

**ELENA STEFANA**  
Curriculum Vitae

**Part I – Education**

Type	Year	Institution	Notes
Post-graduate studies	2019	University of Brescia (Brescia, Italy)	Master “Towards Industry 4.0: Evolution, Concepts, Technologies, and Management”
PhD	2015	Department of Mechanical and Industrial Engineering - University of Brescia (Brescia, Italy)	Ph.D. in “Design and management of production and logistic integrated systems”
University graduation	2012	Faculty of Engineering – University of Brescia (Brescia, Italy)	Master’s degree in Management Engineering with highest honors
University graduation	2010	Faculty of Engineering – University of Brescia (Brescia, Italy)	Bachelor’s degree in Management Engineering
Licensure	2007	Scientific high school - A. Calini (Brescia, Italy)	High school scientific diploma

**Part II – Appointments**

IIA – Academic Appointments

Start	End	Institution	Position
2023	Present	Department of Mechanical and Aerospace Engineering - Sapienza University of (Rome, Italy)	Researcher – Assistant Professor
2022	Present	Department of Mechanical Engineering and Production – NTNU (Trondheim, Norway)	Visiting professor in the centre for energy research HYDROGENi
2018	2023	Department of Mechanical and Industrial Engineering - University of Brescia (Brescia, Italy)	Research fellow in Industrial Systems Engineering
2019	2019	Department of Mechanical and Industrial Engineering – NTNU (Trondheim, Norway)	Visiting research fellow
2016	2016	Department of Mechanical and Industrial Engineering - University of Brescia (Brescia, Italy)	Research fellow in Industrial Systems Engineering

IIB – Industrial Appointments

Start	End	Institution	Position
2016	2017	ORI Martin S.p.A. (Brescia, Italy)	HSE Engineer

IIC – Other Appointments

Start	End	Position
2023	Present	Guest Editor of the Call for papers on the Special Issue “Safety 5.0: Safety management in sustainable, human-centric, and resilient industrial systems” for Journal of Safety and Sustainability (Elsevier)
2022	Present	Topical Advisory Panel member for Fire (MDPI)

2021	2023	Guest Editor of the Call for papers on the Special Issue "Safety Role and Contribution to Industrial Sustainability" for Sustainability (MDPI)
2021	Present	Reviewer Board member for Fire (MDPI)
2018	Present	Reviewer for more than 10 journals in the areas of engineering, safety, sustainability, and management
2020	2021	Guest Editor of the Call for papers on the Special Issue "Harmonising Occupational and Process Safety: a myth or a good safety management practice?" for Journal of Loss Prevention in the Process Industries (Elsevier)
2020	2020	Guest Editor of the Call for papers on the Special Issue "Meta-learning peculiarities and approaches for facing safety issues and enhancing risk management process" for Safety Science (Elsevier)

### Part III – Teaching experience

Start	End	Institution	Lecture/Course
2023	Present	Department of Mechanical and Aerospace Engineering - Sapienza University of (Rome, Italy)	Co-supervisor of more than 5 master theses
2023	Present	Department of Mechanical and Aerospace Engineering - Sapienza University of (Rome, Italy)	Lecturer in the course "Operations Management" (3 CFU)
2023	2023	Department of Information Engineering, Electronics and Telecommunications - Sapienza University of (Rome, Italy)	Lecturer in the course "Logistics management" (3 CFU)
2013	2023	Department of Mechanical and Industrial Engineering - University of Brescia (Brescia, Italy)	Co-supervisor of more than 12 master theses
2020	2023	Department of Mechanical and Industrial Engineering - University of Brescia (Brescia, Italy)	Assistant in the course "Production and safety management – Ergonomics and safety"
2018	2023	Department of Mechanical and Industrial Engineering - University of Brescia (Brescia, Italy)	Assistant in the course "Production systems management laboratory", organisation of lectures about the project management topic
2016	2023	Department of Mechanical and Industrial Engineering - University of Brescia (Brescia, Italy)	Assistant in the course "Industrial plant and logistics – Industrial logistics"
2014	2018	Department of Mechanical and Industrial Engineering - University of Brescia (Brescia, Italy)	Assistant in the course "Production and safety management – Ergonomics and safety"
2014	2014	Department of Mechanical and Industrial Engineering - University of Brescia (Brescia, Italy)	Co-teacher in the PhD course "Project Planning" (12 hours) in Doctoral Research in Mechanical and Industrial Engineering
2013	2015	Department of Mechanical and Industrial Engineering - University of Brescia (Brescia, Italy)	Assistant in the course "Production systems management laboratory"

