

## PhD grant LIM-PDX-2019

The Mechanical Engineering Laboratory at University of A Coruña, Spain, is looking for candidates for a PhD grant in computational mechanics. Evaluation will take place during the academic year 2018/2019, and the grant will start in summer 2019. [EHEA](#) students enrolled in a master's program can apply without having a master's degree (see requirement 2a).

Two topics are available:

- Contact models for multibody dynamics. Collision and contact response is a core component of physics engines used in high-performance scientific simulation, video games, virtual reality and film animation. The PhD will focus on developing new high-fidelity, real-time contact and collision models.
- Modelling and simulation of netting in fishing gears. Computational simulation of fishing gears is an emerging technology that will play an important role in the modernization of EU fisheries technology due to the recent discard ban regulations (landing obligation). The PhD will focus on developing new methods to simulate the structural behaviour of the netting.

### Eligibility requirements

- 1) Bachelor's degree in Engineering, Mathematics or Physics.
- 2) Master studies in computational mechanics, mathematical modelling or related areas.
  - a) Candidates with bachelor's and master's studies in the EHEA:  
At least 60 ECTS credits (1 year) of master courses completed before October 2018.  
It is not required to hold a master's degree.
  - b) Candidates with bachelor's or master's studies outside the EHEA:  
It is required to hold a master's degree before October 2018.
- 3) At least 300 ECTS credits of bachelor's and master's studies completed after January 2015 and before October 2018. For example:
  - a) 240 credits (4 years) of bachelor's level and 60 credits (1 year) of master's level, or
  - b) 180 credits (3 years) of bachelor's level and 120 credits (2 years) of master's level.
- 4) Good programming skills and experience in numerical methods.

### Evaluation criteria

- GPA in bachelor's and master's studies. A very good or excellent GPA is required.
- Optional: B2 or C1 certificates in languages other than first language or Spanish, awarded before January 2019.

### Timeframe

June-July 2018	Pre-screening of candidates.
September 2018	Admission and enrolment in PhD program.
January 2019	Grant application and start of the evaluation process.
May 2019	Notification of results of the evaluation.
June 2019	Start of the PhD grant.

## **Terms of employment**

Salary: about gross € 1370 (net € 1150) per month, established by the Regional Government. Fellows will be registered in the Spanish Social Security System, which provides comprehensive health and occupational insurance coverage.

Duration: 3 years, with an estimated starting date in June or July 2019.

Location: Ferrol, Spain.

The working language is English. Free Spanish language courses are available.

Tasks:

- Research: theoretical developments, computer implementation and experimental validation. Dissemination of results in conferences and peer-reviewed journals.
- At least a 3-months research stay in a foreign world-leading institution.
- Research training (optional): courses on research methodology.
- Teaching (optional): up to 60 teaching hours per year (2 hours/week).

## **Research group**

The Mechanical Engineering Laboratory at University of A Coruña focuses in computational mechanics and is specialized in multibody system dynamics and its applications in various fields. The group has a large expertise in participation in R&D projects at national and international level. It received a score of 92% in the last evaluation carried out by the state research agency. Currently there are 5 ongoing PhD theses in the lab, all of them financially supported by grants.

<http://lim.ii.udc.es/index.en.html>

## **The city and the campus**

The University Campus is very close to the center of Ferrol, about 1 km from the Town Hall. Ferrol is a small walkable city with 70,000 inhabitants. Accommodation is economic: a small apartment close to the campus costs 350 €/month and a room in a flat share costs about 150 €/month. The city is well connected with the airports of A Coruña (50 km), Santiago de Compostela (90 km) and Vigo (170 km). In addition to teaching and research activities, there are many cultural and sports activities on campus. More information in:

<http://www.udc.es>

<http://campusindustrial.udc.gal>

## **Application procedure and deadline**

Candidates are urged to apply as soon as possible.

Please submit applications by e-mail at [manuel.gonzalez@udc.es](mailto:manuel.gonzalez@udc.es) no later than 15 July 2018.

Applications must enclose: CV, transcripts of records of bachelor and master, bachelor's degree, master's degree (optional for EHEA students) and language certificates (optional).