

The University of Applied Sciences and Arts Western Switzerland Valais (HES-SO Valais-Wallis) has over 2,000 students in 9 degree programmes. With its 7 research institutes, it contributes effectively to the innovation, the economic and social development and the creation of jobs in the Valais.

Career >○<

Post-doc in Real-time Hardware-accelerated Photogrammetry at HES-SO Valais Systems Engineering, joint supervision with EPFL-DHLAB

Digital photogrammetry is a costly operation from a computational resources perspective. In the ScanVan project, we aim at digitizing in real-time a whole city with an embedded system integrated into a vehicle. To achieve this goal with those reduced space and power requirements, a network of FPGAs, CPUs and GPUs will be used to implement new parallel photogrammetry algorithms that produce a 3D point cloud.

Tasks

The research will center on the creation of a complete parallel digitization pipeline embarked onto a vehicle. This will consist in the electronic design of the platform, the integration of a special camera and the implementation of novel photogrammetry algorithms on FPGA and/or GPU. The candidate must be highly motivated, independent yet able to work closely with our partners at EPFL-DHLAB.

Requirements

Master degree in computer science or electrical engineering with a strong interest in highperformance implementation of algorithms. Prior experience with FPGA and electronics is required, GPU programming is a strong plus. Fluent spoken and written English, French would be an advantage.

Context

This research will take place within the DATA research group. Part of the University of Applied Sciences Western Switzerland (HES-SO Valais-Wallis) in Sion, the group is active in data processing techniques, electronics and high-performance computing. Topics of interest include acquisition and processing of data under limited resources. The position will be funded by the Swiss National Science foundation.

Contract detail

- 36 months
- Flexible employment percentage
- Starting date: April 2017
- Salary according to the HES-SO Valais standards
- Work location is Sion, Switzerland, among the beautiful swiss Alps.

Interested candidates should email a CV and a brief statement describing how their research interests and competences relate to the position and arrange two letters of recommendation to Prof. Pierre-André Mudry (mui@hevs.ch) where further information on the position may be obtained. Evaluation of candidates will begin on Feb. 15th 2017 and continue until the position is filled.