CURRICULUM VITAE



Riccardo Patriarca, PhD

RESEARCH ACTIVITIES

03/2018-today **PostDoc Researcher** at Sapienza University of Rome, Faculty of Civil and Industrial Engineering, Department of Mechanical and Aerospace Engineering.

01/2018-04/2018 PhD Intern at EUROCONTROL, Brussels (Belgium), NMD/NOM/SAF (Safety Unit).

06/2014-02/2018 Research Assistant at Sapienza University of Rome, Faculty of Civil and Industrial Engineering, Department of

Mechanical and Aerospace Engineering.

PROFESSIONAL QUALIFICATIONS AND ASSOCIATION

since 2019 Innovation Manager of miSE – Italian Ministry of Economic Development

since 2019 Advisory Board of the Lifeboat Foundation, Member of the Complex Systems, Engineering and Space Settlement

Boards

since 2018 National Scientific Qualification as Associate Professor in the scientific field: Industrial Systems Engineering

(Impianti Industriali Meccanici, ING/IND 17).

2017 Six Sigma Green Belt Certification – Sapienza University of Rome

2016-2019 Member of BIS-Italy (British Interplanetary Society)

since 2014 Member of AIDI— Italian Associations of Operations Management Professors (Junior Member)

EDUCATION

2017 PhD (Doctor Europaeus) in "Industrial and Management Engineering" at Sapienza University of Rome (Italy) -

Department of Mechanical and Aerospace Engineering in collaboration with Lund University (Sweden) - Division of Risk Management and Societal Safety. Thesis: "Developing risk and safety management methods for complex

socio-technical systems: From Newtonian reasoning to Resilience Engineering".

2016 Visiting PhD Student Research at Lund University (Sweden) – Division of Risk Management and Societal Safety.

2014 MSc in Aeronautical Engineering at Sapienza University of Rome (Italy).
 2011 BSc in Aerospace Engineering at Sapienza University of Rome (Italy).

TEACHING ACTIVITIES

02/2019-today Adjunct Professor

Sapienza University of Rome (Italy), Faculty of Civil and Industrial Engineering

(a.a. 2020-2021): "Operations Management" for the MSc in Mechanical Engineering (in English). (6ECTS) (a.a. 2019-2020): "Operations Management" for the MSc in Mechanical Engineering (in English). (6ECTS)

(a.a. 2018-2019): "Industrial Plants" for the BSc in Mechanical Engineering. (3ECTS)

Universitas Mercatorum (Italy)

(a.a. 2020-2021): "Risk Management in infrastructures and production systems" for the MSc in Management Engineering. (9ECTS)

11/2015-today Adjunct Lecturer

Italian military training center - CEFLI (Centro di Formazione Logistica Interforze)

since 2019: "Fundamental of Maintenance Management" for the ONU/NATO/EU Course on Logistics.

Italian Quality Culture Association - AICQ (Associazione Italiana Cultura Qualità) since 2019: "Risk Management".

Sapienza University of Rome (Italy) – INAIL (National Institute for Insurance against Accident at Work).

(a.a. 2017-2018): "Resilience Engineering for complex socio-technical systems" for the Second level Master Degree in "Health and Safety Systemic management in the evolving work domain".

Sapienza University of Rome (Italy), Faculty of Information, Electronics, and Telecommunications Engineering. (a.a. 2017-2018): "Availability and Maintainability" for the Second Level Master Degree in "Logistic and communication services for Complex systems". (2ECTS)

(a.a. 2017-2018): "Maintenance Policies" for the Second Level Master Degree in "Logistic and communication services for Complex systems". (1ECTS)

(a.a. 2016-2018): "Quality Management" for the Second Level Master Degree in "Logistic and communication services for Complex systems". (2ECTS)

(a.a. 2015-2019): "Supply Chain Management" for the Second Level Master Degree in "Logistic and communication services for Complex systems". (3ECTS)

11/2017-today **Guest Lecturer**

Lund University (Sweden), Faculty of Engineering.

(a.a. 2017 - 2020): "Risk assessment in the safety area" for the Master of Science in "Risk Management". (a.a. 2017 - 2018): "Research Methodologies: Modelling (and visualising) the dynamics of high-risk systems" for the Master of Science in "Human Factors and System Safety".

