

Lei LIU

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RESEARCH DISCIPLINE	Stochastic Scheduling and Project Management, Risk Measure, Markovian Network Analysis, Operations Management, Industrial Engineering
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 Spring, 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 Exchange student in Industrial Engineering 2015.09-2016.03 <ul style="list-style-type: none">• National Tsinghua University, Hsinchu, TaiWan 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. Lei Liu , Marcello Urgo. Robust Production Scheduling for the Re-manufacturing of Turbine Blades.
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>under review at Annals of Operations Research</i> Lei Liu , Marcello Urgo. Risk-based robust production scheduling: a branch-and-bound approach for the stochastic two-machine ow shop scheduling problem to minimise the value-at-risk, <i>under review at 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> , 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 <i>Selected Topics in Manufacturing</i> (pp. 41-59). Springer, Cham.

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, 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, Athens, Greece 	2021
	A branch and bound algorithm for the robust parallel machine scheduling with sequence dependent set-up time	
	<ul style="list-style-type: none"> • Cross-Strait Tsinghua University Doctoral Forum, Shenzhen, China 	2017
TEACHING	Mentor , Smart Manufacturing Lab	
	<ul style="list-style-type: none"> • 2020-2021, 2021-2022 	
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 	
	Data Intern	2015.01
	<ul style="list-style-type: none"> • KPMG, ShenZhen, 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	