

Supervisor Expression of Interest

MSCA - Marie Sklodowska Curie Action - (PF)

Postdoctoral Fellowship 2025

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Link "Pagina docente": <https://www.som.polimi.it/professor/klumpp-matthias/>

Department Name: DIG

Research topic: Human-centric Logistics 5.0 Systems

MSCA-PF Research Area Panels:

- ECO_Economic Sciences
- ENG_Information Science and Engineering
- ENV_Environmental and Geosciences
- LIF_Life Sciences
- MAT_Mathematics
- PHY_Physics
- SOC_Social Sciences and Humanities
- CHE_Chemistry

Brief description of the Department and Research Group (including URL if applicable):

The Department of Management, Economics, and Industrial Engineering (DIG) of Politecnico di Milano was established in 1990. Its mission is to contribute to the common good and individual well-being through a critical understanding of the opportunities and challenges posed by technology to business and society.

The Department pursues its mission with an international reach by creating and sharing knowledge through high-quality education, the quest for scientific excellence, and active community engagement.

We aim at:

- Educating responsible individuals who will shape the future of relevant corporations and institutions to serve society.
- Promoting original, rigorous, and relevant research at the intersection of engineering, management, and economics, focusing on a deep understanding of technology and its ecosystem.
- Contributing to a sustainable and inclusive society by inspiring virtuous business practices and transformational policy measures.

With approximately 160 professors, DIG is one of the largest departments of Politecnico di Milano.

More information can be found at: <https://www.dig.polimi.it/it>

DIG HumanTech project has been selected and funded by the Ministry of University and Research (MUR) for the period 2023-2027 within “Dipartimenti di Eccellenza” (Law 232/2016), the ministerial initiative aimed at rewarding the departments that stand out for the quality of their research and at financing specific development projects. In particular, the objective of HumanTech is to redefine the relationship between technology and human beings to enable a sustainable digital transition of industrial systems. The project aims to propose new models and processes for the development and adoption of technologies, capable of accelerating the transition towards sustainable, inclusive industrial systems that make individual and collective well-being a priority.

TITLE of the project: Human-centric Logistics 5.0 Systems

Brief project description: Blue-collar operations in logistics systems are planned to be human-centric under the Industry 5.0 / Logistics 5.0 paradigm. This is relevant for major fields of action like warehousing (e.g. order picking), transportation (e.g. truck driving), or other relevant issues like contract logistics. In addition, a strong link to assembly and manufacturing operations is highly relevant as the combination and collaboration of the manufacturing and logistics operations spheres are merging in most contexts. The research project is addressing the objective of human-centric design in logistics processes with the biosensor and neuroscience equipment of the HumanTech CORE Lab for Cognitive Ergonomics Research in Cyber-Physical Systems, e.g. EEG, ECG, EMG or Eye Tracking analyses. The Lab environment provided allows for a real-life simulation of most blue-collar processes in manufacturing and logistics, fostering high level publications the team has already achieved and is continuing to work on (e.g. JBL, POM, IJPE). We welcome any interested and motivated PhD graduate in the operations field to join the excellent lab and operations management team in the DIG HumanTech context.