11/2014-today **Tutor and Assistant Lecturer**

Sapienza University of Rome (Italy), Faculty of Civil and Industrial Engineering and Faculty of Information Engineering, Informatics, and Statistics.

(a.a. 2014 - 2017): "Operations Management"; "Quality Management"; "Industrial plants" for the MSc and BSc in Mechanical Engineering, and for the BSc and MSc in Management Engineering.

PUBLICATIONS

SCOPUS (updated 07 October 2021) GOOGLE SCHOLAR (updated 07 October 2021)

h-index: 16 h-index: 18 Documents: 72 110-index: 29 Total citations: 857 Total citations: 1166

Editorial Board

2018-2019

2019-2021

since 2021	Human Factors in Healthcare (Elsevier)
since 2020	Safety Science (Elsevier)
since 2020	Reliability Engineering & System Safety (Elsevier)
since 2020	Academic of Strategic Management Journal (Allied Strategy), Co-Editor in Chief
since 2020	WUT Journal of Transport Engineering (Warsaw University of Technology)
since 2018	Cogent Engineering (Taylor & Francis), Editor
2017-2019	Journal of Safety Studies (MacroThink)
Guest Editor	
2021	Guest Editor - Journal of Loss Prevention in the Process Industry (Elsevier) for the Special Issue: Harmonising
	Occupational and Process Safety: a myth or a good safety management practice?

2020-2021 Guest Editor - Safety Science (Elsevier) for the Special Issue: Meta-learning peculiarities and approaches for facing safety issues and enhancing risk management process

2020-2021 Guest Editor - Infrastructures (MDPI), for the Special Issue: Infrastructure Resilience in Emergency Situations 2019-2020 Guest Editor - Sustainability (MDPI), for the Special Issue: Inventory Management for Sustainable Industrial Operations

Guest Editor - Complexity (Hindawi), for the Special Issue: Modelling and Quantification of Resilience in Complex **Engineering Systems**

2018-2019 Guest Editor - Sustainability (MDPI), for the Special Issue: Resilience Engineering for Sustainability: Methodological Approaches and Practical Experience

Scientific Roard/Committee member

Scientific Board, col	miniciae member			
2021	4 th European International Conference on Industrial Engineering and Operations Management (IEOM)			
2021	9th Resilience Engineering Association (REA) Symposium, Member of the Organizing Committee– Toulouse			
	(France)			
2020	2020 NTCA International Conference (New Trends in Civil Aviation) – Prague (Czech Republic)			
2020	17th International Conference on Information Systems for Crisis Response and Management			

(ISCRAM 2020); Track on "AI Systems for Crisis and Risks" - Blacksburg (Virginia, USA)

9th Resilience Engineering Association (REA) Symposium, Young Talent Committee Co-Chair – Toulouse (France)

16th International Conference on Information Systems for Crisis Response and Management 2019 (ISCRAM 2019); Track on "Knowledge, Semantics, and AI for risk and crisis management" - Valencia (Spain) 2018

Interoperability for Crisis Management: Increasing Resilience of Smart Cities (ICRIM 2018) - Berlin (Germany) 2017-2019 8th Resilience Engineering Association (REA) Symposium, Young Talent Committee Member - Kalmar (Sweden)

2017 19th NTCA International Conference (New Trends in Civil Aviation) - Prague (Czech Republic)

2017 11th FRAMily meeting & workshop - Rome (Italy)

