

Marie Skłodowska Curie Action – Postdoctoral Fellowship 2023
Expression of interest – Hosting offer
(MSCA-PF-2023)

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Department /Institute /Centre Name	Computer Vision & Aerial Robotics Group Centre for Automation and Robotics
Address	ETSII, Jose Gutierrez Abascal 2
Province	28006 Madrid
Research Area	Information Science and Engineering (ENG)
Brief description of the Centre/Research Group	<p>The activities of our Group are focused to two main objectives:</p> <ul style="list-style-type: none"> • UAV autonomous complex missions using on board sensors (i.e. Vision and Lidar) and on-board computing for autonomously flying in environments where GPS is not available (e.g. indoors) or where GPS doesn't provide enough accuracy (e.g. industrial inspection and/or manoeuvres close to obstacles). We have our own open source framework for operating autonomous our missions www.aerostack.org. Sample of recent projects: <ul style="list-style-type: none"> • "DAR Project for Aircraft Inspection" for AIRBUS Defence & Space • "Boiler Inspection in Meirama Thermal Power Plant" for Naturgy • Autonomous image/video recognition and detection using Machine Learning, e.g. DL, as well as Image Processing techniques, mainly used for aerial images an also for other kind of images. Reinforcement Learning for controlling UAV is also one of our main research topics, based on both direct visual info and pose estimation. Sample of recent projects: <ul style="list-style-type: none"> • "Tropical Plants Detection and Recognition from Aerial Images taken by Drones" for INDIGO Drones • "Electric Tower Inspection" for several companies (Fenosa, Pryisma, REE, Aeromedia). • "COPILLOT: Photovoltaic Power Plant Inspection" R&D projects funded by Madrid Government, in close coloration with local companies. <p>We are also awarded in the very top international competitions in drones autonomy: IMAV12, IMAV13, IARC14, IMAV16, IMAV17, IMAV 2019, MBZIRC20, RAMI-IROS21, el FUZZY_IEE 2021, OPENCV-AI 2021, IMAV 2022, ICUAS22, here are some videos of our recent participation</p> <ul style="list-style-type: none"> • Organisers of the International Mini Air Vehicle Competition and Conference in Madrid IMAV19 • Third place at the Grand Challenge in the MBZIRC20 competition in Abu Dhabi
Project description	To be defined with the candidate within the mentioned two msil objectives of the Group
Applications: documents to be submitted and deadlines	CV, Letter of interest, academic record Deadline: 30/04/2023