# Lei LIU

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**ACADEMIC EXPERIENCE**

**Marie Curie Research Fellow** Feb., 2020-Jan., 2023
- Horizon 2020 Framework Programme for Research and Innovation, European Union

**EDUCATION**

**Ph.D. in Mechanical Engineering** Jan., 2023(Expected)
- Politecnico di Milano, Milano, Italy
- Advisor: Prof. Marcello Urgo
- Thesis: Risk-based Scheduling in the Re-manufacturing of Turbine Blades

**M.S. in Logistics Engineering** July, 2017
- Tsinghua University, Beijing, China
- Advisor: Prof. Canrong Zhang
- Thesis: A Branch and Bound Algorithm for the Robust Parallel Machine Scheduling with Sequence Dependent Set-up Time

**Exchange student in Industrial Engineering** 2015.09-2016.03
- National Tsinghua University, Hsinchu, TaiWan

**B.S. in Information Management and System** July, 2013
- Northeast Forestry University,Harbin, China

**AWARDS**

**Marie Curie Fellowship**, 2020-2023
Finalist, **PMS Best Student Paper Award**, 2022
Finalist, **AITeM Young Researcher Award**, 2021

**WORKING PAPER**

**Lei Liu**, Walter Terkaj, Marcello Urgo. A Review and Classification of Release and Dispatching Control Policies in Manufacturing Systems.

**Lei Liu**, Marcello Urgo. Stochastic 2-machine proportionate flow shop scheduling with rework.

**Lei Liu**, Marcello Urgo. Criticality in stochastic 2-machine flow shop network.

**Lei Liu**, Marcello Urgo. The stochastic 2-machine flow shop scheduling with general distriburion processing times.

**PUBLICATIONS**

**Lei Liu**, Marcello Urgo. A branch-and-bound approach for the two-machine flow shop stochastic scheduling problem with phase-type distributed processing times to minimize the value-at-risk, *under review at Annals of Operations Research.*

**Lei Liu**, Marcello Urgo, 2022. A robust scheduling framework for re-manufacturing activities of turbine blades, Applied Sciences, 12(6):3034.

**Lei Liu**, Marcello Urgo, 2022. Scheduling Remanufacturing Activities for the Repair of Turbine Blades: An Approximate Branch and Bound Approach to Minimize a Risk Measure. In Selected Topics in Manufacturing (pp. 41-59). Springer, Cham.

**CONFERENCE TALKS**

"A branch and bound approach for stochastic 2-machine flow shop scheduling with rework"
- 18th International Workshop on Project Management and Scheduling, Ghent, Belgium (Virtual) 2022
- Finalist, Best Student Award

"Scheduling Re-manufacturing Activities for the Repair of Turbine Blades: An Approximate Branch and Bound Approach to Minimize a Risk Measure"

- XV AITeM Conference (Italian Association of Manufacturing Technology) Milano, Italy (Virtual) 2022
- Finalist, Young Researcher Award

"A branch-and-bound approach for the two-machine flow shop stochastic scheduling problem to minimize the value-at-risk"

- 31st European Conference on Operational Research, Athens, Greece (Virtual) 2021

"A Branch and Bound Algorithm for the Robust Parallel Machine Scheduling with Sequence Dependent Set-up Time"

- Cross-Strait Tsinghua University Doctoral Forum, Shenzhen,China 2017

## TEACHING

**Mentor**, Smart Manufacturing Lab

- 2020-2021, 2021-2022

## OTHER PROFESSIONAL EXPERIENCES

**Algorithm Engineer** 2018-2019

- ZheJiang Transportation Big Data Center, Hangzhou, China

**Software Engineer** 2017-2018

- Hundsun Technologies Inc. Hangzhou, China

**Data Intern** 2015.01

- KPMG, ShenZhen, China

## COMPUTER SKILLS

**Languages:** C++, Python, Java, Latex
**Software and tools:** Gurobi, Pyomo

## REFERENCES

**Marcello Urgo**
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**Canrong Zhang**
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Tsinghua University
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