Reviewer – Journals

ewer-	- Journals	
1.	Academy of Strategic Management Journal (Allied Journal)	since 2018
2.	Aerospace (MDPI)	since 2018
3.	Applied Ergonomics (Elsevier)	since 2019
4.	Applied Sciences (MDPI)	since 2020
5.	Chemical Engineering Transactions (CET)	since 2020
6.	Cogent Business & Management (Cogent OA)	since 2018
7.	Cogent Engineering (Taylor & Francis)	since 2018
8.	Cognition, Technology & Work (Springer)	since 2017
9.	Computers & Industrial Engineering (Elsevier)	since 2018
	CRC Press, reviewer of book proposals (Taylor & Francis)	since 2019
	Electronics (MDPI)	since 2019
	Energies (MDPI)	since 2018 since 2018
	Entropy (MDPI) Environment, Systems and Decisions (Springer)	since 2018
	Ergonomics in Manufacturing & Service Industries (Wlley)	since 2020
	Expert Systems With Applications (Elsevier)	since 2021
	Frontiers Psychology (Frontiers)	since 2017
	Information (MDPI)	since 2020
	Infrastructures (MDPI)	since 2018
	Int. J. of Environmental Research and Public Health (MDPI)	since 2018
	Int. J. of Business Intelligence Research (IGI Global)	since 2021
	Int. J. of Environmental Science and Development (IJESD)	since 2020
	Int. J. of Production Research (Taylor & Francis)	since 2016
	Int. J. of Productions Economics (Elsevier)	since 2019
	Int. J. of Supply Chain and Inventory Management (Inderscience)	since 2017
	Inventions (MDPI)	since 2019
	J. of Advanced Research (Elsevier)	since 2020
28.	J. of Aerospace Engineering and Mechanics (scholars.direct)	since 2020
29.	J. of Aerospace Information Systems (AIAA)	since 2017
30.	J. of Air Transport Management (Elsevier)	since 2018
31.	J. of Computational Methods in Sciences and Engineering (IoS Press)	since 2019
32.	J. of Contingencies and Crisis Management (Wiley)	since 2019
33.	J. of Crisis and Contingencies Management (Wiley)	since 2020
34.	J. of Industrial Engineering and Management (OmniaScience)	since 2017
35.	J. of Industrial and Production Engineering (Taylor & Francis)	since 2021
	J. of Loss Prevention in the process industries (Elsevier)	since 2019
	J. of Residuals Science & Technology (DEStech publication Inc)	since 2016
	J. of Risk and Reliability (Institute of Mechanical Engineering – SAGE)	since 2021
	J. of Safety Studies (MacroThink)	since 2017
	J. of Surveillance, Security and Safety (Oae Pulibshing Inc.)	since 2020
	Kybernetes (Emerald Insight)	since 2017
	Mathematical Problems in Engineering (HIndawi)	since 2020
	Mathematics (MDPI)	since 2020
	MethodsX (Elsevier)	since 2021
	Naval Research Logistics (Wiley)	since 2019
	Operations Management Research (Elsevier)	since 2021
	PLOS One (Public Library of Science)	since 2016
	Progress in Nuclear Energy (Elsevier)	since 2019
	Process Safety and Environmental Protection (Elsevier) Processes (MDPI)	since 2021 since 2020
	Quality and Reliability Engineering International (Wiley)	since 2020
	Reliability Engineering & System Safety (Elsevier)	since 2013
	Robotics and Computer-Integrated Manufacturing (Elsevier)	since 2017
	Safety (MDPI)	since 2021
	Safety and Health at Work (Elsevier)	since 2019
	Safety Science (Elsevier)	since 2019
	Supply Chain Forum Journal (Taylor & Francis)	since 2019
	Sustainability (MDPI)	since 2018
	Sustainable Computing, Informatics and Systems (Elsevier)	since 2020
	Symmetry (MDPI)	since 2019
	The Open Cybernetics and Systemics Journal (Bentham Open)	since 2017
	The Open Transportation Journal (Bentham Open)	since 2019
	Transportation Research Part E: Logistics and Transportation Review (Elsevier)	since 2016
	Water and Environment Journal (Elsevier)	since 2019

Reviewer - Conferences

CVVCI	conjerences	
1.	International Conference on System Sciences (HICSS) – 54th edition	2021
2.	CISAP 9 (International Conference on Safety & Environment in Process & Power Industry)	2020
3.	European Safety and Reliability Conference (ESREL) 2020	2020
4.	International Conference on System Sciences (HICSS) – 53rd edition	2020
5.	ISCRAM CoRe AI systems for Crisis and Risks (ISCRAM conference)	2020
6.	New Trends in Civil Aviation conference (NTCA 2020)	2020
7.	8th Resilience Engineering Association (REA) Symposium – Kalmar (Sweden)	2019
8.	MLIS 2019 Int. Conf. on Machine Learning and Intelligent Systems – Hualien (Taiwan)	2019
9.	AIAA Region Australia-Asia Student Conference – AIAA Sydney Section (AIAA)	2014-16

International journals (55)

