Paolo Gaiardelli

https://didattica-rubrica.unibg.it/ugov/person/3787

- ORCID: **0000-0002-2207-3628**
- Google scholar profile: https://scholar.google.com/citations?user=tIlkct8AAAAJ&hl=it
- Scopus: https://www.scopus.com/authid/detail.uri?authorId=6507168158
- SSD: **IIND-05/A** (già ING-IND/17)

Enterprise	University	EPR
☐ Management Level	☒ Full professor	☐ Research Director and 1st level Technologist / First Researcher and 2nd level Technologist / Principal Investigator
☐ Mid-Management Level	☐ Associate Professor	☐ Level III Researcher and Technologist
☐ Employee / worker level	☐ Researcher and Technologist of IV, V, VI and VII level / Technical collaborator	☐ Researcher and Technologist of IV, V, VI and VII level / Technical collaborator

WORK EXPERIENCE

Full Professor
01/03/2023 - now

University of Bergamo, Department of Management, Information and Production Engineering

Viale Marconi, 5 – 24044 Dalmine (BG), Italy

Lecturer in advanced production systems, lean manufacturing, management and organisation of industrial plants, he also holds a few courses at professional master's programmes provided the School of Management of Politecnico di Milano, SdM-Scuola di alta Formazione of the University of Bergamo. He also collaborates with the Lucerne University of Applied Sciences and Arts (Hochschule Luzern).

Associate Professor
01/07/2015 – 28/02/2023

Director of the professional master's programme in *Tecnologie e processi della filiera tessile* (promoted by SdM-Scuola di alta Formazione of the University of Bergamo) and vice-director of the professional master's programme in Servitization (jointly promoted by SdM-Scuola di alta Formazione of the University of Bergamo and University of Eastern Piedmont - UniUPO).

Vice President for the master's degree courses in Mechanical Engineering and in Mechatronics and Smart Technology Engineering at the University of Bergamo, he is also board member and coordinator (since 01/01/2024) of the PhD programme in Technology, Innovation and Management (TIM), promoted by the University of Bergamo together with the University of Naples "Federico II".

Co-leader of the Special Interest Group (SIG) in Service Systems Design, Engineering and Management of the IFIP Working Group 5.7-Advances in Production Management Systems, he is a member of AIDI, the Italian Association of Industrial Systems Engineering Professors, and ASAP Service Management Forum, an interdisciplinary research centre on innovation and service management in industrial enterprises aimed at promoting the culture and excellence of service management in the industrial world.

Research, training, and consulting activities primarily focus on managing and organizing production systems according to lean manufacturing principles, and on engineering and managing services in manufacturing contexts, with a particular focus on the automotive and commercial vehicle sectors. Recently, research interests have shifted towards exploring the relationships between lean management principles, environmental and social sustainability, digitalization, and servitization.

Associate Editor of Production Planning and Control and Editorial Advisory Board member of the International Journal of Lean Six Sigma, he is the author of over 100 significant publications in important scientific journals, books, and international conferences. He has participated in numerous national and international research projects, as well as in several technology transfer projects to businesses.

Business or sector: Public Administration

Researcher
01/01/2004 - 30/06/2015

University of Bergamo, Department of Management, Information and Production Engineering

Viale Marconi, 5 – 24044 Dalmine (BG), Italy

Lecturer in management and organisation of industrial plants, production planning and control he also

held courses at professional master's programmes provided by MIP-School of Management of Politecnico di Milano, SdM-Scuola di alta Formazione of the University of Bergamo, and University of Trieste.

Coordinator of the automotive area of the ASAP Service Management Forum, an Italian industry-academy initiative aiming at promoting the culture and the excellence of service management through research projects, practice, education and technological transfer, his research activities mainly focused on production and service engineering and management with a specific interest in automotive and truck industry service chain configuration, organisation and performance measurement. In particular, he was involved in studying how to support companies to develop new customer value propositions, to re-design their organisational principles, operations and value chains in order to up hold new product-service business models.

Research interests were also extended to the analysis of digital transformation of industrial firms experiencing digital servitization and to the exploration of the role of lean management along with the main service management trends, including sustainable and behavioural operations.

