

Semantic labeling of visual objects with 2D-3D approaches

Mots clés :

- **Directeur de thèse** : titus ZAHARIA
- **Co-encadrant(s)** :
- **Unité de recherche** : Advanced Research TEchniques for Multidimensional Imaging Systems
- **Ecole doctorale** : École Doctorale Informatique, Télécommunications, Électronique de Paris
- **Domaine scientifique principal**: Divers

Résumé du projet de recherche (Langue 1)

This thesis tackles the issue of still image object recognition. The principle of the proposed approach consists of exploiting categorized 3D models repositories in order to identify unknown 2D objects, based on 2D/3D matching techniques. Notably, we use 2D/3D shape indexing methods, where 3D models are described with the help of a set of 2D views. Thus, a 3D model can be compared with a 2D object extracted from a 2D image. In order to associate a semantic label to a 2D object, the most similar 3D models are retrieved from the categorized repository. A voting procedure is used in order to identify the most probable categories. A dedicated, web-based GUI has also been elaborated and developed in order to integrate the proposed approaches.