

proposition sujet de mémoire **2013 - 2014**  
MASTER Recherche 2<sup>ème</sup> année  
Management  
spécialité « GENIE INDUSTRIEL »

Titre  
**Is Google SketchUp a CAD software ? 3D modelers  
study in a engineering context**

Contenu du sujet proposé :

Nowadays, more and more software are launched on the market to allow the creation of 3D models. These softwares come from various communities (architecture, gaming, engineering, manufacturing...) and offer more and more functionalities. Hence they covers larger domain than they were primarily intended for, and there's now a real market overlapping that push people to circumvent their initial use. As an example, a recent master thesis dissertation have shown that a major problem faced in the context of the FabLabs is the lack of skills in manipulating CAD software while preparing the models. However, there's a significant range of solution to produce a 3D model that do not integrate a CAD software.

In parallel, we can witness a convergence toward new peripherals (e.g. smart devices) and interactions modes that blur a little more the frontiers between disciplines and between the status of the « designers » : professional or public. Few works arise that encourage the use of tactile interactions with 3D editing software. This orientation is fully compatible with some of the trends in collaborative design : integrating non-engineers in the design process and allow advanced manipulation of virtual prototype out of the office.

This study aim at defining a typology of past and existing 3D modelers, based on a selection of software. Then the student will define metrics to allow evaluation of a 3D modeler appropriateness to a specific design task. Of course, we'll have to interrogate the notion of « designer » and set the boundaries of what 3D design is about. In the end, the overall work could give a good insight of what the future 3D CAD software should looks like.

Selon le sujet proposé, souhaitez-vous que l'élève suive un (ou plusieurs) cours optionnel bien spécifique ? si OUI lequel(s)

Pour mener à bien le stage, il est souhaitable de suivre en «cours optionnels» l'enseignement suivant :

- titre du cours, enseignant, lieu, éventuellement dates (période /nombre d'heures...)

Responsable(s) : C. Masclet  
☎ 04.76.82.70.10  
Fax.  
Mel cedric.masplet@g-scop.eu  
Laboratoire : G-SCOP  
Adresse complète  
☎  
Fax.  
Mel