

**Marie Skłodowska Curie Action –Postdoctoral Fellowship 2024
(MSCA-PF-2024)**

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Department /Institute /Centre	Name	Departamento de Sistemas Informáticos – Escuela Técnica Superior de Ingeniería de Sistemas Informáticos – Universidad Politécnica de Madrid
	Address	Calle Alan Turing S/N. 28031 Madrid
	Province	Madrid
Research Area		Information Science and Engineering (ENG); Social Sciences and Humanities (SOC) Environment and Geoscience (ENV)
Brief description of the Centre/Research Group		<p>The Department of Computing Systems (Sistemas Informáticos) is at Computing Systems Engineering School (ETS Ingeniería de Sistemas Informáticos https://etsisi.upm.es), Universidad Politécnica de Madrid (UPM). The Research Group SYST-UPM (System and Software Technology Group, https://systweb.etsisi.upm.es/) has 9 tenured professors, and 1 postdoc, as well as several doctoral students. Members are active in software engineering, computer engineering and project management and economics.</p> <p>SYST-UPM started its activity more than 20 years ago, and has a long history of close collaboration with corporations, with a large number of joint projects within Tools and Environments, System V&V and Quality, Architecture and Modelling, Agile and Innovation, Energy Smart Grids & Cities, and Collective Intelligence. The SYST Group has a strong international activity.</p> <p>Students who got their PhD degree supervised by one of the SYST-UPM members followed different careers: some joined partner corporations, and other joined our School as post docs. Post-doc students get an excellent training as well.</p> <p>The project described below, interdisciplinary, lies on the Collective Intelligence side, and it would be framed into the on-going SloTCoM project (the Sustainability-Aware IoT Systems Driven by Social Communities). SYST-UPM collaborates with MIT Center for Collective Intelligence, and had a joint seed-funding MISTI activity, led by Professor T. Malone and J. Garbajosa on Sustainable Cities, and another one recently submitted on Superminds and Artificial Intelligence.</p>

Expression of Interest – UPM Supervisor

<p>Project description</p>	<p>Fast-learning Supermind-Teams for Solving Serious Challenges with the Help of Artificial Intelligence</p> <p>Humans are facing serious challenges either global, local, such as climate change, or the emptied Spain. General challenges are complex, with many faces, and need to be zoomed-in so that they can be addressed. To cope with them, we need highly-collaborative fast learning teams [Hackman2004] [McEwan2020]. Collective Intelligence (CI) can greatly help: by applying Supermind Design [Malone2018] people minds become networked Superminds, empowered by computers. Artificial Intelligence (AI) can accelerate learning: 1) test a learner's existing knowledge, and adapt learning to individual needs [Premlatha2015] 2) Large Language Models (e.g. ChatGPT) can increase production [Cai2023] 3) AI based "personas" models and mirroring will help improve team learning [Gloor2022]. In practice, Systems Thinking will be required[Kirsch2016].</p> <p>The research will be focused on studying the drivers that would accelerate Supermind teams performance considering AI, and challenges modelled as socio-technical systems.</p> <p>[Cai2023] Cai A., et al. DesignAID: Using Generative AI and Semantic Diversity for Design Inspiration. Proc. of The ACM Collective Intelligence Conf. 2023 Pages 1–11</p> <p>[Gloor2022] Gloor, P. Happimetrics. New Horizons in Management series. 2022 ISBN: 978 1 80392 401 4</p> <p>[Kirsch2016] Kirsch et al. Why Social Thinking Need Systems Thinking. HBR.org,2016</p> <p>[Malone2018] Malone, T. W . Superminds. New York. 2018.</p> <p>[McEwan2020] et al. (2017). The Effectiveness of Teamwork Training on Teamwork Behaviors and Team Performance. PLOS ONE, 12(1)</p> <p>[Premlatha2015] Premlatha et al. Learning content design and learner adaptation for adaptive e-learning environment. Artif Intell Rev 44, 443–465 (2015).</p>
<p>Applications: documents to be submitted and deadlines</p>	<p>CV, letter of motivation, and two letters of reference including the signatories coordinates so that signatories can be contacted. The letter of motivation, as well as providing all the arguments the applicant would like to include, should explain the interest in participating in the proposed project, in joining the research team, and why the applicant thinks that her/his skills and background suit this Fellowship requirements.</p> <p>DEADLINE: 30th APRIL 2024</p>