- 1. Nakhal A.J.A., **Patriarca R.,** Di Gravio G., Antonioni G., Paltrinieri N. (2021). *Investigating occupational and operational industrial safety data through Business Intelligence and Machine Learning,* Journal of Loss Prevention in the Process Industries, vol.73, paper 104609. doi: 10.1016/j.jlp.2021.104608.
- 2. Nakhal A.J.A., **Patriarca R.,** Di Gravio G., Antonioni G., Paltrinieri N. (2021). *Business intelligence for the analysis of industrial accidents based on MHIDAS database*, Chemical Engineering Transactions, vol.86, pp.229-234. doi: 10.3303/CET2186039.
- 3. Colabianchi S., Costantino F., Di Gravio G., Nonino F., **Patriarca R.** (2021). *Discussing resilience in the context of cyber physical systems*, Computers & Industrial Engineering, vol.160, pp.1-18, paper 107534. doi: 10.1016/j.cie.2021.107534
- 4. Steen R., Ingvaldsen G., **Patriarca R.,** (2021). *Engineering resilience in a prison's performance management system*, Safety Science, vol. 142, paper 105367. doi: 10.1016/j.ssci.2021.105367.
- 5. Steen R., Patriarca R., Di Gravio G., (2021). The chimera of time: Exploring the functional properties of an emergency response in action, Journal of Contingencies and Crisis Management, in press. doi: 10.1111/1468-5973.12353.
- 6. Annarelli A., Battistella C., Costantino F., Di Gravio G., Nonino F., Patriarca R., (2021). New trends in product service system and servitization research: A conceptual structure emerging from three decades of literature, CIRP Journal of Manufacturing Science and Technology, vol. 32, pp. 424-436. doi: 10.1016/j.cirpj.2021.01.010.
- 7. **Patriarca R.,** De Paolis A., Costantino F., Di Gravio G., (2021). *Simulation model for simple yet robust resilience assessment metrics for engineered systems,* Reliability Engineering & System Safety, vol. 209, paper 107467. doi: 10.1016/j.ress.2021.107467.
- 8. Bernabei G., Costantino F., Palagi L., **Patriarca R.,** Romito F., (2021). *An integer black-box optimization model for repairable spare parts management*. International Journal of Information Systems and Supply Chain Management, vol. 14 (2), pp. 46-68. doi: 10.4018/IJISSCM.2021040103.
- 9. Becker Bertoni V., Saurin T.A., Fogliatto F. S., Falegnami A., **Patriarca R.,** (2021) *Monitor, anticipate, respond, and learn: Developing and interpreting a multilayer social network of resilience abilities,* Safety Science, vol.136, paper 105148, doi: 10.1016/j.ssci.2020.105148.
- 10. **Patriarca R.,** Falegnami F., Costantino F., Di Gravio G., De Nicola A., Villani M.L., (2021) *WAx: an integrated conceptual framework for the analysis of Cyber-Socio-Technical Systems*, Safety Science, vol. 136, paper 105142. doi: 10.1016/j.ssci.2020.105142
- 11. Cantelmi R., Di Gravio G., **Patriarca R.**, (2021) *Reviewing qualitative research approaches in the context of Critical Infrastructure resilience*, Environment Systems and Decisions, in press. doi: 10.1007/s10669-020-09795-8.
- 12. Falegnami A., **Patriarca R.,** Costantino F., Di Gravio G., Bilotta F., (2021) *Surveying work-as-done in post-operative delirium risk factors collection and diagnosis monitoring*, Applied Ergonomics, vol.92, pp.1-15, paper 103347. doi: 10.1007/s10111-019-00612-0.
- 13. Paltrinieri N., **Patriarca R.**, Stefana E., Brocal F., Reniers G., (2020) *Meta-learning for Safety Management*, Chemical Engineering Transactions, vol.82, pp. 169-174. doi: 10.3303/CET2082029
- 14. **Patriarca R.,** Di Gravio G., Costantino F., Tronci T., (2020) *EOQ inventory model for perishable products under uncertainty,* Production Engineering, vol.14(5-6), pp. 601-612. doi: 10.1007/s11740-020-00986-5.
- 15. Falegnami A., Costantino C., Di Gravio G., **Patriarca R.,** (2020) *Unveil key functions in socio-technical systems: Mapping FRAM into a multilayer network*, Cognition, Technology & Work, vol.22, pp.877-899. doi: 10.1007/s10111-019-00612-0
- 16. Shaban A., Shalaby A.M., Di Gravio G., **Patriarca R.**, (2020) *Analysis of Variance Amplification and Service Level in a Supply Chain with Correlated Demand*, Sustainability, vol.12(16), 6470, pp.1-27. doi: 10.3390/su12166470.
- 17. Cantelmi, R., Di Gravio, G., **Patriarca, R.,** (2020). *Learning from Incidents: A Supply Chain Management Perspective in Military Environments*, Sustainability, vol. 12, 5750, pp.1-19. doi: 10.3390/su12145750.
- 18. **Patriarca, R.,** Ramos, M., Paltrinieri, N., Massaiu, S., Costantino, F., Di Gravio, G., Boring, R.L., (2020). *Human Reliability Analysis: exploring the intellectual structure of a research field*, Reliability Engineering and System Safety, vol.203, pp.1-27, paper 107102. doi: 10.1016/j.ress.2020.107102.
- 19. Quatrini E., Costantino F., Di Gravio G., **Patriarca R.,** (2020). *Condition-based maintenance: an extensive literature review,* Machines, vol.8 (2), pp.1-28. doi: 10.3390/MACHINES8020031.
- 20. Quatrini E., Costantino F., Di Gravio G., **Patriarca R.**, (2020). *Machine learning for anomaly detection and process phase classification to improve safety and maintenance activities*, Journal of Manufacturing Systems, vol.56, pp.117-132. doi: 10.1016/j.jmsy.2020.05.013.
- 21. **Patriarca R.**, Di Gravio G., Woltjer R., Costantino F., Praetorius G., Ferreira P., Hollnagel E., (2020). *Framing the FRAM: a literature review on the functional resonance analysis method*, Safety Science, vol.129, pp.1-23, paper 104827. doi: 10.1016/j.ssci.2020.104827.

