

PROF. DR. FABIO SGARBOSSA

Full Professor of Industrial Logistics

Leader of the Production Management Research Group

Head of the Logistics 4.0 Lab

Department of Mechanical and Industrial Engineering

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EDUCATION & QUALIFICATION

2010	PhD in Industrial Engineering, University of Padova (Italy)
2005	MSc in Management Engineering (cum laude), University of Padova (Italy)

WORK EXPERIENCE

2018 – present	Full Professor of Industrial Logistics Leader of the Production Management Research Group (from 2020) Head of the Logistics 4.0 Lab Department of Mechanical and Industrial Engineering, NTNU, Norway
2015 – 2018	Associate Professor of Logistics and Industrial Facilities Department of Management and Engineering, University of Padova, Italy
2010 – 2015	Assistant Professor of Logistics and Industrial Facilities Department of Management and Engineering, University of Padova, Italy
2010	Assistant Researcher of Logistics and Industrial Facilities Department of Management and Engineering, University of Padova, Italy
2008	Visiting Researcher, Quality and Reliability Engineering Laboratory Department of Industrial and Systems Engineering, Rutgers University, USA

RESEARCH FIELDS

The main activities of my research are as follows:

- design and management of industrial production and logistics systems,
- operations management,
- supply chain management and logistics networks,
- technological innovation and digitalization in logistics,
- materials handling and warehousing,
- material management and inventory control,
- human factors in industrial systems,
- health care logistics and humanitarian logistics.

RESEARCH OUTPUT (SEE LIST OF THE PUBLICATIONS FOR DETAILS)

I am author and co-author of more than 120 publications in relevant international journals and international research conferences (first was published in 2007).

The scopus database (May 2021) has me listed as follows:

<https://www.scopus.com/authid/detail.uri?authorId=17346547400>:

- n° papers: 125
- total n° of citations: 2246
- h-index: 27.

POSITIONS IN ACADEMIA

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- | | |
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| 2021 – present | Member of working group at NTNU for the re-design of the educational offer at the faculty of Engineering, for the pilot on Mechanical and Industrial Engineering Program – Responsible for the Industrial Engineering and Management Educational Area. |
| 2021 – present | Managing editor for the Special Issue “Resiliency and sustainability in manufacturing networks” in Journal of Intelligent Manufacturing, coordinated by Prof. X. Delorme (FR), Prof. Ricardo Rabelo (BR), Fabio Sgarbossa (NO), Prof. Xavier Boucher (FR). |
| 2021 – present | Guest editor for the Special Issue “Human-centric production and logistics system design and management: transitioning from Industry 4.0 to 5.0” in International Journal of Production Research, with prof. Eric Gross (Saarland University, Germany), prof. W. Patrick Neumann (Ryerson University, Canada) and Dr. Cecilia Berlin (Chalmers University, Sweden). |
| 2020 – present | Associate Editor of International Journal of Production Research. |
| 2019 – present | Guest editor for the Special Issue “Ageing Workforce: interaction with Occupational Safety & Health Performance and Industrial Systems Productivity” in Safety Science, with prof. Guido J.L. Micheli (Politecnico of Milan, Italy), prof. Georgios Boustras and Dr. Cleo Varianou-Mikellidou (European University Cyprus, Cyprus). |
| 2019 – present | Member of the Advisory Board of the EU project entitled “Models and Methods for an Active Ageing Workforce: An International Academy project”, the “MAIA Project” (H2020-RISE-2019-MAIA-873077). |
| 2018 – present | Member of the scientific committee at the International congress IEA 2021 (International Ergonomics Association) in Vancouver, Canada, as expert of Industry 4.0 and Industrial Engineering and track responsible for “Ergonomics in Supply Chain Design and Management” |
| 2019 – 2020 | Organizer and chairman of the invited session “Human factors in industrial and logistic system of the future” (with Prof. Daria Battini – Università di Padova, Christoph Glock e Eric Grosse - Technische Universität Darmstadt, Germany and Patrick W. Neumann – Ryerson University, Canada) at the conference 21st IFAC World Congress in Berlin, Germany, July 12-17, 2020 – Berlin (Germany). |
| 2018 – 2019 | Organizer and chairman of the invited session “Human factors in industrial and logistic system of the future” (with Prof. Daria Battini – Università di Padova, Christoph Glock e Eric Grosse - Technische Universität Darmstadt, Germany and Patrick W. Neumann – Ryerson University, Canada) at the conference 9th IFAC Conference on Manufacturing Modelling, Management and Control MIM 2019 – Berlin (Germany). |

- 2017 – 2019 Member of the IPC (International Program Committee) of 9th IFAC Conference on Manufacturing Modelling, Management and Control MIM 2019 – Berlin (Germany).
- 2017 – 2018 Associate Editor of 16th IFAC Symposium on Information Control Problems in Manufacturing, IFAC INCOM 2018 – Bergamo (Italy).
- 2017 – 2018 President of the Jury for the Best Paper Award of 16th IFAC Symposium on Information Control Problems in Manufacturing, IFAC INCOM 2018 – Bergamo (Italy)
- 2017 – 2018 Member of the NOC (National Organizing Committee) and delegated for the invited and special sessions organization at 16th IFAC Symposium on Information Control Problems in Manufacturing, IFAC INCOM 2018 – Bergamo (Italy).
- 2017 - 2018 Organizer and chairman of the invited session “Human factors in industrial and logistic system design” (with Prof. Daria Battini – Università di Padova, Christoph Glock e Eric Grosse - Technische Universität Darmstadt, Germany and Patrick W. Neumann – Ryerson University, Canada) at the conference 16th IFAC Symposium on Information Control Problems in Manufacturing, IFAC INCOM 2018 – Bergamo (Italy).
- 2016 – 2018 Guest editor for the Special Issue “Customized Assembly Systems” in OMEGA, with prof. Olga Battaia (ISAE – SUPAERO, France), Dr. Alena Otto & Prof. Erwin Persch (UNIVERSITY OF SIEGEN, GERMANY).
- 2016 Member of the jury for the best paper award for the conference “8th IFAC / IEEE / IFORS / IFIP / INFORMS MIM 2016 Conference on Manufacturing Modelling, Management & Control” (Troyes, France).
- 2016 Organizer and chairman of the invited session “Human factors in industrial and logistic system design” (with Prof. Daria Battini – Università di Padova, Christoph Glock e Eric Grosse - Technische Universität Darmstadt, Germany and Patrick W. Neumann – Ryerson University, Canada) at the conference “8th IFAC / IEEE / IFORS / IFIP / INFORMS MIM 2016 Conference on Manufacturing Modelling, Management & Control” (Troyes, France).
- 2015 – 2016 Guest editor for the Special Issue “Human factors in industrial and logistic system design” in Computers & Industrial Engineering, with prof. Christoph Glock e Eric Grosse - Technische Universität Darmstadt, Germania and Patrick W. Neumann – Ryerson University, Canada.
- 2015 – 2016 Member of the editorial board of springerplus, ad section editor for the Engineering Section.
- 2015 Organizer and chairman of the invited session “Human factors in industrial and logistic system design” (with Prof. Daria Battini – Università di Padova, Christoph Glock e Eric Grosse - Technische Universität Darmstadt, Germany) at the conference “2015 IFAC Symposium on Information Control in Manufacturing”, (Ottawa, Canada).
- 2015 – 2017 Member of the scientific committee of the 5th and 7th “International Conference on Production Engineering and Management” (Trieste and Pordenone, Italy).
- 2015 – 2016 Guest editor for the special issue “Humanitarian Operations Management and Logistics” for the International Journal of Operations and Quantitative Management with prof. Sander de Leeuw (VU university – Netherlands).
- 2014 – 2018 Coordinator of Erasmus+ mobility Bilateral Agreement between University of Padova and Technische Universität Darmstadt (Germany), and between University of Padova and Chalmers University of Technology (Sweden), and Coordinator of the international affairs of the doctoral school in “Mechatronics and Product Innovation Engineering” and of the master degree program in “Product Innovation Engineering” at the University of Padova.

