Mattia Neroni

Via Petrarca, 4 - Reggio Emilia (Italy) · +393387169126 · mneroni@unimore.it ·
https://www.linkedin.com/in/mattia-neroni-081965101/ · https://github.com/mattianeroni ·
https://orcid.org/0000-0002-4507-4789

RESEARCH SCIENTIST IN OPERATIONS AND PROCESS OPTIMIZATION

Operations Management | Operations Research | Artificial Intelligence | Logistics

Reliable, friendly, energetic and resourceful research scientist with a Ph.D. in algorithms and artificial intelligence applied to logistics and manufacturing. Over five years experience in algorithms development, technical consulting, project management, logistics, supply chain, operations research, machine learning, web applications development. Over fifteen collaborations with different companies and twenty scientific publications. High willingness to learn and desire to constantly prove myself carry out more and more challenging tasks. Interest in working with people who are honest, direct, and without fake goodness.

WORK EXPERIENCE

Research Scientist (Postdoc) 10/2021 - PRESENT

University of Modena - Modena, ITALY
Responsible for the development of advanced research on logistics and operations improvement through algorithms and artificial intelligence.

- Actively worked on several collaborations with companies that involved the development of simulations and optimization algorithms for logistics environments.
- Actively worked on indicatively seven scientific publications on operations and processes improvement through algorithms and artificial intelligence techniques.
- Obtained great satisfaction from partner companies with a much higher productivity than other research scientists.

Founder and Product Manager 09/2021 - PRESENT

Kheperer Srl - Reggio Emilia, ITALY
Founder of a startup (www.kheperer.it) specialized in software development. Responsible for personnel recruitment, markeding, and product manager for Teban (an enterprise resource planner for engineering to order companies).

- Obtained two sales in the first six months of activity.
- Won an european fund for innovative startups.
- Hired and managed three software developers.

Adjunct Professor 10/2021 - 02/2022

University of Parma - Parma, ITALY
Responsible for teaching Lean Management to Master's Degree students in Management Engineering.

- Received great feedback from 100% of students.
- The course was awarded as the best course of the year.
- All students that asked for an internship have been accurately placed and actively participated in projects with partner companies.

Visiting Researcher 09/2021 - 05/2022

Universitat Oberta de Catalunya - Barcelona, SPAIN
Part-time involved in a collaboration with Universitat Oberta de Catalunya (remotely because of Covid-19 pandemic) on the application to last-mile logistics of simheuristic and learheuristic algorithms.

- Actively worked in the development of three algorithms and relative scientific publications.
- Actively worked in the collaborations with partner companies such as Spindox SpA and Cofarte Srl.
- Obtained great satisfaction of partner companies and demonstrated higher productivity than other colleagues.

Research Scientist (Postdoc) 10/2020 - 10/2021

University of Parma - Parma, ITALY
Research scientist working on the design, development, validation, and implementation of algorithms and machine learning models to logistics, supply chain, and manufacturing environments.

- Actively worked in the development of several algorithms and relative scientific publications.
- Actively worked in the creation of the software-based shielding, an innovative technique for automated inventory counting through radio frequency identification.
- Actively worked with several partner companies such as Matter Srl, Elettric80 SpA, Max Mara, and many others.
- Obtained great satisfaction of partner companies and demonstrated higher productivity than other colleagues.

Visiting Researcher 04/2020 - 06/2020

Universitat Oberta de Catalunya - Barcelona, SPAIN

Worked as visiting researcher responsible for the development and validation of biased randomized algorithms for productivity improvement in automated storage and retrieval systems.

Visiting Researcher 01/2019 - 04/2019

University of Applied Sciences - Stuttgart, GERMANY
Worked as visiting researcher responsible for the development of algorithms for productivity improvement in automated storage and retrieval systems.

EDUCATION

Ph.D. in Industrial Systems Engineering 10/2017 - 10/2020

University of Parma - Parma, ITALY
Ph.D. in Industrial Systems Engineering with the additional title of Doctor Europaeus (grade 4/4).

Master's Degree in Management Engineering 10/2015 - 10/2017

University of Parma - Parma, ITALY
Master's degree in management engineering (grade 106/110).

Bachelor's Degree in Management Engineering 10/2012 - 10/2015
University of Parma - Parma, ITALY

Bachelor's degree in management engineering (grade 98/110).

PROFESSIONAL SKILLS

- Experience in programming languages such as Python, Javascript, C++, Java, Go, SQL.
- Mastery of Microsoft Office (Word, Excel, PowerPoint) and Google Suite (Docs, Sheets, Slides).
- Comfortable working in both Ubuntu and Microsoft Windows.
- Good knowledge of commercial softwares such as Anylogic, Simul8, iFix Scada, Technomatix Plant Simulation.
- Excellent communication skills with a focus on team-building.
- Outstanding organizational, multitasking, and problem-solving abilities.

AWARDS AND HONORS

Guest Editor - *Sustainability MDPI* 12/2021

- Guest Editor on occasion of the Special Issue entitled "Industry 4.0 Impacts on Lean Production Systems: Sustainable Practices" and organized by the Sustainability Open Access Journal (www.mdpi.com/journal/sustainability/special_issues/lean_production)

Invited Author - *Winter Simulation Conference 2021 - Phoenix, AZ* 12/2021

- Co-author of an invited paper on occasion of the Winter Simulation Conference 2021 taking place at Phoenix. The article is: Herrera, E.; Neroni, M.; Panadero, J.; Bertolini, M.; Juan, A.

"Last-mile delivery of pharmaceutical items to heterogeneous healthcare centers with random travel times and unpunctuality fees". 2021 Winter Simulation Conference.