- 22. Saurin T.A., **Patriarca R.**, (2020). A taxonomy of interactions in socio-technical systems: A functional perspective, Applied Ergonomics, vol. 82., paper 102980. doi: 10.1016/j.apergo.2019.102980.
- 23. Patriarca R., Hosseini S., (2019). Modeling and quantification of resilience in complex engineering systems, Complexity, number 1038908. ISSN: 1076-2787. doi: 10.1155/2019/1038908.
- 24. **Patriarca R.**, Di Gravio G., Costantino F., (2019). *About resilience of modern societies*, Economy and Management: Problems, Solutions (Ekonomka I Upravlenie: Problemy, Resheniya), vol. 10 (4), page 97-103, UDK 330.332.21. ISSN: 2227-389.
- 25. Falegnami A., Costantino C., Di Gravio G., **Patriarca R.**, (2019). *Unveil key functions in socio-technical systems: Mapping FRAM into a multilayer network*, Cognition, Technology & Work, in press. doi: 10.1007/s10111-019-00612-0.
- 26. **Patriarca R.,** Hu T., Costantino F., Di Gravio G., Tronci M., (2019). A System-Approach for Recoverable Spare Parts Management Using the Discrete Weibull Distribution, Sustainability, vol.11, 5180, pp.1-15.
- 27. Adriaensen A., Patriarca R., Smoker A., Bergstrom J., (2019). A socio-technical analysis of functional properties in a joint cognitive system. A case study in an aircraft cockpit, ISS: 0014-0139 (in press). doi: 10.1080/00140139.2019.1661527.
- 28. **Patriarca R.**, Di Gravio G., Costantino F., 2019. *Risk, safety, reliability and satellites: Chronicles of a fragmented research field.* Journal of Space Safety Engineering, ISSN 2468-8967, vol.6(3), pp.201-211. doi: 10.1016/j.jsse.2019.08.002.
- 29. **Patriarca R.,** Di Gravio G., Costantino F., Fedele L., Tronci M., Bianchi V., Caroletti F., Bilotta F., 2019. *Systemic safety management in anesthesiological practices,* Safety Science, Volume 118, Pages 551-567, ISSN 0925-7535, https://doi.org/10.1016/j.ssci.2019.08.021.
- 30. **Patriarca R.**, Di Gravio G., Cioponea R., Licu A., (2019). *Safety intelligence: Incremental proactive risk management for holistic aviation safety performance*. Safety Science, Volume 118, Pages 551-567, ISSN 0925-7535, https://doi.org/10.1016/j.ssci.2019.05.040.
- 31. **Patriarca R.**, Falegnami A., De Nicola A., Villani M.L., Paltrinieri N., (2019). *Serious games for industrial safety: An approach for developing resilience early warning indicators*. Safety Science, Volume 118, Pages 316-331, ISSN 0925-7535, https://doi.org/10.1016/j.ssci.2019.05.031.
- 32. **Patriarca R.**, Falegnami A., Bilotta F., (2018). *Embracing simplexity: the role of artificial intelligence in peri-procedural medical safety*. Expert Review of Medical Devices, ISSN 1743-4440, vol. 16 (2), pp. 77-79, doi: 10.1080/17434440.2019.1561269.
- 33. Menchinelli A., Ingiosi F., Pamphili L., Marzioli P., **Patriarca R.**, Costantino F., Piergentili F., (2018). *A reliability engineering approach for managing risks in CubeSats*. Aerospace, ISSN 2226-4310, vol. 5 (4), pp. 1-24, doi: 10.3390/aerospace5040121.
- 34. Falegnami A., Bilotta F., Pugliese, F., Costantino F., Di Gravio, G., Tronci, M., **Patriarca R.**, (2018). *A multi-country comparative survey about organizational resilience in anesthesia*. Journal of Evaluation in Clinical Practice, ISSN 0951-8320, vol. 24 (6), pp. 1347-1357, doi: 10.1111/jep.13054.
