

Lei LIU

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| RESEARCH DISCIPLINE | Industrial Engineering, Stochastic Scheduling, Operations Management | |
| ACADEMIC EXPERIENCE | Marie Curie Research Fellow | Feb., 2020-Jan., 2023 |
| | <ul style="list-style-type: none">• Horizon 2020 Framework Programme for Research and Innovation, European Union• Industrial Collaborator: Ansaldo Energia S.p.A, Italy | |
| EDUCATION | Ph.D. in Mechanical Engineering | June, 2023 |
| | <ul style="list-style-type: none">• Industrial Engineering Sector• 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 |
| | <ul style="list-style-type: none">• 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 | |
| | B.S. in Information Management and System | July, 2013 |
| | <ul style="list-style-type: none">• 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, <i>to be submitted to CIRP journal of manufacturing science and technology</i> | |
| PUBLICATIONS | Lei Liu , Marcello Urgo. Robust scheduling in a two-machine re-entrant flow shop to minimise the value-at-risk of the makespan: a branch-and-bound and heuristic algorithms based on Markovian Activity Networks and phase-type distribution, <i>major revision at Annals of Operations Research</i> Lei Liu , Marcello Urgo, 2023. Robust scheduling of a remanufacturing process for the repair of turbine blades, <i>CIRP Annals - Manufacturing Technology</i> Lei Liu , Marcello Urgo, 2023. Risk-based robust production scheduling: a branch-and-bound approach for the stochastic two-machine flow shop scheduling problem to minimise the value-at-risk, <i>International Journal of Production Research</i> Lei Liu , Marcello Urgo, 2022. A robust scheduling framework for re-manufacturing activities of turbine blades, <i>Applied Sciences</i> . 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 <i>Selected Topics in Manufacturing</i> . Springer, Cham. | |

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| CONFERENCE TALKS | A branch and bound approach for stochastic 2-machine flow shop scheduling with rework | |
| | <ul style="list-style-type: none"> • 18th International Workshop on Project Management and Scheduling(PMS), Ghent, Belgium | 2022 |
| | <ul style="list-style-type: none"> • 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 | |
| | <ul style="list-style-type: none"> • XV AITeM Conference (Italian Association of Manufacturing Technology), Milano, Italy | 2022 |
| | <ul style="list-style-type: none"> • Finalist, Young Researcher Award | |
| | A branch-and-bound approach for the two-machine flow shop stochastic scheduling problem to minimize the value-at-risk | |
| | <ul style="list-style-type: none"> • 31st European Conference on Operational Research(EURO), Athens, Greece | 2021 |
| TEACHING | TA, Mentor , Smart Manufacturing Lab | |
| | <ul style="list-style-type: none"> • 2021, 2022, 2023 | |
| OTHER PROFESSIONAL EXPERIENCES | Algorithm Engineer | 2018-2019 |
| | <ul style="list-style-type: none"> • ZheJiang Transportation Big Data Center, Hangzhou, China | |
| | Software Engineer | 2017-2018 |
| | <ul style="list-style-type: none"> • Hundsun Technologies Inc. Hangzhou, China | |
| MEMBERSHIPS | Student Member , EURO Working Group on Project Management and Scheduling (PMS) | |
| | Student Member , Italian Association for Manufacturing Technology (AITEM) | |
| COMPUTER SKILLS | Languages: C++, Python, Java, Latex | |
| | Software and tools: Gurobi, Pyomo, Plant simulation | |

last updated: June 14, 2023