

Expression of Interest-UPM Supervisor

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

Supervisor Name	Federico Gulisano
Email	federico.gulisano@upm.es
Department /Institute / Centre Name/Location	Department of Transport Engineering, Urban and Regional Planning / Transyt / ETSI Caminos, Canales y Puertos
Research Area	Information Science and Engineering (ENG) Environment and Geoscience (ENV)
Research team/group	The Road Engineering research group at Universidad Politécnica de Madrid's School of Civil Engineering focuses on developing cutting-edge technologies for sustainable and smart road pavements, with particular emphasis on multifunctional materials and digital monitoring systems. We have extensive experience leading and participating in competitive national and international research projects. We maintain strong international collaborations with leading European institutions and foster interdisciplinary approaches, working alongside experts in electronics, telecommunications, and data science to develop integrated sensing technologies. Our close partnerships with road construction companies and infrastructure management agencies ensure practical relevance and valorization opportunities.
Keywords	Multifunctional pavements, Sustainable materials, Digital Twin, Self-sensing, Circular economy
Research Focus	<p>Next-generation road pavements: sustainable technologies and digital solutions</p> <p>Our research focuses on developing innovative technologies for multifunctional road pavements, integrating sustainability and digitalization to address current infrastructure challenges. We are interested in hosting postdoctoral researchers working on:</p> <ul style="list-style-type: none"> • Advanced pavement materials: bio-binders, recycled materials (RAP), low-temperature mixtures, heat island mitigation strategies • Digital infrastructure solutions: self-sensing systems, Digital Twins, IoT monitoring, predictive maintenance platforms • Computational modeling: finite element methods, machine learning applications. <p>We particularly encourage interdisciplinary proposals that combine material innovation with sensing technologies, data analytics, or environmental assessment. Our facilities and international network support researchers from Materials Science, Civil/Chemical, Computer Science, Data Science, or related fields. We welcome open and flexible proposals that align with our expertise while bringing new perspectives.</p>
Applications: documents to be submitted and deadlines	Please send a short CV and a brief letter of motivation to federico.gulisano@upm.es . Deadline: April 30, 2026