

## Expression of Interest-UPM Supervisor

### *Marie Skłodowska Curie Action–Postdoctoral Fellowship 2026 (MSCA-PF-2026)*

<b>Supervisor Name</b>	Cristobal Gallego-Castillo	
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<b>Department /Institute /</b>	School of Aeronautical and Space Engineering	
<b>Research Area</b>	Information Science and Engineering ( <b>ENG</b> ) Environment and Geoscience ( <b>ENV</b> )	ENG. G3: Energy collection, conversion and storage, renewable energy ENV. V1: Renewable energy sources ENV. V1: Spatial and regional planning
<b>Research team/group</b>	<p>Our group at Universidad Politécnica de Madrid (UPM) conducts research on energy system modelling, with a focus on large-scale wind power integration (onshore and offshore) and sector coupling. The team develops and maintains PyPSA-Spain, the Spanish adaptation of the widely used open-source PyPSA-Eur framework. Current research is expanding towards sustainable aviation fuels (SAF) for aviation, the interactions between reindustrialisation and energy transition, and territorial equity under large-scale renewable energy deployment. The group collaborates with leading Spanish research centres, policy-makers, and European universities, and is actively engaged in international open-science energy modelling networks.</p>	
<b>Keywords</b>	<ul style="list-style-type: none"> <li>• Energy system modelling</li> <li>• Wind power integration</li> <li>• Territorial equity</li> <li>• Sustainable aviation fuels (SAF)</li> <li>• Sector coupling</li> </ul>	
<b>Research Focus</b>	<p><b>Modelling Energy Transitions for Climate Neutrality, Industrial Transformation and Socially Inclusive Renewable Deployment</b></p> <p>Our research explores how energy system modelling can support the transition to climate neutrality while strengthening energy sovereignty and economic resilience in Spain and Europe. Using open-source frameworks such as PyPSA-Spain and PyPSA-Eur, we analyse pathways for large-scale renewable integration, sector coupling, and the transformation of energy demand across key sectors.</p> <p>Within this broad agenda, potential research directions include the role of sustainable aviation fuels (SAF) in decarbonising aviation, the interactions between energy system transformation and opportunities for industrial development and reindustrialisation, and strategies to deploy renewable energy at scale while addressing territorial equity and social acceptance.</p> <p>The topic is intentionally flexible and welcomes innovative proposals from postdoctoral researchers interested in combining energy system modelling with climate policy, industrial strategy, and socially inclusive energy transitions.</p>	
<b>Applications: documents to be submitted and deadlines</b>	<p>Applicants should send the following documents to the supervisor:</p> <ul style="list-style-type: none"> <li>• Academic CV (including publications)</li> <li>• A short statement of research interests or preliminary project</li> </ul>	

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	<p>idea (1–2 pages) describing how their profile and proposed research could connect with the group’s expertise</p> <ul style="list-style-type: none"><li>• Contact details of two academic referees</li></ul> <p>Applications should be sent by <b>30/April/2026</b> to <b>crisbaljose.gallego@upm.es</b>.</p> <p>Early contact is encouraged, as selected candidates will be invited to further discuss and develop a joint MSCA-PF proposal.</p>
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