

POLITECNICO DI MILANO



## Research Positions at Politecnico di Milano

Funded Postdoc and Ph.D. Positions at Mechanical Engineering Dept. of Politecnico di Milano are available within two recently awarded European Union projects in the fields of semi-conductors, battery cars, plastic recycling, and medical devices.

The successful applicants will work in the research team of prof. Andrea Matta and contribute to the following research activities:

1. Digital twin frameworks that integrate real-time gathered data with simulation predictions for reaching high production performance in semi-conductor companies.
2. Digital twin frameworks that integrate real-time gathered data with simulation predictions for reaching high sustainability in circular economies of battery cars, plastic, and medical devices.
3. Novel data-driven methods based on process mining approach for automated generation and adaptation of multi-fidelity resolution digital twins from data acquired, at multiple levels, along circular economies.
4. New AI methods and algorithms enhanced with digital twin technologies to extend knowledge and support actors in decision-making at Green Gateways in circular economies of battery cars, plastic, and medical devices.
5. Reinforcement learning policies for optimal dispatching of semi-conductor manufacturing systems.

Candidates with a strong interest in manufacturing, discrete event simulation, process mining, decision Markov processes, stochastic modeling, and experience with programming languages (Matlab, Python, C++) are encouraged to apply by sending their CVs to Andrea Matta (contact information below).

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