### Part IV - Society memberships, Awards and Honors

Year	Title
2022	National Academic Qualification as Associate Professor (Abilitazione Scientifica Nazionale) in Industrial Systems Engineering (09/B2 IMPIANTI INDUSTRIALI MECCANICI)
2015	"IPMA Italy Introductory Level" certification
2013	Italian Engineering licence
2013	ABSL award for master theses on work organisation

## Part V – Participation in funded research projects and contracts

Start	End	Title	Activity details
2023	Present	Project “RE-SET: Resilience Engineering for Safe Energy Transition” (funded by INAIL)	Data and document analysis about the Seveso regulation, and development of specific report frameworks
2019	2021	Project “SMART4CPPS – Smart solutions for Cyber Physical Production Systems” (funded by Regione Lombardia)	Development of management models in Smart Manufacturing and definition of quantitative performance indicators of industrial processes
2018	2021	Contract “Smart Twin LMF 4.0” (funded by Travi e Profilati di Pallanzeno S.r.l.)	Benefit assessment of technological innovations in furnace departments in the steel industry
2018	2021	Project “SteelPro 4.0” (funded by Regione Lombardia)	Environmental benefit and sustainability assessment of technological innovations in the steel industry
2018	2018	Project “W2P2 – Work, Wealth, Production, Productivity” (funded by University of Brescia)	Analysis of indicators to measure and assess quality of working life
2015	2016	Contract “Ergonomic assessment of industrial manipulators and material handling solutions” (funded by Scaglia Indeva S.p.A.)	Investigation of human anatomical, anthropometric, physiological, and biomechanical characteristics related to the use of industrial manipulators
2013	2014	Contract “Risk assessment of a Dual Fuel system (LNG-Diesel) system for heavy-duty trucks” (funded by CSEAB S.c.r.l.)	Qualitative risk assessment of a Dual Fuel system to analyse its safety performance in comparison to traditional diesel vehicles
2013	2014	Project “TECNOENERGY Foundry” (funded by the Italian Ministry of Education and Regione Lombardia)	Definition of good management practices to achieve energy savings and enhance environmental performance in cast iron foundries

## Part VI – Research Activities

Keywords	Brief Description
Occupational safety	The main research activities relate to occupational and process safety assessment, risk and safety management in industrial plants, sustainability assessment of industrial processes. Key research topics regard Oxygen Deficiency Hazard, confined spaces, iron and steel industries. The current research interests include the systematic investigation of industrial incidents / accidents, the development of tools and models to enhance the assessment and management of risk and safety in industrial plants, by leveraging on both classical knowledge-based and recent data-driven approaches.
Process safety	
Risk management	
Industrial Systems Engineering	
Sustainability	

## Part VII – Summary of Scientific Achievements

Product type	Details
Paper [international journal]	Tomasoni G., Marciano F., Stefana E., Cocca P. (2024). Assessing the Sustainability Impact of Improving Secondary Steel Production: Lessons Learned from an Italian Plant. <i>Environmental and Climate Technologies</i> , 28(1), pp. 32-44.
Paper [international journal]	Marciano F., Cocca P., Stefana E. (2024). Editorial. Safety Role and Contribution to Industrial Sustainability. <i>Sustainability</i> , 16, 485.
Paper [international journal]	Stefana E., Marciano F., Paltrinieri N., Cocca P. (2024). A systematic approach to develop safety-related undesired event databases for Machine Learning analyses: Application to confined space incidents. <i>Process Safety and Environmental Protection</i> , 182, pp. 279-297.

