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**Intitulé du stage / Internship title** : Light-efficiency calculation tool for Augmented Reality glasses

**Fonction du poste / Job title** : Master2 Intern

**Descriptif et missions du stage / Internship description**

Diffraction Augmented Reality glasses are based on multi-layers of waveguides provided with diffractive flat optical components. The combination of several waveguides, multiple colors and angular incident bands on structures diffracting multiple modes makes it difficult to calculate an overall performance of the system in terms of light-efficiency and colorimetry. The goal of the internship is to develop tools with electromagnetic simulation packages (Comsol), matlab and Zemax in order to quantify the color triangle and light-efficiency of this complex system.

**Mots clés / Keywords** : Nanojet, AR glasses, Diffraction

**Thématiques associées / Associated thematic** : [Sélectionner la thématique dans la liste déroulante]

**Sous-thématique(s) / Sub-theme(s)** : Human Computer Interaction

**Profil du candidat / Candidate profile** :

Master 2 student at an engineering school or university  
 Specialization in Optics  
 Inquiring mind, inventive, passionate  
 Skills in prototyping applications on PCs or embedded platforms  
 Fluent in English

**Compétences attendues / Required skills** :

Understanding of electro-magnetism and diffraction theory. Simulation tools : Comsol, Development skills, Matlab, Zemax.

**Anglais courant / Fluent english** : Oui

**Durée et période du stage / Internship duration and dates**

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Stage ref: RI-IML\_2019-HCI-009

Durée du stage / Internship duration: 6 mois

Date de début souhaitée (ou connue) / Estimated starting date : 2/1/2019

Date de fin prévisionnelle (si connue) / Estimated end date : 8/1/2019

**Lieu du stage / Internship place** : Rennes