



Laboratorio de Ingeniería Mecánica (LIM)
UNIVERSIDADE DA CORUÑA

The **Laboratorio de Ingeniería Mecánica** (Mechanical Engineering Laboratory – <http://lim.ii.udc.es>) at the University of A Coruña (Ferrol, Spain) is looking for a PhD candidate to join their team.

The topic of this PhD thesis will be the development of methods to determine, monitor, and improve the **accuracy of experimental results in cyber-physical testing devices**. In cyber-physical test benches, the assessed device is interfaced to a computer simulation of the environment in which it will be deployed. The research project aims to identify the key factors that affect the reliability of the obtained results, and use this knowledge to guarantee that the obtained results are truly representative of real-world operation conditions. The candidate will work together with the members of the vehicle dynamics team to formulate co-simulation algorithms, sensing and actuation strategies, and data treatment protocols that result in an optimal operation of the testing device. The goals of this thesis will be attained by means of mathematical analysis, computer simulations, and experimental tests conducted in the cyber-physical test benches for electric motors built by the Laboratory. The expected outcome of the research is to arrive at guidelines of general validity to extract reliable information from cyber-physical testing.

Candidates must hold a bachelor's and a Master's degree on Mechanical Engineering, Computer Science, or a related field. Programming skills, especially in Matlab, C++, real-time environments, and data acquisition, will be positively valued.

Applications and inquiries must be addressed to Prof. Francisco González (f.gonzalez@udc.es). Applicants must submit a CV and a transcript of their bachelor's and Master's degrees qualifications.

Ferrol, September 7th 2023