



POLITECNICO
MILANO 1863



POLITÉCNICA
"Engineering the future"

INTERNATIONAL
CAMPUS OF
EXCELLENCE

Double Degree PhD position from Politecnico di Milano (School of Management) and Universidad Politécnica de Madrid (Escuela Técnica Superior de Ingenieros Industriales)

The School of Management of Politecnico di Milano (POLIMI, Italy) in collaboration with the Escuela Técnica Superior de Ingenieros Industriales of Universidad Politécnica de Madrid (UPM, Spain), is currently seeking applicants for **one full-time PhD scholarship (4 years)**, starting from November 2022, on the following research project:

OPERATIONS IMPROVEMENT AND DIGITALISATION

We are looking for a talented and motivated candidate with strong analytical and methodological skills in design and industrial engineering sciences, who is eager to engage in an interdisciplinary and international research project of relevance for both industry and academia.

Obtaining a **Double Degree PhD title** in Management Engineering at POLIMI and UPM requires meeting all the training requirements at both universities as well full time study and engagement in research activities to the four years' period.

The scholarship covers tuition fees, office facilities, and access to library, software and databases. Additionally, the candidate is offered her/his own research budget for travelling. Opportunities of teaching and tutoring BSc/MSc students are also foreseen during the PhD.

The **Department of Management, Economics and Industrial Engineering at POLIMI** has a strong commitment to the excellence, distinctiveness and relevance of its teaching and research activities. The Doctoral Program is highly international and POLIMI PhD graduates are held in high esteem - not only in academia - but also in public institutions and companies where their research qualifications are increasingly demanded.

See our Ph.D. Program website for more information: <https://www.som.polimi.it/en/course/phd/>

The mission of the **Escuela Técnica Superior de Ingenieros Industriales (ETSII) at UPM** is to prepare high-level professionals, with broad capacities to generate, integrate and apply scientific, technological and business knowledge in the industrial field, contributing to the construction of prosperous, inclusive, equitable and sustainable societies. More details here:

<https://www.industriales.upm.es/estudios/doctorados/>

BRIEF DESCRIPTION OF THE RESEARCH PROJECT

In the last years, industrial production systems are being transformed due to a higher level of digitalisation, which leads to intelligent and connected solutions.

Digitalisation is affecting a bigger and bigger part of daily operations of manufacturing and service companies whilst it has not affected in the same way the improvement process, where activities are almost entirely performed by human being

The research aims, thus, to define frameworks and tools to:

- Better understand the improvement/problem solving process
- Identify possible ways to structure such process
- Identify possible digital solutions to support humans in carrying out the structured problem solving process

The following **methodologies** will be applied in the research project:

- Literature analysis in order to map the situation of research at international level;
- Case studies, in order to analyse the best practices of problem solving and innovation management of companies that have already develop new good practices;
- Action research projects to work on tools for data analysis in order to empower human's ability to analyse data and find the root causes of the problems;

The **main educational objectives** of the research project are the followings:

- Understand how digitalisation can support the problem solving and innovation management processes
- Developing frameworks and tools to facilitate the development and adoption of digital tools to improve problem solving approach.
- Evaluating the impact of digital tools on improving the problem solving capabilities of humans.

The opportunities for a PhD graduate in this research area are:

- Academic career in the fields of industrial, automation department and operations department;
- Industrial career:
 - ✓ in a consulting company;
 - ✓ in the OPEX area of manufacturing and service companies

HOW TO APPLY

Candidates can apply exclusively through the **online application system** at the following link:

www.phd-admission.polimi.it

The deadline for application is 20th May 2022 at 2:00 PM (CEST TIME). No application is accepted after this deadline.

The Selection Committee will assess candidates basing on their CV and their research projects. The Committee will interview short-listed candidates (preferably on Skype).

The admission-ranking will be published on **22th July 2022** at the following link:

[Dottorati di Ricerca - Politecnico di Milano: Rankings and replacements \(polimi.it\)](https://www.polimi.it/italian/dottorati-di-ricerca-politecnico-di-milano-rankings-and-replacements)

The selected candidate will enrol in the two PhD programmes at both universities.