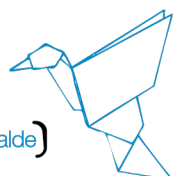


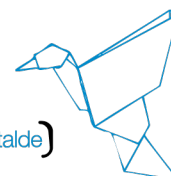
Internship in Development of a Three-Dimensional Environment for Crowd Dynamics Visualization in Casco Viejo (Bilbao)

Job Offer	
Topics:	The Basque Center for Applied Mathematics is offering an internship position within the CFD-MS research group led by Ikerbasque Professor Marco Ellero. The selected candidate will work on the DigiCasco project, which aims to develop software for simulating pedestrian dynamics in the Old Town of Bilbao (Casco Viejo). This software will be used to analyze pedestrian mobility patterns in the Old Town of Bilbao, considering different types of agents (e.g., residents and tourists) with distinct motivations and navigation behaviors. A key aspect of the project is the creation of a realistic virtual environment in which the simulated agents move, as well as the development of accurate pedestrian animations. The candidate will be responsible for building a three-dimensional model of Casco Viejo using Unity or similar tools, integrating and refining representations of its main tourist landmarks based on data extracted from Google Earth, and contributing to the implementation and improvement of pedestrian movement animations. Additional tasks may include building other 3D geometries in Unity for pedestrian dynamics visualization. The tasks to be carried out will be: -Implementation of Casco Viejo's 3D virtual environment in Unity. -Extract Casco Viejo's main touristic landmarks' photographic textures from Google Earth or similar. -Mesh cleanup of the imported photographic textures, reducing the number of polygons to make them smoother and more computationally efficient. - Implementation of pedestrian movement animations. - Creation of avatars and textures for non-touristic buildings.
PI in charge:	Marco Ellero and Ander García



Salary and conditions:	• Living in the Basque Country: - Graduate students: net salary of 300 € monthly - Master's degree students/ PhD students: net salary of 350 € monthly. • Living in Spain: - Graduate students: net salary of 500 € monthly + 150 € for travel expenses - Master's degree students/ PhD students: net salary of 600 € monthly + 150 € for travel expenses • -Living outside Spain: - No remuneration. - Accommodation and meals covered by BCAM* - Travel expenses are covered and to be reimbursed: - Up to 300 €, if the intern comes from the EU - Up to 1000 €, if the intern comes from outside of the EU (to be checked on each country)
Nº Positions offered:	1
Contract and offer:	4 months, with a possibility to extend it in another two months
Deadline:	31st August, 2026, 14:00 CET (UTC+1)
How to apply:	Applications must be submitted on-line at: https://joboffers.bcamath.org

Scientific Profile Requested	
Requirements:	• Degree in Physics, Mathematics, Computer Science, Engineering, or related field
Skills and track-record:	Although the requirements can be adapted to the different candidate profiles, a strong candidate needs to possess the following skills: • Background in Digital Arts or a related field. • With experience in 3D modelling and visualization. • Knowledge of animation and interactive 3D environments. • Proficiency in Unity or similar tools.



Application and Selection Process	
Formal Requirements:	The selected candidate must have applied before the application deadline online at the webpage: https://joboffers.bcamath.org The candidates that do not fulfil the mandatory requirements will not be evaluated with respect to their scientific profile.
Application:	Required documents: • CV • Letter of interest in English describing which topics the candidate is interested in researching. • 2 recommendation letters • Academic record: including undergraduate and master-level courses attended and grades and scientific results achieved, and research statement is NOT required (leave blank in application form).
Evaluation:	Based on the provided application documents of each candidate, the evaluation committee will evaluate qualitatively: the adaption of the previous training and career to the profile offered, the recommendation letters, the main results achieved (papers, proceedings, etc.), the statement of past and proposed future research and other merits; taking in account the alignment of these items to the topic offered.
Incorporation:	As soon as possible



This project will be funded by the project DigiCasco by the Diputación Foral de Bizkaia.

