

Call for applications for a post-doc / research engineer position at Grenoble Institute of Technology, G-SCOP Lab (<https://g-scop.grenoble-inp.fr/en>)

The position is open for 12 months, funded on a research project on **Material Handling System Design, configuration and management**.

The ANR funded project LADTOP develops methodologies to design and configure Material Handling Systems that implement emergent technologies as Autonomous Mobile Robots, Cobots etc. The project developed a structured database supporting MHS design processes linking specification activities with alternative design generation, simulation models' creation or multi-criteria decision-making techniques. It involves works on Model-Based Systems Engineering, Constraints Satisfaction Problem modeling, Discrete Event Simulation and Multi-Criteria Decision Making. This position is open to contribute to the **system management processes**. In few words the challenges on the topic are:

- **System/Fleet management:** to define algorithm to manage a Material Handling System at the operational level. It is about defining rules for equipment positioning and mission affectation/scheduling in a dynamic environment for heterogeneous fleet of Material Handling Equipment.
- **Digital Twin of Material Handling System:** to define appropriate technique to obtain an operational digital twin of an intralogistics system cooperating with the fleet management system.

The proposals are to be tested on a real system in the *Operations Management platform* of the lab. This platform emulates an assembly production system deploying emergent technologies.

The expected profile:

- Knowledge in industry 4.0 and curiosity in AI techniques
- Operational research as Linear programming, constraint programming or any optimization method
- Programming skills (python or similar languages)
- Simulation of production systems

Starting date: as soon as possible, but not later than September 1st, 2023

Duration: 12 months

Deadline for applications: May 30, 2023

Application: CV, list of publications, cover letter, recommendation

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