TITLE	Bio-inspired Flying Robot

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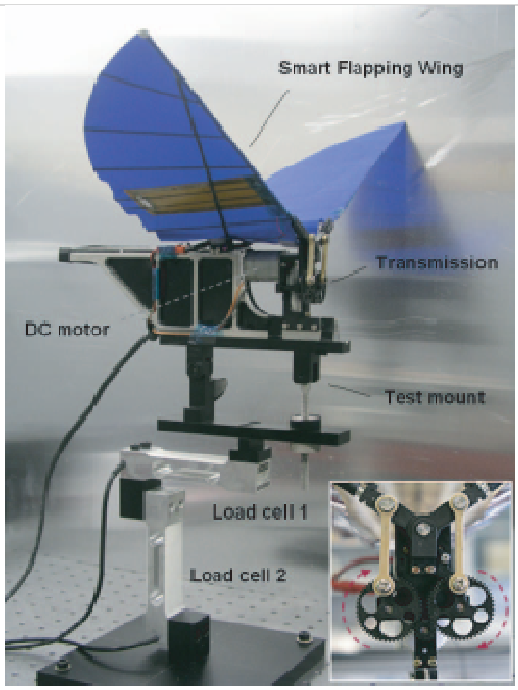
SHORT DESCRIPTION	
Objective	Design, development and implementation of a bio-inspired flying robot One line of research and development in robotics that has received increased attention in recent years is the development of biologically inspired robots. Whether robots that use legs, wings (see Figure 1) or fins as a means to implement locomotion, the idea is to acquire knowledge of biological beings, whose evolution took place over millions of years, and utilize the knowledge thus acquired to implement the same methods of locomotion (or at least use the biologically inspiration) on the machines we develop. It is believed that in this way we are able to develop machines with capabilities similar to those of biological beings in terms of locomotion capacity and energy efficiency.

	 Figure 1: Example of prototype flying robot (Kim, et al., 2007) Bearing these ideas in mind, in this project it is intended to develop a bio-inspired flying robot, or a robot which is based on beating of wings (like a bird) to fly.
Requirements	– Reuse provided components or low cost hardware solutions; – Use open source and freeware software; – Adopt the International System of Units (NIST International Guide for the use of the International System of Units); – Be compliant with the Machines Directive (MD), Low Voltage Directive (LVD) and Restriction of the use of certain Hazardous Substances (RoHS) Directive.

RELEVANT DATA
Maximum budget: 250,00 €

RESOURCES

ACADEMIC SUPERVISORS	Abel José Duarte (AJD), Fernando Ferreira (FJF), Benedita Malheiro (MBM), Maria Cristina Ribeiro (MCR), Manuel Silva (MSS) Pedro Barbosa Guedes (PBG), Paulo Ferreira (PDF)

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