2014 – 2018	Member of several committees (teaching, evaluation, library and others) at University of Padova
2014	Organizer and chairman of the Special Session “Medical device management, Warehousing and Distribution: an Italian Perspective” at the “International Symposium on Healthcare Improvement and Innovation and Research Workshop on Digitalizing Health” (Prato, Italy).
2013	Member of the organizing and scientific committee of the 2nd International Workshop on Supply Chain Management in Emerging and Challenging Sectors: Energy, Food and Healthcare and of the 2nd International Workshop on Innovations in Healthcare Delivery and Management, (Venice, Italy).
2011 – 2012	Member of the organizing and scientific committee of the XVI and XVII Summer School “Francesco Turco” about Industrial Systems Engineering.
2010 – 2018	Responsible of the new research in the logistics laboratories of the department related to the development and integrated study of new packaging solutions, innovative logistics systems, new indoor positioning systems for logistics, innovative monitoring system for logistics and the use and analysis of motion capture systems for ergonomic assessment and efficiency of the various assembly, productive workstations and warehousing activities.
2005 – present	Reviewer for several international journals, in particular International Journal of Production Economics, European Journal of Operational Research, Computer & Industrial Engineering and International Journal of Production Research, Omega and others

MAIN INTERNATIONAL AND NATIONAL RESEARCH PROJECTS (as Principal Investigator or Member)

2020 – present	Project: “Sustainable logistics of the future (FutureLOG)”, funded to Norwegian Research Council – <u>Principal Investigator</u> (total project 700 k€) – International Partnership, with 18 international universities and research centers.
2020 – present	Project: “Innovative design for logistics approach in the production of refrigeration system” between NTNU and STUDIO 54 – <u>Principal Investigator</u> (about 20 k€)
2018 – present	IPN Project: “Smart, transparent and sustainable food supply chains”, funded by Norwegian Research Council – <u>Leader</u> of a Work Package (total project 1500 k€, WP: 400k€)
2018 – present	Project: “Smart material handling for innovative industry”, funded by NTNU – Faculty of Engineering <u>Principal Investigator</u> (about 150 k€ as scholarship for a PhD and Investment in Log 4.0 Laboratory)
2018 – 2019	Project: “Innovative solutions for the in-house logistics in the production of refrigeration systems” between NTNU and STUDIO 54 – <u>Principal Investigator</u> (about 20 k€)
2018 – 2019	Establishment of Logistics 4.0 Lab, funded by Department of Mechanical and Industrial Engineering (NTNU) – <u>Principal Investigator</u> (about 300 k€)
2016 – 2018	Project: “Worker-centered models for high-performance logistics systems”, granted by University of Padova – <u>Principal Investigator</u> (about 40 k€)
2015 – 2017	European Project: europeaid/135-474/DD/ACT/IN “EU INDIA research and innovation partnership for efficient and sustainable freight transportation” - Member
2015 – 2017	Project: “Human-Friendly Smart Workstation for supporting the ageing workforce involvement in industrial environments” granted by University of Padova - Member
2013 – 2016	Project: “Development of innovative environmental-friendly and safety processes for the production and distribution of fresh-food products” granted by Fondazione CariVerona – <u>Coordinator</u> of the Logistics Research Group (about 150 k€)
2013 – 2016	Project: “New Design Models for Automated Live-Cube Compact Storage Systems” granted by University of Padova - Member
2010 – 2014	Project: “Development of low energy consumption technologies, low environmental impact materials using and implementation of systems for the food safety and product quality. Commercial analysis and economic sustainability of research outcomes” granted by Fondazione CariVerona – <u>Coordinator</u> of the Logistics Research Group (about 150 k€)
2013 – 2014	European Project EU: “Implementation of the liquid infusion in the manufacturing of aerospace structures (ILMAS)”, 338413 - Member
2010 – 2013	Project: "Modeling, simulation and testing of innovative supply networks for drug management in the healthcare sector" granted by MIUR (Ministero dell'università e della Ricerca) - Member
2010 – 2013	Project: “Logistic package systems design: innovative models and tools” granted by University of Padova - Member
2005 – 2018	Principal Investigator and member of many research projects between Department of Management and Engineering and national companies concerning industrial logistics, supply chain management, operations management, industrial system design, industrial plants efficiency improvement, development of innovative tools and new maintenance policies (total amount of about 200 k€).

KEYNOTES & INVITED SPEAKER

2021	Plenary talk on Logistics of the future at 2021 INFORMS Conference on Service Science, Aug. 10-12, 2021, Beijing, China
2021	Invited speaker on Logistics of the future at "Doctoral Seminar Lunch", January 2021, Polytechnic of Milan, Italy
2020	Invited speaker on Logistics 4.0 at "The European House – Ambrosetti", February 2020, Bergamo, Italy
2019	Invited speaker on New technologies for Logistics at the Material Handling Teaching Institute (MHTI 2019), in San Marcos, TX - USA.
2018	Invited speaker at the 8th International students' symposium on logistics and international business (ISSLIB 2018), November 2018, Izmir, Turkey
2018	Invited speaker as panelist on Production Logistics 4.0 at the 16th International Material Handling Research Colloquium (IMHRC 2018), in Savannah, GA - USA.
2018	Keynote speaker on "New technologies and Human Factors in Warehousing 4.0" at seminar at Erasmus Rotterdam Business School June, 2018 Rotterdam, Netherlands.
2017 - 2018	Keynote speaker on 4 seminars on "Innovation in Logistics" for the Master in Innovation Management at CUOA Business School, Vicenza, Italy.
2017	Keynote speaker on the seminar "Capturing Value from Digitalization of Logistics" at the Fraunhofer Institute - Production Academy in Stuttgart (Stuttgarter Produktionsakademie). Seminar SPA 385, October 10-11, Stuttgart, Germany.
2016	Keynote speaker on "Human Factors in Industrial and Logistic System Design" at the Logistic Symposium organized by Technische Universität Darmstadt, Germany.
2015	Keynote speaker (with Prof. Daria Battini) on "Ergonomics and Part Feeding in Assembly Line Design and Balancing" at the workshop, ALBP 60 Years Later: State-of-the-Art and Future Developments Roadmap - ISAE-SUPAERO (Toulouse, France).
2015	Keynote speaker on "Ergonomics in Industrial Systems Design and Management" at the International Summer School, A Holistic Approach to Workplace Health-Promotion and Corporate Wellness, organized by a consortium of European Universities (Izola, Slovenia).

AWARDS

2020	The paper: Calzavara, M., Battini, D., Bogataj, D., Sgarbossa, F., & Zennaro, I. (2020). Ageing workforce management in manufacturing systems: state of the art and future research agenda. <i>International Journal of Production Research</i> , 58(3), 729-747 is one of top cited <i>International Journal of Production Research</i> papers published in the 2020 volume.
2019	Commended Paper Award for FONTANA GRANOTTO, G.; SGARBOSSA, F.; GLOCK, C.; GROSSE, E. "The effect of worker fatigue on the performance of a bucket brigade order picking system" at MIM 2019 - 9th IFAC/IFIP/IFORS/INFORMS et al. Conference on Manufacturing Modelling, Management and Control MIM 2019, Berlin (among 700 papers).
2019	One of my Master Student received VWI Graduation award by Verband Deutscher Wirtschaftsingenieure e.V. in Berlin, prize awarded to final thesis "Impact of monetary incentives and personality traits on performance in order picking" written by Michelle Maurer, supervised by Dr. Eric Grosse, Dr. Martina Calzavara and me.
2018	Paper of the Month (January 2018) of <i>International Journal of Production Research</i> for the paper BATTINI, D., CALZAVARA, M., OTTO, A., & SGARBOSSA, F. (2018). Preventing ergonomic risks with integrated planning on assembly line balancing and parts feeding. <i>INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH</i> , 1-21.
2017	Best Reviewer Award for OMEGA journal for his extraordinary job done in editing the Special Issue "Customized Assembly Systems".
2015	Best Application Paper for BATTINI D., SGARBOSSA F., DELORME X., DOLGUI A., (2015), "Assembly Line Balancing with Ergonomics Paradigms: Two Alternative Methods" at INCOM 2015 - 15th IFAC/IEEE/IFIP/IFORS Symposium on Information Control Problems in Manufacturing (Ottawa, Canada).
2015	Top 10 papers (among 600) of the conference INCOM 2015 (Ottawa, Canada) for the paper Battini, D., Glock, C. H., Grosse, E. H., Persona, A., & Sgarbossa, F. (2015). Ergo-lot-sizing: Considering ergonomics in lot-sizing decisions. <i>IFAC-PapersOnLine</i> , 28(3), 326–331. at INCOM 2015 - 15th IFAC/IEEE/IFIP/IFORS Symposium on Information Control Problems in Manufacturing (Ottawa, Canada).
2014	One of my PhD Students received the Prof. Lazzarin Award for best PhD thesis at the University of Padova (Italy).
2012	One of my PhD Students received the award for best proposed research at Bundesvereinigung Logistik (BVL), at ELA Research Day - 29th International Supply Chain Conference & EUROLOG 2012 (Berlin, Germany).
2008	Awarded Best Paper for BATTINI D., FACCIO M., PERSONA A., SGARBOSSA F. (2008), "A Single Vendor, Multiple Buyer Inventory Model for Evaluating Consignment Stock Policy" at the Global Business and Innovation Development Conference (BIRC, Emerald, Elsevier, Science Direct Conference), Rio De Janeiro, Brazil. ISBN 978-1-60585-005-4