Business or sector: Public Administration

Research Assistant
01/03/2003 - 31/12/2003

University of Bergamo, Department of Management, Information and Production Engineering

Viale Marconi, 5 – 24044 Dalmine (BG), Italy

His activities mainly concerned research on after-sales service in the automotive industry. Activities included the analysis of the configuration and management of after-sales logistics and the definition of a reference model for after-sales performance measurement. It also participated in the preparation of the project's final report and in the dissemination of research on the topic and networking activities with national and international research bodies. He also acted as tutor for the following courses: industrial plant design at Politecnico di Milano, mechanical plants organisation at the University of Bergamo.

Business or sector: Public Administration

Tendering & contracting Engineer
01/02/1999 - 28/02/2003

Alstom Power Italia Spa

Piazzale Lodi, 3 – 20137 Milano, Italy

The main activities involved the analysis and optimisation of the installation of mechanical and electrical parts of a power plant. He also worked as a contract engineer for HVAC and fire-fighting systems, water treatment systems, water-oil filtration systems, water transport systems and oil pumping stations, and was involved in several data analysis and reporting activities as well as in some process optimisation programmes as six sigma project leader.

Business or sector: Energy and construction

Production Engineer
04/03/1998 - 31/01/1999

Moto Guzzi Spa

via E. Parodi 57, 23826 Mandello del Lario (LC), Italy

Production manager assistant, he worked as supervisor of product quality and production processes in the motorbike assembly department. He was also involved in the reorganisation of internal logistics and material handling systems.

Business or sector: Motorbike production

EDUCATION AND TRAINING

1990 - 1996

Master Degree in Management Engineering

Politecnico di Milano

Master Degree in Management Engineering with a thesis entitled *Application of a hybrid system (Genetic Algorithm - Simulator) for a multi-objective scheduling problem*

WORK ACTIVITIES

Main research projects (2018-2025)

UA_EU_CLUSTER5.0 (2025-2026). The project brings together digital clusters from Ukraine, Portugal, and Italy to strengthen SMEs, integrate them into the EU market, and promote innovation, sustainability, resilience, and human-centricity in line with Industry 5.0 principles.

PSS-Pass (2024-2027). Funded by the EU, the project introduces the Digital Product Service System Passport (DPSSP) to enhance sustainability in manufacturing. Going beyond Digital Product Passports (DPPs), it integrates product and service data to optimize reuse, refurbishment, and recycling. Using AI, Digital Twins, and interoperability frameworks, PSS-Pass drives circular economy practices in home appliances, equipment, and textiles.

GREENSMARTMED (2024-2026). An Interreg Euro-Med project aiming to enhance cooperation among innovation ecosystem actors to support the green transformation of SMEs, aligning with regional specialization policies.

ECOCARBONIO (2020-2022). ID code: 1170458. Funder: Lombardy Region. The project leaded by ENEA, aims to develop sustainable production methods for composite materials reusing production waste.

SMART4CPPS (2018-2021). ID code: 236789. Funder: *Lombardy Region*. The project aims to develop a smart cloud platform system (CPS), where ICT technologies are integrated into components, machines and environments that become intercommunicating and intelligent.

CARBONFORCE (2018-2019). ID code: 379278. Funder: *Lombardy Region*. The project aims to create a system for the production of unidirectional carbon fabrics, suitable for structural consolidation of buildings according to the latest anti-seismic standard.

UNIRAPIER (2018-2019). ID code: 145574. Funder: *Lombardy Region*. The project aims to develop an innovative new family of single rapier positive weaving machines capable of producing special technical textiles for clothing and home furnishing industry.

Awards (2018-2025)

He took part in several privately funded consultancy and training projects for the implementation of service management methods.

- Best paper Award (The Digital Servitization of Manufacturing sector: Evidence from a worldwide Digital Servitization Survey), APMS Conference 2023, Trondheim (Norway 17-21 settembre 2023).
- Best paper Award (The role of Lean Management practices in the valorisation of neurodiverse people in manufacturing environments), European Lean Educator Conference, ELEC 2022, Galway (Ireland 22-24 novembre 2022).
- Best paper Award (Cyber-Physical Visual Management Systems in the Digital Lean Manufacturing World), APMS Conference 2022, Gyeongju (S. Korea 25-29 settembre 2022).

