

ED STIC - Proposition de Sujets de Thèse pour la campagne d'Allocation de thèses 2011

Titre du sujet :

Mention de thèse :

HDR Directeur de thèse inscrit à l'ED STIC :

Co-encadrant de thèse éventuel :

Nom :

Prénom :

Email :

Téléphone :

Email de contact pour ce sujet :

Laboratoire d'accueil :

Description du sujet :

In this thesis, we will develop novel algorithms which will allow the capture, display and manipulation of urban environments using image-based techniques.

The idea will be to develop new algorithms allowing image-based rendering using a small number of images, without complex capture calibration and measurement steps. The goal is to allow efficient and high-quality display of these environments, as well as their ability to change lighting conditions easily. An additional constraint will be the ability to use the resulting algorithms in high-resolution, real-time constrained settings of an immersive environment, such as the immersive space we have at INRIA Sophia-Antipolis (see for example <http://www-sop.inria.fr/revs/Basilic/2011/CVCCHD11/> for example research in this setting), but also on low-end devices such as tablets or smart phones.

This project is in the continuity of our approach for using Virtual Reality in therapy (see

<http://www-sop.inria.fr/reves/NIEVE>) and will involve integration of these techniques in a complete system including multi-sensory audio-visual display.

URL : <http://www-sop.inria.fr/reves/Stages/2011/PhD-Urban-Environments.pdf>

English version:

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