Paper [international conference proceedings]	Stefana E., Di Gravio G., Patriarca R. (2023). Adopting the Specific Operations Risk Assessment Methodology for Drone Inspections at Industrial Sites. <i>Proceedings of 2023 7th International Conference on System Reliability and Safety</i> , pp. 355-361. Institute of Electrical and Electronics Engineers, Inc., New Jersey.
Paper [international conference proceedings]	Cocca P., Marciano F., Varianou-Mikellidou C., Stefana E. (2023). Have older workers been overlooked by health and safety standards?. In: Brito M.P., Aven T., Baraldi P., Čepin M., Zio E. (Eds.), <i>Proceedings of 33rd European Safety and Reliability Conference</i> , pp. 1538-1545. Research Publishing, Singapore.
Paper [international conference proceedings]	Campari A., Stefana E., Ferrazzano D., Paltrinieri N. (2023). Analyzing Hydrogen-Related Undesired Events: A Systematic Database for Safety Assessment. In: Brito M.P., Aven T., Baraldi P., Čepin M., Zio E. (Eds.), <i>Proceedings of 33rd European Safety and Reliability Conference</i> , pp. 420-427. Research Publishing, Singapore.
Paper [international journal]	Stefana E., Patriarca R., Droguett E.L., Paltrinieri N. (2023). Editorial on Meta-learning peculiarities and approaches for facing safety issues and enhancing risk management process. <i>Safety Science</i> , 159, 106040.
Paper [international journal]	Paltrinieri N., Maiti J., Stefana E., Patriarca R. (2023). Editorial on Harmonising Occupational and Process Safety: a myth or a good safety management practice?. <i>Journal of Loss Prevention in the Process Industries</i> , 81, 104950.
Paper [international journal]	Stefana E., Cocca P., Fantori F., Marciano F., Marini A. (2023). Resource Overall Equipment Cost Loss indicator to assess equipment performance and product cost. <i>International Journal of Productivity and Performance Management</i> , in print.
Paper [international conference proceedings]	Tomasoni G., Stefana E., Cocca P., Marciano F., Rossi D. (2022). Technological innovation as a driver of sustainability in steel production. <i>Proceedings of the XXVII Summer School "Francesco Turco"</i> , Sanremo (Italy), 7-9 September 2022.
Paper [international conference proceedings]	Stefana E., Ghidoni D., Fanizza F., Marciano F., Cocca P., Paltrinieri N. (2022). Towards Machine Learning Application for Safety in Confined Spaces: Creating an Incident Database. In: Leva M.C., Patelli E., Podofillini L., Wilson S. (Eds.), <i>Proceedings of the 32nd European Safety and Reliability Conference</i> , pp. 2686-2693. Research Publishing, Singapore.
Paper [international journal]	Borgese L., Tomasoni G., Marciano F., Zacco A., Bilo F., Stefana E., et al. (2022). Definition of an Indoor Air Sampling Strategy for SARS-CoV-2 Detection and Risk Management: Case Study in Kindergartens. <i>International Journal of Environmental Research and Public Health</i> , 19, 7406.
Paper [international journal]	Stefana E., Ustolin F., Paltrinieri N. (2022). IMPROSafety: A risk-based framework to integrate occupational and process safety. <i>Journal of Loss Prevention in the Process Industries</i> , 75, 104698.
Paper [international conference proceedings]	Stefana E., Strazzari C., Marciano F., Carnevale C. (2021). Towards a Novel Tiered Approach to Assess the Resilience Level in the Safety Domain. In: Castanier B., Cepin M., Bigaud D., Berenguer C. (Eds.), <i>Proceedings of the 31st European Safety and Reliability Conference</i> , pp. 2854-2861. Research Publishing, Singapore.
Paper [international conference proceedings]	Stefana E., Marciano F., Rossi D., Cocca P., Tomasoni G. (2021). Management practices to conduct ladle treatment processes in the steel industry: a systematic literature review. <i>Proceedings of the XXVI Summer School "Francesco Turco"</i> , Bergamo (Italy), 8-10 September 2021.
Paper [international conference proceedings]	Stefana E., Marciano F., Rossi D., Cocca P., Tomasoni G. (2021). A multi-objective decision making model for machine tools selection. <i>Proceedings of the XXVI Summer School "Francesco Turco"</i> , Bergamo (Italy), 8-10 September 2021.
Paper [international conference proceedings]	Boniotti G., Cocca P., Marciano F., Marini A., Stefana E., Vernuccio F. (2021). A Conceptual Reference Model for Smart Factory Production Data. In: Dolgui A., Bernard A., Lemoine D., von Cieminski G., Romero D. (Eds.), <i>Advances in Production Management Systems. Artificial Intelligence for Sustainable and Resilient Production Systems. APMS 2021. IFIP Advances in Information and Communication Technology</i> , 633, pp. 110-118. Springer Nature, Switzerland.
Paper [international journal]	Stefana E., Marciano F., Rossi D., Cocca P., Tomasoni G. (2021). Composite Indicators to Measure Quality of Working Life in Europe: A Systematic Review. <i>Social Indicators Research</i> , 157, pp. 1047-1078.

