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 Industrial 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. The stochastic 2-machine flow shop scheduling for re-manufacturing activities of turbine blades.

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 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 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 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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Mechanical Engineering Department
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