

PhD position in computer graphics and human-computer interaction at MIRALab, University of Geneva, Switzerland

MIRALab at the University of Geneva offers a PhD position in the field of computer graphics and human computer interaction. The research directions of particular interest include but are not limited to:

- Computer animation
 - Affective computing
 - Emotion modeling and recognition
 - Human behavior modeling
 - Computer vision
 - Computer graphics and 3D engines
 - Human-computer interaction
 - Decision processes
 - Virtual reality
 - Mixed reality
 - Human robotics
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The proposed PhD project, under the supervision of Professor Nadia Magnenat-Thalmann (https://en.wikipedia.org/wiki/Nadia_Magnenat_Thalmann), will develop computational methods for behavior simulation and human computer interaction.

The research will be experimental, using a 3D scanner and virtual humans, and will involve controlled user studies as well as data collection in mobile daily-life settings. In addition to experimental skills, the work will require to develop a thorough understanding of human vision, the design and implementation of prototype systems and interfaces, as well as statistical data analysis techniques.

Applicants should email the following to (jobs@miralab.ch). To apply until position filled:

- A complete CV with photo
- A motivation letter
- Country of citizenship and date of availability

Applications without all of elements above will not be considered. Applications received after the due date may be considered, but priority will be given to applications arriving by the due date.

The MIRALab team at the University of Geneva offers a highly collegiate and stimulating environment for doctoral research training. The successful candidate will join an ambitious research group that is at the forefront of these emerging research areas. The candidate will be expected to contribute to the strong profile of the group by participating in the preparation and publication of research results at the level of international excellence in computer graphics and human-computer interaction.

We invite applications from enthusiastic individuals, who are able to work independently and have an excellent first degree in Computer Science or a related field relevant to the proposed research, and very good knowledge of computer vision or human-computer interaction. The studentship is not restricted by nationality. Interested applicants are advised to consult previous work done by the group.

PROJECTS

The successful candidates will work on one or both of the following EU projects:

1. ACTIVE@HOME

This project proposal aims at providing an intervention program to increase physical activity of older adults and promote fall prevention, while motivating the users through captivating and challenging multi-player ExerGames. The user will be able to choose the type of exercise that suits him/her best from sequences of games composed together to create workouts, dance exercises based on traditional dances from different European countries or Tai Chi training, all with social capabilities to foster community engagement and enhance cultural and cognitive aspects. All exercises will be monitored using available motion sensors, with special focus on inertial sensors, therefore allowing and promoting the use of the smartphone as the main sensor. The use of other common sensors, like Kinect, will also be considered. The project will also include the development of a specially designed sensor featuring an IMU that can be attached to specific parts of the body to allow proper and accurate tracking of all body movements. The use of multiple sensors simultaneously may also be considered for a better evaluation of body movement. These IMUs, being cheap and easy to use, will be provided whenever there is no possibility to use any other sensor.

2. NOTRE

The vision of NOTRE is to develop a network that will strengthen and enhance the potential of the newly established Social Computing Research Centre (SCRC) at the Cyprus University of Technology (CUT) for stimulating scientific excellence and innovation capacity in the area of social aspects of computing. NOTRE proposes an interdisciplinary approach towards the close network collaboration between SCRC of CUT, a research active university in a low-performing member state, and four internationally-leading counterparts specializing in: (a) online social

networks and their analysis; (b) entertainment, games, virtual reality and educational technologies; (c) Social Computing for social inclusion; and (d) Social Computing and social change. SCRC through this proposal does not only aim to access the core research groups of the leading counterparts, and their collaborators, but also recognizes the multidisciplinary of the field and will try to establish itself as an intermediate between them. The NOTRE network will follow a series of interlinked activities, such as short term staff exchanges, expert visits and short-term on-site training, workshops, conference attendance, organization of joint summer school type activities, and dissemination and outreach activities. Such activities with worldrenowned EU partners (IMDEA; MIRALab of Universite de Geneve; Institute of Computer Science of the Foundation for Research and Technology Hellas -FORTH-ICS; and the department of Political Science of the University of Dusseldorf -UDUS), will be instrumental for significantly strengthening SCRC's research efforts, enhancing the network's innovation capacity and research profile, and stimulating scientific excellence in the emerging multidisciplinary field of Social Computing.

UNIVERSITY OF GENEVA

The University of Geneva is a public research university located in Geneva, Switzerland. It was founded in 1559 by John Calvin, as a theological seminary and law school. It remained focused on theology until the 17th century, when it became a center for Enlightenment scholarship. In 1873, it dropped its religious affiliations and became officially secular. Today, the university is the second-largest university in Switzerland by number of students. In 2009, the University of Geneva celebrated the 450th anniversary of its founding. At least 40% of the students come from foreign countries. UNIGE is a member of the League of European Research Universities (including academic institutions such as Amsterdam, Cambridge, Heidelberg, Helsinki and Milan) the Coimbra Group and the European University Association.

GENEVA, SWITZERLAND

Geneva is the second most populous city in Switzerland (after Zürich). Geneva is a global city, a financial center, and worldwide center for diplomacy due to the presence of numerous international organizations, including the headquarters of many of the agencies of the United Nations and the Red Cross. Geneva is the city that hosts the highest number of international organizations in the world. It is also the place where the Geneva Conventions were signed, which chiefly concern the treatment of wartime non-combatants and prisoners of war.