LIST OF PUBLICATIONS FROM SCOPUS (UPDATE MAY 2021)

2021

- Fragapane, G., de Koster, R., Sgarbossa, F., Strandhagen, O., (2021). Planning and control of autonomous mobile robots for intralogistics: Literature review and research agenda. Invited Review *European Journal of Operational Research*
- Fragapane, G., Sgarbossa, F., Hvolby, H., Strandhagen, O., (2021). Autonomous mobile robots for sterile instrument logistics in hospitals, *Production Planning and Control*
- Sgarbossa, F., Peron, M., Lolli, F., Balugani, E., (2021). Conventional or additive manufacturing for spare parts management: An extensive comparison for Poisson demand, *International Journal of Production Economics*
- Peron, M., Sgarbossa, F., Strandhagen, J.O (2021) Decision Support System for implementing assistive technologies in assembly systems. *International Journal of Production Research*.
- Florian E., Sgarbossa, F., Zennaro, I., (2021). Machine Learning for predictive maintenance: a cost-oriented model for implementation. *International Journal of Production Economics*
- Fager, P., Calzavara, M., & Sgarbossa, F. (2021). Cost modelling of onboard cobot-supported item sorting in a picking system. Selected from MIM conference, *International Journal of Production Research*.
- Leoni, L., BahooToroody, A., Abaei, M. M., De Carlo, F., Paltrinieri, N., & Sgarbossa, F. (2021). On hierarchical bayesian based predictive maintenance of autonomous natural gas regulating operations. *Process Safety and Environmental Protection*, 147, 115-124.
- Peron, M., Alfnes, E., Sgarbossa, F. (2021) Best Practices of Just-in-Time 4.0: Multi Case Study Analysis. *Lecture Notes in Electrical Engineering*, 737, pp. 636-643.
- Simonetto, M., Peron, M., Fragapane, G., Sgarbossa, F. (2021) Digital Assembly Assistance System in Industry 4.0 Era: A Case Study with Projected Augmented Reality. *Lecture Notes in Electrical Engineering*, 737, pp. 644-651.

2020

- Buer, S. V., Semini, M., Strandhagen, J. O., & Sgarbossa, F. (2020). The complementary effect of lean manufacturing and digitalisation on operational performance. *International Journal of Production Research*, 1-17.

- Sgarbossa, F., Grosse, E. H., Neumann, W. P., Battini, D., & Glock, C. H. (2020). Human factors in production and logistics systems of the future. *Annual Reviews in Control*.
- Peron, Mirco, Giuseppe Fragapane, Fabio Sgarbossa, and Michael Kay. "Digital Facility Layout Planning." *Sustainability* 12, no. 8 (2020): 3349.
- Oluyisola, O. E., Sgarbossa, F., & Strandhagen, J. O. (2020). Smart Production Planning and Control: Concept, Use-Cases and Sustainability Implications. *Sustainability*, 12(9), 3791.
- Finco, S., Battini, D., Delorme, X., Persona, A., & Sgarbossa, F. (2020). Workers' rest allowance and smoothing of the workload in assembly lines. *International Journal of Production Research*, 58(4), 1255-1270.
- Fragapane, G., Peron, M., Sgarbossa, F. (2020). Cloud Material Handling Systems: conceptual model and cloud-based scheduling of handling activities. *Book Chapter in "Scheduling in Industry 4.0 and Cloud Manufacturing" – Springer*.
- Battini, D., Sgarbossa, F., Finco S. (2020). Human-oriented assembly line balancing and sequencing model in the Industry 4.0 era. *Book Chapter in "Scheduling in Industry 4.0 and Cloud Manufacturing" – Springer*.
- Fragapane, G., Peron, M., Sgarbossa, F., Strandhagen, J.O., Ivanov, D., (2020) Increasing flexibility and productivity in Industry 4.0 production networks with autonomous mobile robots and smart intralogistics. *Annals of Operations Research*. 1-19.
- Fager, P., Calzavara, M., & Sgarbossa, F. (2020). Modelling time efficiency of cobot-supported kit preparation. *The International Journal of Advanced Manufacturing Technology*, 106(5), 2227-2241.
- Botti, Lucia, Daria Battini, Fabio Sgarbossa, and Cristina Mora. "Door-to-door waste collection: Analysis and recommendations for improving ergonomics in an Italian case study." *Waste Management* 109 (2020): 149-160.
- Simonetto, M., & Sgarbossa, F. (2020, August). Introduction to Material Feeding 4.0: Strategic, Tactical, and Operational Impact. In *IFIP International Conference on Advances in Production Management Systems* (pp. 158-166). Springer, Cham.
- Vijayakumar, V., & Sgarbossa, F. (2020, August). Tools for Evaluating Human Factor Aspects in Production and Logistics System. In *IFIP International Conference on Advances in Production Management Systems* (pp. 591-598). Springer, Cham.

Fragapane, G., Hvolby, H. H., Sgarbossa, F., & Strandhagen, J. O. (2020, August). Autonomous Mobile Robots in Hospital Logistics. In *IFIP International Conference on Advances in Production Management Systems* (pp. 672-679). Springer, Cham.

2019

Fragapane, G., Zhang, C, Sgarbossa, F., Strandhagen, J.O., (2019) An agent-based simulation approach to model hospital logistics. *International Journal of Simulation Modelling*.

Finco, Serena, Daria Battini, Xavier Delorme, Alessandro Persona, and Fabio Sgarbossa. "Workers' rest allowance and smoothing of the workload in assembly lines." *International Journal of Production Research* (2019): 1-16.

Sgarbossa, F., Zennaro, I., Florian, E., Calzavara, M., (2019). Age replacement policy in the case of no data: The effect of Weibull parameter estimation *International Journal of Production Research*, in press.

Sgarbossa, F., Calzavara, M., & Persona, A. (2019). Throughput models for a dual-bay VLM order picking system under different configurations. *Industrial Management & Data Systems*.

Calzavara, M., Sgarbossa, F., & Persona, A. (2019). Vertical Lift Modules for small items order picking: an economic evaluation. *International Journal of Production Economics*, 210, 199-210.

Calzavara, M., Glock, C. H., Grosse, E. H., & Sgarbossa, F. (2019). An integrated storage assignment method for manual order picking warehouses considering cost, workload and posture. *International Journal of Production Research*, 57(8), 2392-2408.

Calzavara, M., Battini, D., Bogataj, D., Sgarbossa, F., Zennaro, I. (2019). Ageing workforce management in manufacturing systems: state of the art and future research agenda. *International Journal of Production Research*.

