



## INTERNSHIP PROGRAM FOR INTERNATIONAL STUDENTS

### INTERNSHIP SUBJECT FORM

Name of the Host Laboratory	LIX, Ecole Polytechnique
Website of the Host Laboratory	<a href="https://www.lix.polytechnique.fr/">https://www.lix.polytechnique.fr/</a>
Research Group	STREAM
Internship Supervisor	Maks Ovsjanikov: <a href="http://www.lix.polytechnique.fr/~maks/">http://www.lix.polytechnique.fr/~maks/</a>
Internship Subject	Deep Learning for 3D Shape Recognition and Comparison
Student's level	<input type="checkbox"/> Advanced Undergraduate Students (3 <sup>rd</sup> or 4 <sup>th</sup> year) <input checked="" type="checkbox"/> Master's students (1 <sup>st</sup> or 2 <sup>nd</sup> 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 checked="" type="checkbox"/> 6 months
Prerequisites	<p>The ideal candidates should have strong background in at least some of the following:</p> <ul style="list-style-type: none"> <li>- Geometry Processing and 3D shape analysis</li> <li>- Machine Learning</li> <li>- Computer Vision and Image Processing</li> <li>- Computer Graphics</li> <li>- Knowledge of basic Differential Geometry</li> <li>- Programming experience, especially in multimedia data analysis</li> </ul> <p>Preference will be given to candidates who wish to pursue a PhD at the end of the internship (starting Sep. 2020). The PhD has funding guaranteed by the ERC Starting Grant EXPROTEA.</p>

**Internship description (max. 15 lines)**

The goal of this project is to develop a method for classifying and recognizing non-rigid 3D models by using techniques from Deep Learning, Geometry Processing and Computer Graphics. Given a collection of 3D models, such as scans of humans in different poses, the goal is to learn effective ways for recognizing shapes and their parts using Machine Learning techniques.

Venue and supervision:

Successful candidates will be based at Ecole Polytechnique located in Palaiseau, Paris area, France. The project will be supervised by Maks Ovsjanikov:

<http://www.lix.polytechnique.fr/~maks/index.html>

How to apply:

To apply, please contact Maks Ovsjanikov: maks@lix.polytechnique.fr, and put [internship application] in the subject line. In your email, please include your CV, the transcript of courses taken with the grades and a short cover letter.

In your cover letter, make sure to mention how your experience relates specifically to each of the topics in this announcement.

Reference letters are optional but may need to be provided upon request.