

Expression of Interest-UPM Supervisor

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

Supervisor Name	Sergio Zubelzu
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Department /Institute / Centre Name/Location	Agroforest Engineering. School of Agriculture, Food and Biosystems Engineering
Research Area	Environment and Geoscience (ENV)
Research team/group	<p>The group of researchers are integrated within the Irrigation Hydrology research group (HIDER), constituting an independent line of work oriented toward research in monitoring and modelling of event-based hydrological phenomena with special emphasis on the fusion of data-based approaches (Machine Learning) with physically-based models. They have recently participated in the project “Advanced and novel hydrology models based on enhanced data collection, analysis, and prediction (ANDROMEDA)”, H2020 CHIST-ERA 2019(PCI2020-120694-2) and ongoing international networking and close collaboration with different EU universities and research institutes.</p> <p>The group is composed of 6 permanent professors (2 full professors and 4 associate professors) with strong background and expertise in hydrological monitoring and modelling. Several invited researchers and PhD candidates working on this research line also join the research group.</p>
Keywords	Hydrology, Modelling, Machine Learning, Physics, Monitoring
Research Focus	<p>Data-driven approaches for modelling event based hydrological processes</p> <p>The research line focuses on analyzing the available data (time series of precipitation, outflow and soil moisture, as well as static soil and territorial properties) for a set of 20 small catchments located in the Ebro river basin to develop modelling techniques for event-based hydrological processes. The work will address several temporal scales (from 15-min storm analysis to daily or greater aggregated values). The research will pay attention to modelling the outflows but also to different hydrological processes and variables such as soil water storage, time of concentration, physical model parametrisation, among others.</p>
Applications: documents to be submitted and deadlines	<p>Letter of motivation, CV.</p> <p>Deadline: 1st May 2026</p>