Fragapane, G., Sgarbossa, F., Strandaghen, J.O. (2019). Autonomous mobile robots for smart, sustainable material handling: A research agenda. *6th International EurOMA Sustainable Operations and Supply Chains Forum*, 18-19 March 2019, in Gothenburg

Fontana Granotto, F., Sgarbossa, F., Grosse, E., Glock, C. (2019). The effect of worker fatigue on the performance of a bucket brigade order picking system. *IFAC-PapersOnLine (AWARDED AS HIGH COMMENDED PAPER)*

Fager, P., Calzavara, M., Sgarbossa, F. (2019). Kit preparation with cobot-supported sorting in mixed model assembly. *IFAC-PapersOnLine*

2018

Battini, D., Calzavara, M., Isolan, I., Sgarbossa, F., & Zangaro, F. (2018). Sustainability in Material Purchasing: A Multi-Objective Economic Order Quantity Model under Carbon Trading. *Sustainability*, 10(12), 4438.

Battini, D., Calzavara, M., Persona, A., Sgarbossa, F. (2018). A method to choose between carton from rack picking or carton from pallet picking. *Computers and Industrial Engineering*. In press.

Zennaro, I., Battini, D., Sgarbossa, F., Persona, A., & De Marchi, R. (2018). Micro downtime: Data collection, analysis and impact on OEE in bottling lines the San Benedetto case study. *International Journal of Quality and Reliability Management*, 35(4), 965–995. <https://doi.org/10.1108/IJQRM-11-2016-0202>

Calzavara, M., Persona, A., Sgarbossa, F., & Visentin, V. (2018). A model for rest allowance estimation to improve tasks assignment to operators. *International Journal of Production Research*. <https://doi.org/10.1080/00207543.2018.1497816>

Battaïa, O., Otto, A., Sgarbossa, F., & Pesch, E. (2018). Future trends in management and operation of assembly systems: from customized assembly systems to cyber-physical systems. *Omega (United Kingdom)*, 78, 1–4. <https://doi.org/10.1016/j.omega.2018.01.010> (**Editorial**)

Calzavara, M., Persona, A., Sgarbossa, F., & Visentin, V. (2018). A device to monitor fatigue level in order-picking. *Industrial Management and Data Systems*, 118(4), 714–727. <https://doi.org/10.1108/IMDS-05-2017-0182>

Calzavara M., Persona A., Sgarbossa F., (2018), Economic and performance analysis of dual-bay Vertical Lift Modules, *15th International Material Handling Research Colloquium (IMHRC 2018)* Savannah, USA, 22-26 July 2018 (**Invited Contribution**)

Sgarbossa F. (2018) Production Logistics in the I4.0 era. *15th International Material Handling Research Colloquium (IMHRC 2018)* Savannah, USA, 22-26 July 2018 (**Invited Speech**)

Winkelhaus, S., Sgarbossa, F., Calzavara, M., & Grosse, E. H. (2018). The effects of human fatigue on learning in order picking: an explorative experimental investigation. *IFAC-PapersOnLine*, 51(11), 832-837.

- Sgarbossa, F., Zennaro, I., Florian, E., & Persona, A. (2018). Impacts of weibull parameters estimation on preventive maintenance cost. *IFAC-PapersOnLine*, 51(11), 508-513.
- Battini, D., Botti, L., Mora, C., & Sgarbossa, F. (2018). Ergonomics and human factors in waste collection: analysis and suggestions for the door-to-door method. *IFAC-PapersOnLine*, 51(11), 838-843.
- Zangaro, F., Battini, D., Calzavara, M., Persona, A., & Sgarbossa, F. (2018). A Model to Optimize the Reference Storage Assignment in a Supermarket to Expedite the Part Feeding Activities. *IFAC-PapersOnLine*, 51(11), 1470-1475.
- Finco, S., Battini, D., Delorme, X., Persona, A., & Sgarbossa, F. (2018). Heuristic methods to consider rest allowance into assembly balancing problem. *IFAC-PapersOnLine*, 51(11), 669-674.
- Abdous, M. A., Delorme, X., Battini, D., Sgarbossa, F., & Berger-Douce, S. (2018). Multi-objective optimization of assembly lines with workers fatigue consideration. *IFAC-PapersOnLine*, 51(11), 698-703.
- Calzavara M., Persona A., & Sgarbossa F., (2018). Modelling of Rail Guided Vehicles serving an automated parts-to-picker system. *IFAC-PapersOnLine*, 51(11), 1476-1481.
- Zuin, S., Calzavara, M., Sgarbossa, F., & Persona, A. (2018). Ultra Wide Band Indoor Positioning System: analysis and testing of an IPS technology. *IFAC-PapersOnLine*, 51(11), 1488-1492.
- Visentin, V., Sgarbossa, F., Calzavara, M., & Persona, A. (2018). Fatigue accumulation in the assignment of manual material handling activities to operators. *IFAC-PapersOnLine*, 51(11), 826-831.
- Battini, D., Calzavara, M., Persona, A., Sgarbossa, F., Visentin V., Zennaro, I. (2018). Integrating mocap system and immersive reality for efficient human-centred workstation design. *IFAC-PapersOnLine*, 51(11), 188-193.

2017

- Battini, D., Glock, C. H., Grosse, E. H., Persona, A., & Sgarbossa, F. (2017). Reprint of "Ergo-lot-sizing: An approach to integrate ergonomic and economic objectives in manual materials handling." *International Journal of Production Economics*.
<https://doi.org/10.1016/j.ijpe.2017.11.003>

- Sgarbossa, F., & Russo, I. (2017). A proactive model in sustainable food supply chain: Insight from a case study. *International Journal of Production Economics*, 183, 596–606. <https://doi.org/10.1016/j.ijpe.2016.07.022>
- Battini, D., Calzavara, M., Persona, A., & Sgarbossa, F. (2017). Additional effort estimation due to ergonomic conditions in order picking systems. *International Journal of Production Research*, 55(10), 2764–2774. <https://doi.org/10.1080/00207543.2016.1190879>
- Battini, D., Glock, C. H., Grosse, E. H., Persona, A., & Sgarbossa, F. (2017). Ergo-lot-sizing: An approach to integrate ergonomic and economic objectives in manual materials handling. *International Journal of Production Economics*, 185, 230–239. <https://doi.org/10.1016/j.ijpe.2017.01.010>
- Calzavara, M., Glock, C. H., Grosse, E. H., Persona, A., & Sgarbossa, F. (2017). Analysis of economic and ergonomic performance measures of different rack layouts in an order picking warehouse. *Computers and Industrial Engineering*, 111, 527–536. <https://doi.org/10.1016/j.cie.2016.07.001>
- Glock, C. H., Grosse, E. H., Neumann, W. P., & Sgarbossa, F. (2017). Editorial: Human factors in industrial and logistic system design. *Computers and Industrial Engineering*, 111, 463–466. <https://doi.org/10.1016/j.cie.2017.08.014> (**Editorial**)
- Battini, D., Calzavara, M., Otto, A., & Sgarbossa, F. (2017). Preventing ergonomic risks with integrated planning on assembly line balancing and parts feeding. *International Journal of Production Research*, 1–21. <https://doi.org/10.1080/00207543.2017.1363427>
- Battini, D., Calzavara, M., Finco, S., Persona, A., & Sgarbossa, F. (2017). Design and improvement of big-size products assembly lines: State of the art and characteristics. In *Proceedings of the Summer School Francesco Turco* (Vol. 2017–Septe, pp. 279–285).
- Calzavara, M., Persona, A., Sgarbossa, F., & Visentin, V. (2017). Recovery time setting for order picking activities. In *Proceedings of the Summer School Francesco Turco* (Vol. 2017–Septe, pp. 68–74).
- Calzavara, M., Hanson, R., Sgarbossa, F., Medbo, L., & Johansson, M. I. (2017). Picking from pallet and picking from boxes: a time and ergonomic study. *IFAC-PapersOnLine*, 50(1), 6888–6893. <https://doi.org/10.1016/j.ifacol.2017.08.1212>
- Grosse, E. H., Calzavara, M., Glock, C. H., & Sgarbossa, F. (2017). Incorporating human factors into decision support models for production and logistics: current state of research. *IFAC-PapersOnLine*, 50(1), 6900–6905. <https://doi.org/10.1016/j.ifacol.2017.08.1214>

