

Research Grants for PhD students from the China Scholarship Council

Information Form (please read the guidelines carefully on the website www-csc.utt.fr)

Supervisor's name : Given names :

Status (prof., assistant prof., ...) :

Laboratory : Website address :

Institution : Website address :

Scientific competence of the supervisor:

Dr. Omar Tahri was born in Fez, Morocco, in 1976 got his Masters in photonics, images and system control from the Louis Pasteur University, Strasbourg, France, in 2000 and received his Ph.D degree in computer science from the University of Rennes, France, in March 2004. In June 2014, he obtained the Habilitation à Diriger des Recherches (HDR) from Blaise Pascal University. His research interests include robotics and computer vision, especially visual servoing.

Two major publications in the field proposed for the PhD :

1.
2.

Website address of the personal page :

Supervisor's email :

Description of the research work proposed for a PhD **Topic # (see list) :**

Title :

Subject :

Nowadays, multi-robots systems are an important research area in robotics. Among multi-robots systems, multi arms platforms are of particular research interest due to complexity of tracking, controlling and optimizing the articulated mechanisms. From a practical point of view, it is known that a multi-robot system can perform tasks that are difficult for one single robot like manipulating/working on large objects or on non-rigid objects. For manipulation tasks, robots can be equipped with different kinds of sensors: Cameras onboard or eye-to hand, omnidirectional or conventional, mono or 3D, Force sensors, Tactile. Those sensors provide at the same time redundant and complementary information about objects to be manipulated and robots. The provided data should be used effectively for the control, but also for recovering non-measurable information. For instance, object to be manipulated are not always well know, and recovering information about their weigh, center of gravity, their shapes and about the contact between the fingers and the object (friction parameters for instance) would help for computing accurate control to be applied to the robotic system. The PhD work will then focus on developing multimodal control and estimation using different kinds of sensors: visions sensors, force and tactile sensors. The experimental validations will be achieved using a bi-arm Kuka system equipped with shadow hands.

Keywords :

Expected collaborations :

Background required from the applicant :

Existence of a PDF file detailing the proposal ("yes" or "no") :

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