- 35. **Patriarca R.**, Falegnami A., Costantino F., Bilotta F., (2018). *Resilience Engineering for socio-technical risk analaysis: application in neuro-surgery*. Reliability Engineering & System Safety, ISSN 0951-8320, vol. 180, pp. 321-335. doi: 10.1016/j.ress.2018.08.001.
- 36. **Patriarca R.**, Falegnami, A., Di Gravio G., Costantino, F., Bilotta, F., (2018). *An analytic framework to assess organisational resilience*. Safety and Health at Work, ISSN: 2093-7911, vol. 9(3), pp. 265-276. doi: 10.1016/j.shaw.2017.10.005.
- 37. **Patriarca R.**, Bergström J., Di Gravio G., Costantino, F., (2018). *Resilience Engineering: current results and future challenges*. Safety Science, ISSN 0925-7535, vol. 102, pp. 79-100. doi: 10.1016/j.ssci.2017.10.005.
- 38. Costantino, F., Di Gravio, G., **Patriarca R.**, Petrella L. (2018). *Spare parts management for irregular demand items*. OMEGA: The management science journal, ISSN 0305-0483, vol. 81, pp. 57-66. doi: 10.1016/j.omega.2017.09.009.
- 39. **Patriarca R.**, Del Pinto G., Di Gravio G., Costantino F., (2018). *FRAM for systemic accident analysis: a matrix representation of functional resonance*. International Journal of Reliability, Quality and Safety Engineering, ISSN 1793-6466. doi: 10.1142/S0218539318500018.
- 40. **Patriarca R.**, Di Gravio G., Costantino F., Tronci M., Severoni A., Vernile A., Bilotta F. (2017). *A paradigm shift to enhance patient safety in health care, a Resilience Engineering approach: scoping review of available evidence*. International Journal of Healthcare Technology and Management, ISSN 1741-5144, vol. 16 (3-4), pp. 319-343. doi: 10.1504/IJHTM.2017.088872.
- 41. **Patriarca R.**, Bergström J., (2017). *Modelling complexity in everyday operations: Functional resonance in maritime mooring at quay*. Cognition, Technology & Work, ISSN 1435-5566, vol. 19 (4), pp. 711-729. doi: 10.1007/s10111-017-0426-2.
- 42. **Patriarca R.**, Bergström J., Di Gravio G., (2017). *Corrigendum to "Defining the Functional Resonance Analysis space: combining Abstraction Hierarchy and FRAM"*. Reliability Engineering and System Safety, ISSN 0951-8320, vol. 167, pp. 612. doi: 10.1016/j.ress.2017.08.015.
- 43. **Patriarca R.**, Bergström J., Di Gravio G., (2017). *Defining the functional resonance analysis space: Combining Abstraction Hierarchy and FRAM.* Reliability Engineering and System Safety, ISSN 0951-8320, vol. 165, pp. 34-46. doi: 10.1016/j.ress.2017.03.032.
- 44. **Patriarca R.**, Di Gravio G., Costantino F., (2017). *Resilience Engineering to assess risks for the Air Traffic Management system: a new systemic method.* International Journal of Reliability and Safety, vol. 16 (4), pp. 323-345, doi: 10.1504/IJRS.2016.10005344.
- 45. **Patriarca R.**, Di Gravio G., Costantino F., (2017). A Monte Carlo evolution of the Functional Resonance Analysis Method (FRAM) to assess performance variability in complex systems. Safety Science, ISSN 0925-7535, vol. 91, pp. 49-60. doi: 10.1016/j.ssci.2016.07.016.
- 46. **Patriarca R.**, Costantino F., Di Gravio G., & Tronci M., (2017). *The Functional Resonance Analysis Method for a systemic risk based environmental auditing in a sinter plant: A semi-quantitative approach.* Environmental Impact Assessment Review, ISSN 0195-9255, vol. 63, pp. 72-86. doi: 10.1016/j.eiar.2016.12.002.