- Calzavara, M., Sgarbossa, F., Persona, A., Glock, C., Grosse, E. (2017). Vergleich unterschiedlicher papierloser Kommissioniersysteme. In *WAREHOUSING 4.0 - Technische Lösungen und Managementkonzepte für die Lagerlogistik der Zukunft*. ISBN: 978-3-944325-07-1. **(Book Chapter)**
- Sgarbossa, F., Calzavara M., Persona, A., Battini, D. (2017). Economic and performance analysis of dual tray Vertical Lift Modules (VLMs). *Proceedings of the 24th International Conference on Production Research (ICPR 22)*, **(Selected for the Special Issue on IJPE)**.
- Calzavara, M., Sgarbossa, F., Glock, C., Grosse, E. (2017). Analytical models for a joint posture and fatigue analysis in order picking. in: *Bousonville, T., Melo, T., Rezg, N., Vernadat, F. (eds.): Proceedings of the International Conference on Industrial Engineering and Systems Management, IESM 2017*, 11. - 13. Oktober 2017, Saarbrücken. Industry and Logistics 4.0: Trends, Benefits, and Challenges for Industrial Growth, pp. 32-37. **(Selected for the Special Issue on IJPR)**.
- Bogataj, D, Battini, D, Persona, A, Sgarbossa, F, Kovačić, D. (2017) Data driven close loop supply chains for sustainable logistics of the meat industry. V: *PAWAR, Kulwant S (Ed.), POTTER, Andrew (Ed.), LISEC, Andrej (Ed.). Data driven supply chains : The proceedings of 22nd International Symposium on Logistics, Ljubljana, Slovenia, 9-12th July 2017*. Nottingham: Business School. cop. 2017, pp. 602-609.
- Battini, D., Calzavara, M, Persona, A., Sgarbossa, F. (2017). MRP Theory Supporting Trade-Off between Investments in Collaborative Robots and Production in Foreign Countries for a Water Pumps Supply Chains. *SOR 2017 Proceedings* pp:229-234.

2016

- Battini, D., Calzavara, M., Persona, A., & Sgarbossa, F. (2016). Sustainable Packaging Development for Fresh Food Supply Chains. *Packaging Technology and Science*, 29(1), 25–43. <https://doi.org/10.1002/pts.2185>
- Battini, D., Peretti, U., Persona, A., & Sgarbossa, F. (2016). Sustainable humanitarian operations: Closed-loop supply chain. *International Journal of Services and Operations Management*, 25(1), 65–79. <https://doi.org/10.1504/IJSOM.2016.078067>
- Battini, D., Glock, C. H., Grosse, E. H., Persona, A., & Sgarbossa, F. (2016). Human energy expenditure in order picking storage assignment: A bi-objective method. *Computers and Industrial Engineering*, 94, 147–157. <https://doi.org/10.1016/j.cie.2016.01.020>

- Andriolo, A., Battini, D., Calzavara, M., Gamberi, M., Peretti, U., Persona, A., ... Sgarbossa, F. (2016). New RFID pick-To-light system: Operating characteristics and future potential. *International Journal of RF Technologies: Research and Applications*, 7(1), 43–63. <https://doi.org/10.3233/RFT-150071>
- Battini, D., Delorme, X., Dolgui, A., Persona, A., & Sgarbossa, F. (2016). Ergonomics in assembly line balancing based on energy expenditure: A multi-objective model. *International Journal of Production Research*, 54(3), 824–845. <https://doi.org/10.1080/00207543.2015.1074299>
- Andriolo, A., Battini, D., Persona, A., & Sgarbossa, F. (2016). A new bi-objective approach for including ergonomic principles into EOQ model. *International Journal of Production Research*, 54(9), 2610–2627. <https://doi.org/10.1080/00207543.2015.1113324>
- Persona, A., Sgarbossa, F., & Pham, H. (2016). Systemability: A New Reliability Function for Different Environments. In: *Quality and reliability management and its applications* (pp. 145-193). Springer London. **(Book Chapter)**.
- Battini, D., Mazzon, S., Persona, A., & Sgarbossa, F. (2016). Condition-based maintenance in a bottling line. In *Proceedings - 22nd ISSAT International Conference on Reliability and Quality in Design* (pp. 60–64).
- Battini, D., Calzavara, M., Otto, A., & Sgarbossa, F. (2016). The Integrated Assembly Line Balancing and Parts Feeding Problem with Ergonomics Considerations. *IFAC-PapersOnLine*, 49(12), 191–196. <https://doi.org/10.1016/j.ifacol.2016.07.594> **(Selected for the Special Issue on IJPR)**
- Battini, D., Celin, A., Persona, A., Sgarbossa, F., & Zennaro, I. (2016). Reliability analysis based on field microdowntime data: A bottle production plant case study. In *Proceedings - 22nd ISSAT International Conference on Reliability and Quality in Design* (pp. 343–347).
- Sgarbossa, F., Battini, D., Persona, A., & Visentin, V. (2016). Including ergonomics aspects into mixed-model assembly line balancing problem. *Advances in Intelligent Systems and Computing* (Vol. 489). https://doi.org/10.1007/978-3-319-41694-6_94
- Calzavara, M., Glock, C. H., Grosse, E. H., Persona, A., & Sgarbossa, F. (2016). Models for an ergonomic evaluation of order picking from different rack layouts. *IFAC-PapersOnLine*, 49(12), 1715–1720. <https://doi.org/10.1016/j.ifacol.2016.07.829> **(Selected for the Special Issue on IJPR)**.

- Battini D., Calzavara M., Mazzon S, Persona A., Sgarbossa F., (2016), Balancing assembly line and part picking at once to achieve economic gains in assembly system management In: *19th International working seminar on production economics*, February 23-26, 2016.
- Battini D., Persona A., Sgarbossa F., Visentin V. (2016), Sustainable purchasing and transportation in a global supply chain scenario under a cap and trade system In: *19th International working seminar on production economics*, February 23-26, 2016.
- Battini D., Glock C., Grosse E., Persona A., Sgarbossa F., (2016), An integrated approach to include ergonomics in lot-sizing decision In: *19th International working seminar on production economics*, February 23-26, 2016 (***Selected for the Special Issue on IJPE***).
- Battini D., Calzavara M., Persona A., Sgarbossa F., (2016), Dual-tray vertical lift modules for fast order picking, *14th International Material Handling Research Colloquium (IMHRC 2016)* Karlsruhe Institute of Technology Baden-Württemberg, Germany, 12-16 June 2016 (***Invited Contribution***)
- Sgarbossa F. (2016), Human factors in industrial and logistic system design, “*Logistic Summit - Industrial and Academics Meeting*”, Technische Universität Darmstadt, Germany, 11-13 May 2016 (***Invited speech***)

2015

- Battini, D., Calzavara, M., Persona, A., & Sgarbossa, F. (2015). A comparative analysis of different paperless picking systems. *Industrial Management and Data Systems*, 115(3), 483–503. <https://doi.org/10.1108/IMDS-10-2014-0314>
- Sgarbossa, F., Persona, A., & Pham, H. (2015). Using systemability function for periodic replacement policy in real environments. *Quality and Reliability Engineering International*, 31(4), 617–633. <https://doi.org/10.1002/qre.1620>
- Andriolo, A., Battini, D., Persona, A., & Sgarbossa, F. (2015). Haulage sharing approach to achieve sustainability in material purchasing: New method and numerical applications. *International Journal of Production Economics*, 164, 308–318. <https://doi.org/10.1016/j.ijpe.2014.12.011>
- Sgarbossa, F., & De Leeuw, S. D. (2015). Humanitarian Operations Management. *International Journal of Operations and Quantitative Management*, 21(1), 1–3. (***Editorial***)

