PhD position: Large Scale Marker-less Human Motion Capture

Project

Applications are invited for one fully-funded PhD, of duration up to five years, within the *Computer Vision and Perception Lab* (CVAP) at the Royal Institute of Technology (KTH) in Stockholm, starting in November 2008. This research position, under the supervision of Dr. Josephine Sullivan and Prof. Stefan Carlsson, will be funded by *Stiftelsen för Strategisk Forskning*.

The candidate will join the collaboration between CVAP and the Stockholm based, digital media and sports analysis company *TRACAB*. The latter has a real time player tracking system that estimates each player's position on the football pitch throughout a game. It is employed regularly on "Allsvenskan" and "Champions League" games (check out `http://zoom.sportbladet.se/` to see their results). The project's ambitious goals is to build a 3D reconstruction of each player's motion throughout a whole football game from the tracking and video data. It is hoped that initially the PhD candidate will explore the use of machine learning techniques to the problem of marker-less human motion capture. The main challenge will be the amount and diversity of the data to be processed.

The successful candidates will be based at CVAP, one of Sweden's leading computer vision laboratories. The laboratory currently undertakes research on object recognition, active vision, robotics, multi-target tracking and marker-less human motion capture. Detailed information about the department and its research areas can be found at `http://www.csc.kth.se/cvap` and further information about the research project you will be working on can be found at `http://www.csc.kth.se/~sullivan/actvis`.

Qualifications

Applicants for the PhD position will need to have a good masters or basic degree in computer science, engineering, physics, mathematics or another related area and be able to demonstrate a strong mathematical background. A competency in computer programming is expected and a clear interest in computer vision and/or machine learning is also desirable. Only those fluent in both written and spoken English will be considered for the position. Obviously, an interest in sport would be helpful though not necessary!

KTH aims to employ a diversity of competences, and thus welcomes applicants who will add to the variety of the University, especially with respect to its gender structure.

Employment

This graduate student position extends over maximally five years, including 20% of departmental duties (e.g. teaching). The salary follows the guidelines provided by KTH, see **Doktorandsektionen, KTH**. The starting date is open for discussion, though ideally we would like the successful candidate to start as soon as possible.

Form of employment: Time limited
Start date: According to agreement

Application

If you feel you fit the profile we are looking for and would be interested in the PhD position, please apply. The application should contain a covering letter where you outline your reasons and motivations for conducting PhD studies within this project. A CV, copies of relevant exams, grades, master thesis work or publications, as well as contact information to three reference persons, should be provided. Applications from students that are close to finishing a master level education will also be evaluated. Please note that all the material submitted should be in English, except for official documents.

Application deadline: 2008-09-26
Employer's reference number: ......

Applications by snail mail should be sent to:
CSC att. Susanne Bergman, KTH, 100 44 Stockholm.

Applications via email to: susanneb@csc.kth.se   (CV, etc should be sent as an attachment if the application is sent electronically.)

Contact(s)

Queries concerning PhD studies at KTH can be directed to:
Eva-Lena Åkerman, personnel office
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Email: `ela@csc.kth.se`

Queries concerning the project content can be directed to:
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