Invited Speaker - *Moscow International Logistics Forum 2020 - Moscow, Russia* 02/2020

- Invited speaker at Moscow International Logistics Forum to present some collaborations in the context of picking and internal logistics.

LANGUAGE COMPETENCIES

- Italian: mother tongue
- English: full professional proficiency
- German: basic
- Spanish: basic

SCIENTIFIC PUBLICATIONS

Bertolini, M., Braglia, M., Marrazzini, L., Neroni, M. (2021) Project Time Deployment: A new lean tool for losses analysis in Engineer-to-Order production environments. International Journal of Production Research, DOI: https://doi.org/10.1080/00207543.2021.1912428.

Neroni, M. (2021). Ant Colony Optimization with Warm-Up. Algorithms, 14(10), 295, DOI: https://doi.org/10.3390/a14100295.

Bertolini, M., Mezzogori, D., Neroni, M., Zammori, F. (2021) Machine Learning for industrial applications: a comprehensive literature review, Expert Systems with Applications, DOI: https://doi.org/10.1016/j.eswa.2021.114820.

Ammouriova, M., Bertolini, M., Castaneda, J., Juan, A. A., & Neroni, M. (2022). A Heuristic-Based Simulation for an Education Process to Learn about Optimization Applications in Logistics and Transportation. Mathematics, 10(5), 830. DOI: https://doi.org/10.3390/math10050830.

Neroni, M., Tebaldi, L. (2021) A hybrid heuristic algorithm for solving the Traveling Salesman Problem with Time Windows. Proceedings of the 20th International Conference on Modeling & Applied Simulation (MAS 2021), pp. 1-8, DOI: https://doi.org/10.46354/i3m.2021.mas.001.

Herrera, E., Neroni, M., Panadero, J., Bertolini, M., Juan, A. (2021) Last-mile delivery of pharmaceutical items to heterogenous centers with random travel times and unpunctuality fees, Winter Simulation Conference 2021. DOI: 10.1109/WSC52266.2021.9715531.

Esposito, G., Mezzogori, D., Neroni, M., Rizzi, A., Romagnoli, G. (2021) Software-based shielding for real-time inventory count in different store areas: A feasibility analysis in fashion retail, International Journal of RF Technologies, DOI: 10.3233/RFT-210294.

Neroni, M., Rizzi, A., Romagnoli, G., Rosa, M. (2022). RFID software-based shielding: Implementation of further approaches under varying surrounding conditions. International Journal of RF Technologies. DOI: 10.3233/RFT-220320.

Esposito, G., Mezzogori, D., Neroni, M., Rizzi, A., Romagnoli, G., Rosa, M. (2021) A review of RFID based solutions for indoor localization and location-based classification of tags, 26th Summer

School Francesco Turco.

Bertolini, M., Neroni, M., & Oliva, M. (2021). An operational framework for the definition of the supply chain strategies in ETO environments. In 26th Summer School Francesco Turco, 2021. DOI: 2-s2.0-85124674041.

Mezzogori, D., Neroni, M., Zammori, F. (2021). Cycle-time calculation in Shuttle Lift Crane based Automated Storage and Retrieval Systems. IIE Transactions, DOI: https://doi.org/10.1080/24725854.2020.1861391.

Bertolini, M., Neroni, M., Zammori, F. (2021). A flexible operating tool to provide an efficient project' s staffing and resource allocation. International Journal of Project Organisation and Management.

Bertolini, M., Neroni, M., Uckelmann, D. (In Press) A survey of literature on automated storage and retrieval systems from 2009 to 2019. International Journal of Logistics Systems and Management.

Bertolini, M., Melloni, R., Neroni, M. (2020). Order picking: a comparison of heuristic and metaheuristic approaches. 25th Summer school Francesco Turco, link: https://drive.google.com/file/d/1SbF1pwCfHJKUdq4ohGfiE2azIvvxF8OO/view.

Bertolini, M., Mezzogori, D., Neroni, M. (2019). Allocation of items considering unit loads balancing and joint retrieving. 24th Summer School Francesco Turco, DOI: http://www.scopus.com/inward/record.url?partnerID=3MLxHJVE&origin=inward&eid=2-s2.0-85081557195.

Bertolini, M., Esposito, G., Neroni, M., Rizzi, A., Romagnoli, G. (2019). A meta-analysis of industry 4.0-related technologies that are suitable for lean manufacturing. 24th Summer School Francesco Turco, DOI: 2-s2.0-85081612481.

Bertolini, M., Esposito, G., Mezzogori, D., Neroni, M. (2019). Optimizing Retrieving Performance of an Automated Warehouse for Unconventional Stock Keeping Units. Procedia Manufacturing, DOI: https://doi.org/10.1016/j.promfg.2020.01.272.

Bertolini, M., Esposito, G., Neroni, M., Romagnoli, G. (2019). Maturity Models in Industrial Internet: a Review. Procedia Manufacturing, DOI: https://doi.org/10.1016/j.promfg.2020.01.253.

Uckelmann, D., Mezzogori, D., Esposito, G., Neroni, M., Reverberi, D., Ustenko, M. (2020). Safety and Security in Federated Remote Labs–A Requirement Analysis. International Conference on Remote Engineering and Virtual Instrumentation.

Bertolini, M., Neroni, M., Romagnoli, G. (2018). A new heuristic algorithm to improve the design of a vertical storage system. 23rd Summer School Francesco Turco, DOI: http://www.scopus.com/inward/record.url?partnerID=3MLxHJVE&origin=inward&eid=2-s2.0-85056254061.

Uckelmann, D., Mezzogori, D., Esposito, G., Neroni, M., Reverberi, D., & Ustenko, M. (2021) Guideline to Safety and Security in Federated Remote Labs, International Journal of Online and Biomedical Engineering, DOI: 10.3991/ijoe.v17i04.18937.