- Battini, D., Gamberi, M., Persona, A., & Sgarbossa, F. (2015). Part-feeding with supermarket in assembly systems: Transportation mode selection model and multi-scenario analysis. *Assembly Automation*, 35(1), 149–159. <https://doi.org/10.1108/AA-06-2014-053>
- Battini, D., Calzavara, M., Persona, A., & Sgarbossa, F. (2015). Order picking system design: The storage assignment and travel distance estimation (SA&TDE) joint method. *International Journal of Production Research*, 53(4), 1077–1093. <https://doi.org/10.1080/00207543.2014.944282>
- Peretti, U., Tatham, P., Wu, Y., & Sgarbossa, F. (2015). Reverse logistics in humanitarian operations: challenges and opportunities. *Journal of Humanitarian Logistics and Supply Chain Management*, 5(2), 253–274. <https://doi.org/10.1108/JHLSCM-07-2014-0026>
- Sgarbossa, F., Peretti, U., Persona, A., & Tatham, P. (2015). Multi-criteria decision-making in the management of humanitarian operations. *International Journal of Services and Operations Management*, 22(4), 413–441. <https://doi.org/10.1504/IJSOM.2015.072735>
- Azzi, A., Battini, D., Persona, A., & Sgarbossa, F. (2015). Logistics cycle indexes: Supply Network Analysis takes a step further. In *Proceedings of the 13th International Symposium on Operational Research, SOR 2015* (pp. 209–214).
- Battini, D., Delorme, X., Dolgui, A., & Sgarbossa, F. (2015). Assembly line balancing with ergonomics paradigms: Two alternative methods. *IFAC-PapersOnLine*, 48(3), 586–591. <https://doi.org/10.1016/j.ifacol.2015.06.145> (***Nominated for the Best Application paper Award and Winner of the Best Application Paper Award***)
- Battini, D., Glock, C. H., Grosse, E. H., Persona, A., & Sgarbossa, F. (2015). Ergo-lot-sizing: Considering ergonomics in lot-sizing decisions. *IFAC-PapersOnLine*, 28(3), 326–331. <https://doi.org/10.1016/j.ifacol.2015.06.102> (***Nominated for the Best Application paper Award***)
- Daria, B., Martina, C., Alessandro, P., & Fabio, S. (2015). Linking human availability and ergonomics parameters in order-picking systems. *IFAC-PapersOnLine*, 48(3), 345–350. <https://doi.org/10.1016/j.ifacol.2015.06.105> (***Selected for the Special Issue on IJPR***).
- Battini D., Calzavara M., Persona A., Sgarbossa F., (2015), Design of compact storage system, *5th International Conference on Production Engineering and Management*, Trieste October 2015.
- Battini D., Persona A., Sgarbossa F., (2015), Ergonomics and part feeding in assembly line design and balancing, *Workshop “ALBP 60 years later: State-of-the-Art and Future Developments Roadmap”*. November 2015, Toulouse, France (***Invited Contribution***)

- Zanardelli, A., Battini, D., Persona, A., & Sgarbossa, F. (2015). Sustainable transportation network design: A literature review and a research agenda. In *Proceedings of the Summer School Francesco Turco* (pp. 139–148).
- Battini D., Persona A., Sgarbossa F., Zennaro I., De Marchi R. (2015). Downtime Analysis as a tool to improve efficiency in automated production lines: A bottle plant case study. In *Proceedings of the Summer School Francesco Turco*, Napoli, Italia. 16-18 Settembre 2015.
- Battini D., Calzavara M., Persona A., Roncari M., Sgarbossa F. (2015). Dual-tray Vertical Lift Module for order picking: a performance and storage assignment preliminary study. In *Proceedings of the Summer School Francesco Turco*, Napoli, Italia. 16-18 Settembre 2015.
- Calzavara M, Glock C., Grosse E., Sgarbossa F. (2015) The impact of alternative rack layouts on economic and ergonomic performance measures in order picking. *20th International Symposium on Logistics (ISL 2015)*, Bologna, Italy 5-8th July 2015

2014

- Faccio, M., Persona, A., Sgarbossa, F., & Zanin, G. (2014). Industrial maintenance policy development: A quantitative framework. *International Journal of Production Economics*, 147(PART A), 85–93. <https://doi.org/10.1016/j.ijpe.2012.08.018>
- Battini, D., Persona, A., & Sgarbossa, F. (2014). Innovative real-time system to integrate ergonomic evaluations into warehouse design and management. *Computers and Industrial Engineering*, 77, 1–10. <https://doi.org/10.1016/j.cie.2014.08.018>
- Azzi, A., Battini, D., Faccio, M., Persona, A., & Sgarbossa, F. (2014). Inventory holding costs measurement: A multi-case study. *International Journal of Logistics Management*, 25(1), 109–132. <https://doi.org/10.1108/IJLM-01-2012-0004>
- Battini, D., Peretti, U., Persona, A., & Sgarbossa, F. (2014). Application of humanitarian last mile distribution model. *Journal of Humanitarian Logistics and Supply Chain Management*, 4(1), 131–148. <https://doi.org/10.1108/JHLSCM-01-2013-0001>
- Faccio, M., Persona, A., Sgarbossa, F., & Zanin, G. (2014). Sustainable SC through the complete reprocessing of end-of-life products by manufacturers: A traditional versus social responsibility company perspective. *European Journal of Operational Research*, 233(2), 359–373. <https://doi.org/10.1016/j.ejor.2013.03.027>
- Battini, D., Persona, A., & Sgarbossa, F. (2014). A sustainable EOQ model: Theoretical

formulation and applications. *International Journal of Production Economics*, 149, 145–153.
<https://doi.org/10.1016/j.ijpe.2013.06.026>

Andriolo, A., Battini, D., Grubbström, R. W., Persona, A., & Sgarbossa, F. (2014). A century of evolution from Harris's basic lot size model: Survey and research agenda. *International Journal of Production Economics*, 155, 16–38.
<https://doi.org/10.1016/j.ijpe.2014.01.013>

Battini, D., Faccio, M., Persona, A., & Sgarbossa, F. (2014). *Modelling the growing process of integrated healthcare supply networks. Healthcare Administration: Concepts, Methodologies, Tools, and Applications* (Vol. 1). <https://doi.org/10.4018/978-1-4666-6339-8.ch019>

Andriolo, A., Battini, D., Persona, A., & Sgarbossa, F. (2014). Sustainable lot-sizing: An innovative approach to incorporate the 3BL paradigm into inventory management. In *Proceedings of the Summer School Francesco Turco* (Vol. 09–12–Sept, pp. 1–6).

Zennaro, I., Battini, D., Persona, A., & Sgarbossa, F. (2014). TPM Implementation in automated flow line manufacturing systems: Criticalities and key factors to support a faster implementation. In *Proceedings of the Summer School Francesco Turco* (Vol. 09–12–Sept, pp. 165–170).

Battini D., Peretti U., Persona A., Sgarbossa F. (2014). Closed Loop Supply Chain in Humanitarian Operations. In *Proceedings of the Summer School Francesco Turco*, Senigallia, Italia. 09-12 Settembre 2014.

Battini D., Calzavara M., Persona A., Sgarbossa F. (2014). A model for warehouse picking forward area allocation and dimensioning. In *Proceedings of the Summer School Francesco Turco*, Senigallia, Italia. 09-12 Settembre 2014.

Andriolo, A., Battini, D., Persona, A., Sgarbossa, F. (2014) Parametric analysis of a sustainable lot-sizing model in a global supply chain scenario. In: *18th International working seminar on production economics*, February 24-28, 2014, Innsbruck Austria

Battini D., Persona A., Sgarbossa F., (2014), Ergo-Balancing in Assembly Lines based on Energy Expenditure Rate, In: *IFORS 2014 - 20th Conference of the International Federation of Operational Research Societies*. Barcelona, Spain, 13-18 July 2014.

Battini D., Calzavara M., Persona A., Sgarbossa F., (2014), New packaging solutions for sustainable fresh food supply chains and research agenda, in: *21st International annua Euroma conference*, Palermo, Italy, June 20-25, 2014.

