



INTERNSHIP PROGRAM FOR INTERNATIONAL STUDENTS

INTERNSHIP SUBJECT FORM

Name of the Host Laboratory	LIX, Laboratoire d'Informatique de l'École Polytechnique
Website of the Host Laboratory	http://www.lix.polytechnique.fr/~maks/
Research Group	GeoVic
Internship Supervisor	Maks Ovsjanikov
Internship Subject	Deep Learning for 3D shape analysis
Student's level	<input type="checkbox"/> Advanced Undergraduate Students (3 rd or 4 th year) <input checked="" type="checkbox"/> Master's students (1 st or 2 nd year) <input checked="" type="checkbox"/> PhD students
Proposed Duration	<input type="checkbox"/> 3 months <input type="checkbox"/> 4 months <input checked="" type="checkbox"/> 5 months <input type="checkbox"/> 6 months
Prerequisites	Solid foundations in - Computer Vision and Image Processing - Machine Learning - Geometry Processing, and 3D shape analysis - Differential Geometry, Fourier analysis, Numerical Linear Algebra
Internship description (max. 15 lines)	The goal of this project is to develop tools for the analysis of large-scale 3D shape collections, by designing novel Deep Learning techniques capable of processing and manipulating geometric data. The ultimate goal is to design tools for shape labeling, recognition, and matching across geometric data in 3D. The focus of this internship will be to develop Deep Learning methods capable of handling real world noisy data to address common problems such as non-rigid shape correspondence and object detection. A solid math foundation would be particularly important in this project.

The boxes marked with cross implies eligible