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Supervisor Expression of Interest MSCA - Marie Sklodowska Curie Action - (PF) Postdoctoral Fellowship 2024

Supervisor name: Raffaella Cagliano

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Link “Pagina docente”: <https://www.som.polimi.it/professor/raffaella-cagliano/>

Department Name: Department of Management, Economics and Industrial Engineering (DIG)

Research topic:

- MSCA-PF Research Area Panels: CHE_Chemistry
- ECO_Economic Sciences
- ENG_Information Science and Engineering
- ENV_Environmental and Geosciences
- LIF_Life Sciences
- MAT_Mathematics
- PHY_Physics
- SOC_Social Sciences and Humanities**

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.som.polimi.it/en/>

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



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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.

Within the Department, Professor Raffaella Cagliano is part of the GIGA research group, specialized in people and organization management, innovation and supply chain management.

TITLE of the project: Human-centric organizational models – organizational implications of Industry 5.0 paradigm

Brief project description

Research context

The present research initiative is developed in the context of the “HumanTech – Humans and Technology” project.

Research description

Digital technologies are nowadays one of the central factors in the transformation of any organization, from service to manufacturing industries. The set of these transformations entails a deconstruction of the traditional parameters of organization of work, offering both challenges and opportunities.

On one hand, in the manufacturing context, digitalization is associated to the concept of Smart Manufacturing or Industry 4.0, referring to the transition towards a new paradigm of interconnected, digitalized and intelligent production systems which has several impacts in terms of organization of work. On the other hand, remote, virtual, and flexible working modes have become commonplace for knowledge workers and industries like services or IT. Nonetheless, the recent pandemic pushed the boundaries of digitalization and new forms of working even for companies belonging in these sectors. Industry 5.0 has been already theorized by the European Commission, defining a new paradigm that complements the "existing" Industry 4.0 one by emphasizing research and innovation as drivers for a transition to a sustainable, human-centered and resilient European industry. It shifts the focus from shareholder value to stakeholder value, with benefits for all stakeholders. Industry 5.0 seeks to capture the value of new technologies, providing prosperity beyond jobs and growth, respecting planetary boundaries and putting the well-being of the industry worker at the heart of the production process.

Aligned with this view, the objective of the project is to explore human-centric technological development, from the design to the implementations of new organizational models and processes that exploit the technology as a lever to empower humans and their well-being inside the organizations. Some examples of research questions are: Which are the organizational models for inclusive and human-centric factories? How to measure the impact of such models on quality of work? How to structure processes that involve relevant actors in the design and implementation of technological innovation? How to foster participation of organizational members in such processes?