2013

- Andriolo, A., Battini, D., Persona, A., & Sgarbossa, F. (2013). Ergonomic lot sizing: A new integrated procedure towards a sustainable inventory management. In *22nd International Conference on Production Research, ICPR 2013*.
- Andriolo, A., Battini, D., Gamberi, M., Sgarbossa, F., & Persona, A. (2013). 1913-2013: The EOQ theory and next steps towards sustainability. In *IFAC Proceedings Volumes (IFAC-PapersOnline)* (Vol. 46, pp. 1708–1713). <https://doi.org/10.3182/20130619-3-RU-3018.00371>
- Azzi, A., Persona, A., Sgarbossa, F., & Bonin, M. (2013). Drug inventory management and distribution: outsourcing logistics to third-party providers. *Strategic Outsourcing: An International Journal*, 6(1), 48–64. <https://doi.org/10.1108/17538291311316063>
- Faccio, M., Gamberi, M., Persona, A., Regattieri, A., & Sgarbossa, F. (2013). Design and simulation of assembly line feeding systems in the automotive sector using supermarket, kanbans and tow trains: A general framework. *Journal of Management Control*, 24(2), 187–208. <https://doi.org/10.1007/s00187-013-0175-1>
- Battini D., Peretti U., Persona A., Sgarbossa F., Van Wassenhove L., (2013), Vehicle Routing Problem in Humanitarian Operations, In: *20th International annua Euroma conference*, Dublin, Ireland, June 7-12, 2013.
- Battini D., Persona A., Sgarbossa F., (2013), Ergo-picking: multi-objective approach to consider ergonomics aspects in picking systems design and management, In: *26th EURO-INFORMS Conference*, Rome, Italy, July 1-4, 2013.
- Battini D., Bortolini M., Gamberi M., Pilati F., Sgarbossa F., (2013), Bi-objective warehouse design: travel time versus energy consumption optimization, In: *26th EURO-INFORMS Conference*, Rome, Italy, July 1-4, 2013.
- Battini D., Persona A., Sgarbossa F., (2013), Spare parts management: a comparison between (s,s) policy with delayed ordering and policy based on binomial distribution and total cost. In: *19th ISSAT conference on reliability and quality in design*. Hawaii, U.S.A, August 5-7, 2013.
- Battini D., Peretti U., Persona A., Sgarbossa F. (2013), LCA (Life Cycle Assessment) in Disaster Waste Management: Emilia-Romagna Earthquake, an Italian case study – In: *Proceedings of the Summer School Francesco Turco*, Senigallia, Italia. 11-13 Settembre 2013. ISBN 978-88-908649-0-2 - ISSN (online) 2283-8996

Andriolo A., Battini D., Calzavara M., Gamberi M., Peretti U., Persona A., Pilati F., Sgarbossa F. (2013) New pick-to-light system configuration: a feasibility study - In: *Proceedings of the Summer School Francesco Turco*, Senigallia, Italia. 11-13 Settembre 2013. ISBN 978-88-908649-0-2 - ISSN (online) 2283-8996

2012

Battini, D., Faccio, M., Persona, A., & Sgarbossa, F. (2012). Design of an integrated quality assurance strategy in production systems. *International Journal of Production Research*, 50(6), 1682–1701. <https://doi.org/10.1080/00207543.2011.555428>

Azzi, A., Battini, D., Persona, A., & Sgarbossa, F. (2012). Packaging design: General framework and research agenda. *Packaging Technology and Science*, 25(8), 435–456. <https://doi.org/10.1002/pts.993>

Azzi, A., Faccio, M., Persona, A., & Sgarbossa, F. (2012). Lot splitting scheduling procedure for makespan reduction and machine capacity increase in a hybrid flow shop with batch production. *International Journal of Advanced Manufacturing Technology*, 59(5–8), 775–786. <https://doi.org/10.1007/s00170-011-3525-x>

Battini D., Faccio M., Persona A., Sgarbossa F., (2012), Manual order picking optimization: an innovative approach, In: *4th World conference on Production & Operations Management (POMs)*, Amsterdam, Netherlands, 1-5 July 2012

Battini D., Persona A., Sgarbossa F., (2012), A Sustainable EOQ Model: theoretical formulation and applications, In: *17th International working seminar on production economics*, February 20-24, 2012, Innsbruck, Austria (*Selected for the Special Issue on IJPE*).

Bortolini M., Gamberi M., Graziani A., Manzini R., Pilati F., Sgarbossa F., (2012), Feasibility analysis of photovoltaic systems in the main EU countries, In: *ICERD-5 International conference on energy research & development 2012*, 9-12 April 2012, Kuwait

Battini D., Peretti U., Persona A., Sgarbossa F. (2012), Development of a general multi-objective framework for OM in Humanitarian Logistics – In: *Proceedings of the Summer School Francesco Turco*, Venice, Italia. 12-14 Settembre 2012. ISBN 9788890631917

Andriolo A., Battini D., Persona A., Sgarbossa F. (2012), 1913-2013: The EOQ theory and a future research agenda - In: *Proceedings of the Summer School Francesco Turco*, Venice, Italia. 12-14 Settembre 2012. ISBN 9788890631917

2011

- Ortolani, C., Persona, A., & Sgarbossa, F. (2011). External cost effects and freight modal choice: Research and application. *International Journal of Logistics Research and Applications*, 14(3), 199–220. <https://doi.org/10.1080/13675567.2011.609536>
- Battini, D., Faccio, M., Persona, A., & Sgarbossa, F. (2011). New methodological framework to improve productivity and ergonomics in assembly system design. *International Journal of Industrial Ergonomics*, 41(1), 30–42. <https://doi.org/10.1016/j.ergon.2010.12.001>
- Azzi, A., Battini, D., Faccio, M., Persona, A., & Sgarbossa, F. (2011). Innovative travel time model for dual-shuttle automated storage/retrieval systems. *Computers and Industrial Engineering*, 61(3), 600–607. <https://doi.org/10.1016/j.cie.2011.04.015>
- Faccio, M., Persona, A., Sgarbossa, F., & Zanin, G. (2011). Multi-stage supply network design in case of reverse flows: A closed-loop approach. *International Journal of Operational Research*, 12(2), 157–191. <https://doi.org/10.1504/IJOR.2011.042504>
- Faccio, M., Persona, A., Sgarbossa, F., & Zanin, G. (2011). Quantitative framework for industrial maintenance policy development. In *21st International Conference on Production Research: Innovation in Product and Production, ICPR 2011 - Conference Proceedings*.
- Azzi, A., Battini, D., Persona, A., & Sgarbossa, F. (2011). Packaging design for logistics: A new integrated approach. In *21st International Conference on Production Research: Innovation in Product and Production, ICPR 2011 - Conference Proceedings*.
- Azzi A., Battini D., Persona A., Sgarbossa F. (2011), Logistics outsourcing assessment in centralized healthcare supply network. In: *Proceedings of the Summer School Francesco Turco*, Abano Terme, Italia. 14-16 Settembre 2011. ISBN 9788890631924
- Akkerman R., Azzi A., Battini D., Persona A., Sgarbossa F. (2011), Manufacturing Execution Systems in the Food Industry: Implementation and Performance. In: *Proceeding workshop on food supply chain (wfsc)*, Bertinoro, Italy j une 26 – July 1 , 2011 ISBN 9788890650000.