Editorial activity

From 2019: Associate Editor of Production Planning & Control, Taylor & Francis.
From 2022: Editorial Advisory Board member of the International Journal of Lean Six Sigma, Emerald.
From 2022: Editorial Review member of Frontiers in Manufacturing and Technologies.
Member of the scientific technical committee of Logistica Management, Editrice TeMi Srl.

Reviewer of: Industrial Marketing Management; International Journal of Business Environment; International Journal of Business Performance Management; International Journal of Lean Six Sigma International Journal of Product Development; International Journal of Production Economics; International Journal of Production Research; International Journal of Productivity and Performance Management; International Journal of Services and Operations Management; Journal of Cleaner Production; Journal of Service Research; Journal of Intelligent Manufacturing; Management Decision; Service Science; Production Planning & Control; Service Science; Technovation; The TQM Journal

Invited presentations ///
Grants and patents

ADDITIONAL INFORMATION

Publications
(30/09/2025)

Total number of publications in peer-review journals: **41**
Total number of citations: **2.663 (Scopus)**
H index (Scopus): **26**
Main publications (from 01/01/2021 to 30/09/2025):

Scientific Journals

1. Hines, P., Tortorella, G.L., Antony, J., Romero, D., Walsh, A., Taylor, D., Carvalho Alves, A., Bertolini, M., Caiado, R., Carvalho, J., Demeter, K., Ferreira, L., Fettermann, D., Godinho Filho, M., Gaiardelli, P., Howe, G., Gurkan Inan, G., Kumar, M., Chi Le, H., Magnani, F., Maqeira Marin, J.M., Mula, J., Packianather, M., Peças, P., Ribeiro Pereira, M.T., Powell, D.J., Prashar, A., Ur Rehman, M. J., De Sá, C. V., Saabye, H., Selim, E., Teixeir L., and Zak, H. 2025. A Global Industrial Perspective on Lean Industry 4.0: A Qualitative Wide-Angle Lens Approach. Production Planning & Control, DOI: 10.1080/09537287.2025.2509143.
2. Boffelli, A., Colombo, B., Gaiardelli, P., Kalchschmidt, M. and Madonna, A. 2025. The fabric of circular economy: how can supply chain collaboration foster circular economy in the textile industry? Supply Chain Management: an International Journal, 30(7), 60-76 DOI 10.1108/SCM-07-2024-0448.
3. Arioli, V., Pezzotta, G., Romero, D., Adrodegari, F., Sala, R., Rapaccini, M., Saccani, N., Marjanovic, U., Rakic, S., West, S., Stoll, O., Wiesner, S., Bertoni, M., Lopez Odriozola, U. Pirola, F. and Gaiardelli, P. 2025. Digital servitization business typologies in the manufacturing sector. Journal of Industrial Engineering and Management, 16(1), 1-23. DOI: 10.24867/IJIEM-378.
4. Romero, D., Cimini, C., Lagorio, A. Gaiardelli, P. and Tortorella, G.L. 2024. On Job Profiles Enlargement and Enrichment when Lean and Industry 4.0 Paradigms Meet. International Journal of Industrial Engineering and Management, 15(4), 338-347. DOI: 10.24867/IJIEM-2024-4-367.
5. Colombo, B., Gaiardelli, P., Dotti, S. and Caretto, F. 2024. Tensile properties of unidirectional thermosetting composites reinforced with ring-spun hybrid yarns from recycled carbon fiber. The Journal of Textile Institute, 115(12), 2605-2616. DOI: 10.1080/00405000.2024.2305053.
6. Tortorella, G.L., Saurin, T.A., Fogliatto, F.S., Tlapa, D., Moyano-Fuentes, J., Gaiardelli, P., Seyedghorban, Z., Vassolo, R., Mac Cawley Vergara, A., Sunder, V.M., Sreedharan, R., Sena, S.A., Forstner, F.F. and Macias de Anda, E. 2024. Digitalization of maintenance: exploratory study on the adoption of Industry 4.0 technologies and Total Productive Maintenance practices. Production Planning & Control, 35(4), 352-372. DOI: doi.org/10.1080/09537287.2022. 2083996.
7. Colombo, B., Gaiardelli, P., Dotti, S. and Caretto, F. 2023. Environmental assessment of a spinning process for the production of ring-spun hybrid yarns from recycled carbon fiber: A cradle-to-gate approach. Journal of Cleaner Production, 425, 138995. DOI: https://doi.org/10.1016/j.jclepro.2023.138995.
8. Colombo, B., Gaiardelli, P., Dotti, S. and Caretto, F. 2023. An innovative spinning process for production and characterisation of ring-spun hybrid yarns from recycled carbon fibre. Journal of Cleaner Production, 406, 137069 DOI: https://doi.org/10.1016/j.jclepro.2023.137069.
9. Cimini, C., Lagorio, A. and Gaiardelli, P. 2023. The evolution of operators' role in production: how Lean Manufacturing and Industry 4.0 affect Job Enlargement and Job Enrichment. International Journal of Production Research, 61(24), 8493-8511. DOI: 10.1080/00207543.2022.2152894.
10. Tortorella, G.L., Saurin, T., Gaiardelli, P. and Jurburg, D. 2023. Relationships between competences and lean automation practices: an exploratory study. Production Planning & Control, 34(8), 689-704. DOI: 10.1080/09537287.2021.1953178.
11. Colombo, B., Gaiardelli, P., Dotti, S. and Caretto, F. 2022. Recycling technologies for fibre-reinforced plastic composite materials: A bibliometric analysis using a systematic approach. Journal of Composite Materials. 56(19), 3063-3080. DOI: 10.1177/00219983221109877.
12. Tortorella, G.L., Saurin, T.A., Fogliatto, F.S, Tlapa, D., Moyano-Fuentes, J., Gaiardelli, P., Seyedghorban, Z., Vassolo, R., Mac Cawley, A.F., Sunder, M.V. Sreedharan, V.R., Sena, S. and Forstner, F.F. 2022. The impact of Industry 4.0 on the relationship between TPM and maintenance performance. Journal of Manufacturing Technology Management, 33(3), 489-520 DOI 10.1108/JMTM-10-2021-0399.