Paper [international journal]	Stefana E., Paltrinieri N. (2021). ProMetaUS: A proactive meta-learning uncertainty-based framework to select models for Dynamic Risk Management. <i>Safety Science</i> , 138, 105238.
Paper [international journal]	Stefana E., Marciano F., Rossi D., Cocca P., Tomasoni G. (2021). Wearable Devices for Ergonomics: A Systematic Literature Review. <i>Sensors</i> , 21, 777.
Online tool	ODHMOD, available on: <a href="https://www.aiha.org/public-resources/consumer-resources/apps-and-tools-resource-center/aiha-risk-assessment-tools">https://www.aiha.org/public-resources/consumer-resources/apps-and-tools-resource-center/aiha-risk-assessment-tools</a> .
Paper [international journal]	Stefana E., Marciano F., Drolet D., Armstrong T.W. (2021). A traditional Near Field-Far Field approach-based model and a spreadsheet workbook to manage Oxygen Deficiency Hazard. <i>Process Safety and Environmental Protection</i> , 149, pp. 537-556.
Paper [international journal]	Stefana E., Marciano F., Cocca P., Rossi D., Tomasoni G. (2021). Oxygen deficiency hazard in confined spaces in the steel industry: assessment through predictive models. <i>International Journal of Occupational Safety and Ergonomics</i> , 27(4), pp. 990-1004.
Paper [international conference proceedings]	Stefana E., Paltrinieri N. (2020). Meta-learning Potential to Assess Uncertainties in Dynamic Risk Management. In: Baraldi P., Di Maio F., Zio E. (Eds.), <i>Proceedings of the 30th European Safety and Reliability Conference and the 15th Probabilistic Safety Assessment and Management Conference</i> , pp. 2734-2741. Research Publishing, Singapore.
Paper [international conference proceedings]	Stefana E., Zanotti R., Marciano F., Mansini R. (2020). A Mathematical Programming Approach for Minimizing Occupational Exposures to Chemical Agents. In: Baraldi P., Di Maio F., Zio E. (Eds.), <i>Proceedings of the 30th European Safety and Reliability Conference and the 15th Probabilistic Safety Assessment and Management Conference</i> , pp. 155-162. Research Publishing, Singapore.
Paper [international conference proceedings]	Cocca P., Marciano F., Stefana E., Pedersoli M. (2020). Western ERP Roll-out in China: Insights from Two Case Studies and Preliminary Guidelines. <i>Proceedings of the 22nd International Conference on Enterprise Information Systems (ICEIS 2020)</i> , 2, pp. 579-586.
Paper [international conference proceedings]	Stefana E., Marciano F., Cocca P. (2020). Uncertainty and Sensitivity Analyses of Models for Assessing Oxygen Deficiency Hazard: Preliminary Results. In: Beer M., Zio E. (Eds.), <i>Proceedings of the 29th European Safety and Reliability Conference</i> , pp. 2761-2767. Research Publishing, Singapore.
Paper [international journal]	Paltrinieri N., Patriarca R., Stefana E., Brocal F., Reniers G. (2020). Meta-learning for Safety Management. <i>Chemical Engineering Transactions</i> , 82, pp. 169-174.
Paper [international journal]	Stefana E., Paltrinieri N. (2020). Integration Between Occupational and Process Safety: Existing Approaches and Challenges for an Enhanced Framework. <i>Chemical Engineering Transactions</i> , 82, pp. 31-36.
Paper [international conference proceedings]	Stefana E., Marciano F., Bacchetta A.P., Cocca P., Rossi D., Tomasoni G. (2019). A Multiple Criteria Decision-Making framework for evaluating Oxygen Reduction Systems' use. <i>Proceedings of the XXIV Summer School "Francesco Turco"</i> , pp. 416-422.
Paper [international journal]	Stefana E., Cocca P., Marciano F., Rossi D., Tomasoni G. (2019). A Review of Energy and Environmental Management Practices in Cast Iron Foundries to Increase Sustainability. <i>Sustainability</i> , 11, 7245.
Paper [international conference proceedings]	Stefana E., Marciano F., Cocca P., Alberti M. (2018). Confined space risk management in steel industry: towards the adoption of Industry 4.0 technologies. <i>Proceedings of the XXIII Summer School "Francesco Turco"</i> , pp. 94-100.
Paper [international journal]	Stefana E., Marciano F., Cocca P., Alberti M. (2017). A Near Field-Far Field model for assessing Oxygen Deficiency Hazard. <i>Process Safety and Environmental Protection</i> , 105, pp. 201-216.
Paper [international conference proceedings]	Marciano F., Cocca P., Stefana E., Alberti M. (2016). Selection of occupational health and safety management software using Analytic Hierarchy Process. <i>Proceedings of the XXI Summer School "Francesco Turco"</i> , pp. 252-256.
Paper [international journal]	Stefana E., Marciano F., Alberti M. (2016). A predictive model for estimating the indoor oxygen level and assessing Oxygen Deficiency Hazard (ODH). <i>Journal of Loss Prevention in the Process Industries</i> , 39, pp. 152-172.

Paper [international journal]	Stefana E., Marciano F., Alberti M. (2016). Qualitative risk assessment of a Dual Fuel (LNG-Diesel) system for heavy-duty trucks. <i>Journal of Loss Prevention in the Process Industries</i> , 39, pp. 39-58.
Paper [international journal]	Stefana E., Marciano F., Cocca P., Alberti M. (2015). Predictive models to assess Oxygen Deficiency Hazard (ODH): a systematic review. <i>Safety Science</i> , 75, pp. 1-14.

Product type	Number	Data Base	Start	End
Papers [international]	33	Scopus	2015	2024

Total Citations	221
Hirsch (H) index	8

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