PhD positions in Computer Vision /3D Animation/Simulation and Machine Learning

MIRALab@CUI at University of Geneva is looking for several PhD students to model an intelligent 3D digital expert surgeon that can analyse the gestures of a real learning surgeon and teach her/him how to do the right gestures. A specific data set will be developed to allow the digital surgeon to know at each moment what are the right surgical gestures to perform. This project is done in collaboration with the hospital of Geneva (new center in medical VR) and two companies.

We invite candidates in areas of A.I., Computer Vision, or Computer Graphics to apply. Candidates with strong knowledge in one of the below fields are welcome to apply.

1. **Computer Vision**: to model the perception and the understanding of the gestures of the real surgeons in VR setting
2. **Computer Graphics**: to model the digital surgeon's gestures and behavior in response to the real learning surgeon working in VR
3. **Machine Learning**: to model appropriate semantic responses how to surgeon a patient according to a data set of skilled surgeons

Required qualifications

Applicants must earn a MSc in computer science or computer engineering. Candidate with a PhD will also be considered as postdoc. Candidates must demonstrate strong potential for excellence in Research in computer science.
Candidates must have a strong background in one or several of the following areas:

- machine learning,
- scene perception
- spatio-temporal and semantic representation
- 3D Human Modelling and Animation

Excellent programming and software development skills are required, in particular knowledge in OpenCV, MATLAB, object-oriented programming, UML, C sharp, C++ would be appreciated. Please provide a detailed CV with photo, two references with contact details, availability date, and a motivation letter explaining what contribution you could bring to this project.Salary is according to PhD scale at University of Geneva (approx. 4000 Swiss Francs a month plus social benefits.

Please send applications to Prof Nadia Thalmann at thalmann@miralab.ch.