13. Preuss Luz, G., Tortorella, G.L., Buozon, M., Garza-Reyes, J. and Gaiardelli, P. 2022. Proposition of a method for stochastic analysis of value streams. Production Planning & Control. 33(8), 741-757. 10.1080/09537287.2020.1833377.
14. Colombo, B., Gaiardelli, P., Dotti, S., Caretto, F. and Coletta, G. 2021. Recycling of waste Fibre-Reinforced Plastic composites: a patent-based analysis. Recycling, 6(4), 72. DOI: 10.3390/recycling6040072.
15. Ayala, N.F., Gaiardelli, P., Pezzotta, G., Le Dain, M.-A. and Frank, A.G. 2021. Adopting service suppliers for servitisation: which type of supplier involvement is more effective? Journal of Manufacturing Technology Management, 32(5), 977-993. DOI: 10.1108/JMTM-09-2020-0374.
16. Preuss Luz, G., Tortorella, G.L., Narayanamurthy, G., Gaiardelli, P. and Sawhney, R. 2021. A systematic literature review on the stochastic analysis of value streams. Production Planning & Control, 32(2), 121-131. DOI: 10.1080/09537287.2020.1713414.
17. Gaiardelli, P., Pezzotta, G., Rondini, A., Romero, D., Jarrahi, F., Bertoni, M., Wiesner, S., Wuest, T., Larsson, T., Zaki, M., Jussen, P., Boucher, X. Bigdeli, A. and Cavalieri, S. 2021 Product-Service Systems Evolution in the Era of Industry 4.0. Service Business Journal, 15(1), 177-207. DOI: 10.1007/s11628-021-00438-9.
18. Gaiardelli, P. and Songini, L. 2021. Successful Business Models for service centres: an empirical analysis. International Journal of Productivity and Performance Management, 70(5), 1187-1212. DOI 10.1108/IJPPM-05-2019-0230.

