, the research should focus on innovative understanding and classification methods applicable to images and 3D point cloud. The research should formulate the problem such that efficient learning and inference are possible and in order to detect object and extract information useful e.g. in map production/update, semantic enrichment, autonomous driving, etc.

Skills and requirements

- Master degree in geoinformation, computer or information sciences
- Knowledge of image analysis, photogrammetry and point cloud processing
- Experience and understanding of machine learning, neural network, deep learning
- Knowledge of programming languages
- Willingness to scientific research
- Intermediate/good written and spoken communication skills in English

The offer

- Opportunity to work in Skoltech within innovative, international, motivated and successful teams
- Possibility to spend a research period in FBK Trento
- Possibility to enroll in the PhD program of Skoltech
- Flexible working hours
- Workplace with various facilities, including cafeteria, mensa, car parking, welcome office support, etc.

- A stimulating and friendly working environment
- A position for 3 years
- A competitive salary based on the Russian regulations for PhD candidate

Application
Candidates are required to submit their application to Anton Ivanov - A.Ivanov2@skoltech.ru - including the following attachments (.pdf format):

- detailed CV
- letter of motivation

Application deadline: September 15th, 2017
Start date: November, 2017

Do you enjoy working in a scientific environment at the leading edge of research in photogrammetry, 3D imaging and geospatial data processing? Are you looking forward to collaborate with colleagues across wide national and international networks? Do you want to work with international researchers towards excellent solutions applied to real life problems? Are you interested in developing new methods for automated image and point cloud segmentation and classification?
If the answers to these questions is yes, then this job is for you!

The PhD will be **jointly** supervised by Skoltech and FBK senior researchers. The student will have the possibility to spend part of her/his research activities in Moscow and in Trento.

The **Skoltech Space Centre** (http://crei.skoltech.ru/space) conducts research in advanced space technologies and remote sensing. The remote sensing direction is focusing on utilization of the latest machine learning technologies in conjunction with large amount of data gathering from Russian, European and American remote sensing satellites. Students are encouraged to apply their skills and knowledge either in state enterprises or create innovative start-ups.
The **FBK-3DOM research unit** (http://3dom.fbk.eu) comprise staff members working at international level on R&D projects supported by European and international programmes, grants and funding sources, in collaboration with other research parties, companies or public administrations.

For further information you can contact:

- Anton Ivanov, Skoltech-Space: A.Ivanov2@skoltech.ru
- Fabio Remondino, FBK-3DOM: remondino@fbk.eu