

# MARIE S. CURIE PhD positions at University of Deusto (Bilbao, Spain) in Artificial Intelligence

The Deusto Institute of Technology (DeustoTech) (<https://deustotech.deusto.es/>) from the University of Deusto (Bilbao, Spain) is looking for a full-time PhD student. The position is offered in the frame of the Horizon 2020 Marie Skłodowska-Curie COFUND Programme (<https://bit.ly/3r8ZcK0>). The grant will have a duration of 3 years under a regular employment contract with full social security coverage. You can find more information about the scholarship here: <http://shorturl.at/mLpZ9>

\* THE DEADLINE FOR APPLICATIONS IS FEBRUARY 24, 2021 \*

\*PROJECT BACKGROUND\*

Transport is a fundamental sector for the European economy. At EU level, it covers a fairly complex network that includes around 1.2 million private and public companies, employing around 10.5 million people. This is why it is a crucial sector of the EU economy: in 2015, it accounted for about 9 % of total gross added value, 9 % of total employment, and 17.2 % of total EU exports of services were transport-related. However, transport also generates negative social effects, such as accidents, greenhouse gas emissions, air pollution, noise and environmental effects. Overall, external costs due to transport have been estimated at around 4% of GDP in 2011.

Although transport at EU level presents important challenges to be addressed, technological advances in areas such as Information and Communication Technologies or energy storage are revolutionising the transport and mobility of both people and goods and opening up new areas of opportunity. Two of the main areas of opportunity are the high availability of transport data nowadays and the appearance of emerging mobility solutions (electric vehicles, autonomous and connected vehicles, micro-mobility, etc.).

This research aims at addressing the previous challenges mentioned by developing novel Artificial Intelligence techniques that will make it possible to exploit the areas of opportunity described before. Within the wide range of Artificial Intelligence methods that can be found today, in this project we will mainly focus on Machine Learning methods and optimization techniques based on Metaheuristics. The researcher will be supervised by:

Antonio D. Masegosa, Ikerbasque Research Associate, University of Deusto, Spain (<http://paginaspersonales.deusto.es/ad.masegosa/>)

Andres R. Masegosa, University of Almeria, Spain (<https://andresmasegosa.github.io/>)

\* WE OFFER \*

- Three years of full-time contract for doing your PhD. The gross annual salary (not including social security and before taxes) will be approximately €32.508 per year.
- Allowances for moving (up to €1500 per year), training costs (3000€), research stays (1500€ + additional funds from the research group (1500€-2500€ approx.)) and attendance to international conference (1000€).
- A research stay of at least three months at a leading international institution.
- Excellent working conditions.

- Exposure to both academia and the industry in an environment with multiple H2020 on-going projects.
- Possibility to publish at top journal and conferences in the area of machine learning, evolutionary computing and transport systems.
- High quality of life in one of the most livable cities (<https://bit.ly/2MhsfN1>) and regions (<https://bit.ly/39CQFt6>).

**\*REQUIREMENTS\***

- An official Master's degree in Computer Science, or related field.
- An excellent academic record (grades of B or higher).
- Advanced command of English (minimum Cambridge C1 or equivalent).
- Research experience rule: applicants shall be in the first four years (full-time equivalent research experience) of their research careers and not yet have been awarded a doctoral degree.
- Mobility rule: At the time of the relevant deadline for submission of proposals, researchers shall not have resided or carried out their main activity (work, studies, etc.) in Spain for more than 12 months in the 3 years immediately prior to the reference date. Compulsory national service and/or short stays such as holidays are not taken into account.

For more details about requirements please visit <http://shorturl.at/mLPZ9>

**\* CANDIDATE PROFILE \***

- Background in computer science, computer engineering, applied mathematics or related fields.
- Good programming skills and experience in some of the next programming languages is also desirable: Python, Keras, PyTorch, TensorFlow, R, etc.
- Experience in the application and development of metaheuristics, machine learning, deep learning or probabilistic graphical models will be especially welcome.
- Experience in the fields of intelligent transportation systems, travel behaviour analysis or transport planning will be also welcome.
- Fluency in English, both spoke and written, is expected, along with good communication and presentation skills.
- Innovative and proactive attitude, and be a good team player.

**\*PROCEDURE AND DEADLINE FOR APPLICATIONS\***

This call of the University of Deusto is framed in the context of the 6i-DIRS project (for more details:<https://bit.ly/3r8ZcK0>). The selection of candidates will be done in two stages:

- First stage

The applicants should forward their CV and two references to Antonio D. Masegosa ([ad.masegosa@deusto.es](mailto:ad.masegosa@deusto.es)) and Andrés R. Masegosa ([andresma@ual.es](mailto:andresma@ual.es)).

THE DEADLINE FOR FIRST STAGE APPLICATIONS IS \*FEBRUARY 24th, 2020\*.

Applicants from the first stage will be evaluated as their submissions are received and they will be contacted individually as soon as possible and no later than February 26th, 2021.

THE SOONER YOU SUBMIT THE APPLICATION TO THE FIRST STAGE THE BETTER because in case you are selected you will have more time to prepare the application for the second stage.

- Second stage

The selected candidates will be invited to submit their applications to the second stage, in which they should follow the guidelines given by the 6i-DIRS call (see next link:<http://shorturl.at/mLPZ9>).

These candidates will be supported by Antonio D. Masegosa and Andres R. Masegosa in the preparation of all the materials required by the 6i-DIRS call, especially in the preparation of the research project and motivation letter.

THE DEADLINE FOR SECOND STAGE APPLICATIONS IS \*MARCH 5th, 2021\*.