Editorial

19. Powell, D.J., Romero, D. and Gaiardelli, P. 2022. Editorial of the Special Issue “New and Renewed Manufacturing Paradigms for Sustainable Production. Sustainability, Vol. 14, No. 1279. DOI: https://doi.org/10.3390/su14031279

Books

20. West, S., Gaiardelli, P. and Saccani, N. 2022. Modern Industrial Services, A Cookbook for Design, Delivery, and Management, Springer: London. p. 202. eISBN: 978-3-030-80511-1 ISBN: 978-3-030-80513-5. DOI: 10.1007/978-3-030-80511-1.

Book chapters

21. Powell, D.J., Romero, D., Antony, J. and Gaiardelli, P. 2024. A digital lean world: From digital lean Mmanufacturing to Lean 4.0. In: Powell, D Furlan, A. (Eds.). A Research Agenda for Lean Management. Chapter, 13. pp. 215-226. Elgar Publishing. DOI: https://doi.org/10.4337/9781035302918.00026.
22. Zanchi, M., Gaiardelli, P., Pezzotta, G. and Powell, D.J. 2024. Lean as a compensatory tool for neurodiverse people. In: Powell, D and Furlan, A. (Eds.). A Research Agenda for Lean Management. Chapter, 7 pp. 113-130. Elgar Publishing. DOI: https://doi.org/10.4337/9781035302918.00018.
23. Petrolo, D., Songini, L. and Gaiardelli, P. 2023. Sustainable Servitisation in the automotive sector: an exploratory study. In: Kuźniarska, A., Mania, K. and Jedynak, M. (Eds.) Organizing Sustainable Development. Chapter 12. pp. 159-171. DOI: 10.4324/9781003379409-15.
24. Gaiardelli, P., Boucher, X. West, S. and Pezzotta, G. 2023. Product-Service Systems: definitions and design approaches. In: Bidanda, B. (Ed.). Maynard’s Industrial and Systems Engineering Handbook, 6th edition. Section 10, chapter 58, pp. 1127-1154. McGraw Hill Professional, New York. ISBN: 978-1-260-46156-5.
25. Romero, D., Von Cieminski, G., Wuest, T., Gaiardelli, P., Moon, I., Pezzotta, G., Wiesner, S., Macchi, M. Baalsrud Hauge, J., Roda, I., Powell, D.J., Netland, T., Kulvatunyou, B., Szirbik, N., Roser, C., Alfnes, E. and Rudberg, M. 2021. Advances in Production Management Systems: Issues, Trends, and Vision Towards 2030. In: Goedicke M., Neuhold E., Rannenberg K. (eds) Advancing Research in Information and Communication Technology. IFIP Advances in Information and Communication Technology, vol 600. Springer, Cham., pp. 194-221. ISBN: 978-3-030-81700-8, eISBN: 978-3-030-81701-5. DOI: 10.1007/978-3-030-81701-5_8.
26. West, S., Gaiardelli, P. Mathews, A. and Saccani, N. 2021. A Conceptual Guideline to Support Servitization Strategy Through Individual Actions. In: Kohtamäki, M., Baines, T., Rabetino, R., Bigdeli, A.Z., Kowalkowski, C., Oliva, R. and Parida, V. (Eds.), The Palgrave Handbook of Servitization, pp. 309-326. ISBN: 978-3-030-75770-0, eISBN: 978-3-030-75771-7. DOI: 10.1007/978-3-030-75771-7_20.

OTHER COMPETENCES

Languages

Mother tongue: **Italian**

Comprehension		Oral		Written	
Listening	Reading	Interaction	Production		
C1	C1	C1	C1	B2	**English**
B2	C1	B2	B2	B2	**French**

Other skills

Communication

Advanced communication skills acquired during twenty years of experience in university and post-university teaching, as well as through participation in numerous scientific and outreach events as a speaker

Organizational and management

Advanced organizational, managerial and problem-solving skills acquired through participation in numerous scientific research and technology transfer projects as a scientific coordinator.

Digital

High proficiency level in information processing, communication, content creation, security, and problem-solving is advanced, as demonstrated by my experience and expertise in these areas across various projects and roles, ensuring effective handling of complex tasks and challenges with efficiency and precision.

Dalmine (BG), 30/09/2025
Paolo Gaiardelli