2010

- Gamberini, R., Lolli, F., Rimini, B., & Sgarbossa, F. (2010). Forecasting of sporadic demand patterns with seasonality and trend components: An empirical comparison between holt-winters and (s)ARIMA methods. *Mathematical Problems in Engineering*, 2010. <https://doi.org/10.1155/2010/579010>

- Battini, D., Gunasekaran, A., Faccio, M., Persona, A., & Sgarbossa, F. (2010). Consignment stock inventory model in an integrated supply chain. *International Journal of Production Research*, 48(2), 477–500. <https://doi.org/10.1080/00207540903174981>
- Persona, A., Pham, H., & Sgarbossa, F. (2010). Age replacement policy in a random environment using systemability. *International Journal of Systems Science*, 41(11), 1383–1397. <https://doi.org/10.1080/00207720903353617>
- Sgarbossa, F., & Pham, H. (2010). A cost analysis of systems subject to random field environments and reliability. *IEEE Transactions on Systems, Man and Cybernetics Part C: Applications and Reviews*, 40(4), 429–437. <https://doi.org/10.1109/TSMCC.2010.2042713>
- Battini, D., Faccio, M., Persona, A., & Sgarbossa, F. (2010). “supermarket warehouses”: Stocking policies optimization in an assembly-to-order environment. *International Journal of Advanced Manufacturing Technology*, 50(5–8), 775–788. <https://doi.org/10.1007/s00170-010-2555-0>
- Battini, D., Faccio, M., Persona, A., & Sgarbossa, F. (2010). Framework to optimise the inventory centralisation/decentralisation degree and feeding policy in assembly systems. *International Journal of Services and Operations Management*, 6(2), 184–205. <https://doi.org/10.1504/IJSOM.2010.030635>
- Battini, D., Faccio, M., Persona, A., & Sgarbossa, F. (2010). Evaluation of the mixed-model assembly line balancing problem with variable operation times and product mix. *International Journal of Services and Operations Management*, 6(2), 126–148. <https://doi.org/10.1504/IJSOM.2010.030632>
- Battini, D., Grassi, A., Persona, A., & Sgarbossa, F. (2010). Consignment stock inventory policy: Methodological framework and model. *International Journal of Production Research*, 48(7), 2055–2079. <https://doi.org/10.1080/00207540802570669>
- Azzi, A., Battini, D., Persona, A., & Sgarbossa, F. (2010). Decreasing network complexity with logistics outsourcing: An entropic approach. *International Journal of Procurement Management*, 3(4), 339–360. <https://doi.org/10.1504/IJPM.2010.035466>
- Battini, D., Faccio, M., Persona, A., & Sgarbossa, F. (2010). Inspection allocation cost model for serial assembly systems. In *Proceedings - 16th ISSAT International Conference on Reliability and Quality in Design* (pp. 115–119).
- Azzi A., Battini D., Persona A., Sgarbossa F. (2010), Sustainable Healthcare Supply Chain: insights from Veneto region. In: *Proceedings of the Summer School Francesco Turco*, Monopoli, Italia. 14-18 Settembre 2010. ISBN 978-88-904625-1-1

Azzi A., Faccio M., Persona A., Sgarbossa F., (2010) Scheduling in a Job Shop Production System with Different Parallel Machines and Multiple Products: an Heuristic Approach, *24th European Conference on Operational Research*, Lisbon, Portugal, 11-14 July 2010.

2009

Persona, A., Sgarbossa, F., & Pham, H. (2009). Systemability function to optimisation reliability in random environment. *International Journal of Mathematics in Operational Research*, 1(3), 397–417. <https://doi.org/10.1504/IJMOR.2009.024292>

Battini, D., Faccio, M., Persona, A., & Sgarbossa, F. (2009). Logistic Game™: Learning by doing and knowledge-sharing. *Production Planning and Control*, 20(8), 724–736. <https://doi.org/10.1080/09537280903119056>

Battini, D., Faccio, M., Persona, A., & Sgarbossa, F. (2009). Design of the optimal feeding policy in an assembly system. *International Journal of Production Economics*, 121(1), 233–254. <https://doi.org/10.1016/j.ijpe.2009.05.016>

Battini, D., Faccio, M., Persona, A., & Sgarbossa, F. (2009). A new methodological framework to implement an RFID project and its application. *International Journal of RF Technologies: Research and Applications*, 1(1), 77–94. <https://doi.org/10.1080/17545730802320174>

Battini, D., Faccio, M., Persona, A., & Sgarbossa, F. (2009). Balancing-sequencing procedure for a mixed model assembly system in case of finite buffer capacity. *International Journal of Advanced Manufacturing Technology*, 44(3–4), 345–359. <https://doi.org/10.1007/s00170-008-1823-8>

Battini D., Faccio M., Persona A., Sgarbossa F. (2009), Healthcare Supply Chain modelling: a conceptual framework, *Production & Operations Management society conferences*, Orlando, Florida USA. 1-4 May 2009.

Ortolani C., Persona A., Sgarbossa F. (2009), Modelling external transport costs in distribution networks, *Production & Operations Management society conferences*, Orlando, Florida USA. 1-4 May 2009.

Azzi A., Battini D., Persona A., Sgarbossa F. (2009), An entropic model for evaluating impacts of Third-party logistics, In: *Proceeding 20th International Conference On Production Research, ICPR*. Shanghai, China. 2-6 August 2009. ISRC CN-E16-09-0006-0/A – H

Battini D., Faccio M., Persona A., Sgarbossa F. (2009), Components Management Policies in

Assembly To Order Environments, In: *Proceeding 20th International Conference On Production Research, ICPR*. Shanghai, China. 2-6 August 2009. ISRC CN-E16-09-0006-0/A – H

Battini D., Faccio M., Persona A., Sgarbossa F. (2009), Sustainable Spare Parts Logistics. *Proceedings of the Summer School Francesco Turco*, Monopoli, Italia. 15-19 Settembre 2009. ISBN 978-88-904625-0-4

2008

Battini, D., Faccio, M., Persona, A., & Sgarbossa, F. (2008). Reliability of motorcycle components using systemability approach. In *Proceedings - 14th ISSAT International Conference on Reliability and Quality in Design* (pp. 265–269).

Battini D., Faccio M., Persona A., Sgarbossa F. (2008), Optimal Centralization/Decentralization Degree of Components Inventory and Optimal Feeding System in an Assembly System, *Global Business and Innovation Development Conference (BIRC, Emerald, Elsevier, Science Direct Conference)*, Rio De Janeiro, 16-19 January 2008. ISBN 978-1-60585-005-4.

Battini D., Faccio M., Persona A., Sgarbossa F. (2008), The Multi/Mixed Models Assembly Line Balancing Problem: Evaluation of the balancing methodologies in presence of variability of task time and demand. *Global Business and Innovation Development Conference (BIRC, Emerald, Elsevier, Science Direct Conference)*, Rio De Janeiro, 16-19 January 2008. ISBN 978-1-60585-005-4.

Battini D., Faccio M., Persona A., Sgarbossa F. (2008), A single vendor multiple buyer inventory model for evaluating Consignment Stock Policy, *Global Business and Innovation Development Conference (BIRC, Emerald, Elsevier, Science Direct Conference)*, Rio De Janeiro, 16-19 January 2008. ISBN 978-1-60585-005-4. (**Winner of the BEST PAPER AWARD**).

2007

Battini, D., Faccio, M., Ferrari, E., Persona, A., & Sgarbossa, F. (2007). Design configuration for a mixed-model assembly system in case of low product demand. *International Journal of Advanced Manufacturing Technology*, 34(1–2), 188–200. <https://doi.org/10.1007/s00170-006-0576-5>

Sgarbossa, F., Battini, D., Faccio, M., & Persona, A. (2007). Reliability in random environment: Systemability and its application. In *Proceedings - 13th ISSAT International Conference on Reliability and Quality in Design* (pp. 107–111).

- Battini D., Faccio M., Persona A., Sgarbossa F. (2007), The Logistic Game. In: *Proceeding. of 25th International conference of the system dynamics society*. Boston. July 29 - August 2 2007. ISBN 978-0-9745329-7-4.
- Battini D., Faccio M., Persona A., Sgarbossa F., (2007), Linking Ergonomics Evaluation And Assembly System Design Problem In A New Integrated Procedure. In: *Proceeding 19th international conference on production research, ICPR*. Valparaiso, Chile. July 29 - August 3 2007 ISBN: 978-956-310-751-7.
- Battini D., Faccio M., Persona A., Sgarbossa F., (2007), Study Of Innovative Applications Of Rfid Technology: Methodological Framework. In: *Proceeding 19th international conference on production research, ICPR*. Valparaiso, Chile. July 29 - August 3 2007 ISBN: 978-956-310-751