



## **AVIS DE SOUTENANCE EN VUE DE L'HABILITATION A DIRIGER DES RECHERCHES**

Discipline : Sciences et Technologies Industrielles

**Chetouani Aladine, Maitre de conférences**

présentera ses travaux en vue de l'habilitation à diriger des recherches

**Le mardi 6 octobre à 14 heures**

**Lieu : Amphi Turing, Polytech'Orleans – site Galilée, Orléans**

devant le jury constitué par les personnalités suivantes :

- **P. Lina Karam, IVU Lab (Arizona) and LAU (Liban), rapporteure**
- **P. Christine Maloigne-Fernandez, XLIM, Poitiers, rapporteure**
- **DR. Frédéric Dufaux, L2S, Paris, rapporteur**
- **P. Patrick Le Callet, LS2N, Nantes, examinateur**
- **P. Jean-Luc Dugelay, Sophia-Antipolis, Nice, examinateur**
- **P. Bruno Galerne, IDP, Orléans, examinateur**
- **P. Rachid Jennane, I3MTO, Orléans, examinateur**

Résumé des travaux :

The rapid development of digital technologies allows easier access to multimedia contents (image, video and 3D) with different applications (streaming, video surveillance, VOD and computer vision) through different supports (TV, computer, Smartphone, PAD, etc.). However, the latter are often subject to various artifacts (blocking, blur, ringing, etc.) since the general acquisition pipeline is often composed of several treatments (acquisition, processing, compression, transmission, etc.) that can potentially impact the user's perception. It is thus essential to develop efficient tools that efficiently assess the impact of these treatments on the perceived quality. To meet this critical need, significant efforts have been made to evaluate efficiently the quality of 2D images, stereoscopic images, videos and 3D meshes, which is essential in different domains (biometrics, medical imaging, etc.). In this context, my research mainly focuses on developing quality assessment methods for multimedia contents based on the use of deep learning models as well as the exploitation of some HVS mechanisms. More precisely, I develop quality metrics for 2D images and 3D meshes that integrate visual attention in order to focus on the most perceptually relevant regions.