



# colabs



<b>COORDINATOR</b>	<b>Prof. Jorge S. Marques</b>
<b>PHD/PÓS-DOC/...</b>	Dra. Catarina Barata
<b>INSTITUTE/LAB</b>	Institute for Systems and Robotics
<b>PROJECT TITLE</b>	Automatic Analysis of Dermoscopy Images for Skin Cancer Diagnosis
<b>PROJECT DESCRIPTION</b>	Dermatologists are able to detect skin cancer through the inspection of dermoscopy images. This is a slow and subjective process, where the diagnosis is not always correct. We want to automatize the diagnosis, using a pattern recognition approach. To achieve this goal, we will use a dataset of images annotated by an expert (benign/malign) to learn a classifier. Then, the classifier will diagnose new images. The student should learn to process dermoscopy images and machine learning algorithms.
<b>WORK FIELD/CONCEPTS</b>	Image processing, Machine learning, Implementation of algorithms
<b>NUMBER OF VACANCIES</b>	2
<b>STUDENT PROFILE</b>	Organized, sociable, responsible
<b>REQUIRED SKILLS</b>	Basic knowledge of programming (MatLab or Python programming is a plus). Reading scientific reports.
<b>OBJECTIVES</b>	The student will work on the following stages of the decision process: i) Features extraction; ii) Classifier learning; iii) System evaluation; Using image processing and machine learning methods.
<b>NECESSARY EQUIPMENT</b>	Laptop
<b>DURATION</b>	16 weeks Start: March 26th Finish: July 16th
<b>RECOMMENDED SCHEDULE</b>	1 afternoons a week (1 afternoon = 4h)