- 47. Di Gravio G., **Patriarca R.**, Costantino F., Sikora I., (2017). *Safety assessment for an ATM system change: a methodology for the ANSPs*. PROMET Traffic & Transportation, ISSN 1848-4069, vol. 29 (1), pp. 99-107. doi: http://dx.doi.org/10.7307/ptt.v29i1.2121.
- 48. **Patriarca R.**, Di Gravio G., Mancini M., Costantino F., (2016). *Change management in the ATM system: integrating information in the Preliminary System Safety Assessment*. International Journal of Applied Decision Sciences, ISSN 1755-8085, vol. 9 (2), pp. 121-138. doi: 10.1504/IJADS.2016.10000985.
- 49. **Patriarca R.**, Costantino F., Di Gravio G., (2016). *Inventory model for a multi-echelon system with unidirectional lateral transshipment*. Expert Systems with Applications, ISSN 0957-4174, vol. 65, pp. 372-382. doi:10.1016/j.eswa.2016.09.001.
- 50. Costantino F., Di Gravio G., Nonino F., **Patriarca R.**, (2016). *Evolution of the intellectual structure of research on pricing strategy of low cost carriers*. Research in Transportation Business and Management, ISSN 2210-5395, vol. 21, pp.9 9-116. doi:10.1016/j.rtbm.2016.07.005.
- 51. **Patriarca R.**, Costantino F., Di Gravio G., Tronci M., (2016). *Inventory optimization for a customer airline in a performance based contract*. Journal of Air Transport Management, ISSN 0969-6997, vol. 57, pp. 206-216. doi:10.1016/j.jairtraman.2016.08.005.
- 52. **Patriarca R.**, Di Gravio G., Costantino F., (2016). *Assessing performance variability of ground handlers to comply with airport quality standards.* Journal of Air Transport Management, ISSN 0969-6997, vol. 57, pp. 1-6, doi: 10.1016/j.jairtraman.2016.06.009.
- 53. Di Gravio G., **Patriarca R.**, Mancini M., Costantino F., (2016). *Overall safety performance of the Air Traffic Management system: The Italian ANSP's experience on APF*. Research in Transportation Business and Management, ISSN 2210-5395, vol. 20, pp. 3-12, doi:10.1016/j.rtbm.2016.03.001.
- 54. Di Gravio G., Mancini M., **Patriarca R.**, Costantino F., (2015). *Overall safety performance of the Air Traffic Management system: indicators and analysis.* Journal of Air Transport Management, ISSN 0969-6997, vol. 44-45, pp. 65-69, doi: 10.1016/j.jairtraman.2015.02.005.
- 55. Di Gravio G., Mancini M., **Patriarca R.**, Costantino F., (2015). *Overall safety performance of Air Traffic Management system:* forecasting and monitoring. Safety Science, ISSN 0925-7535, vol. 72, pp. 351-362, doi: 10.1016/j.ssci.2014.10.003.

International conference proceedings (42)

- 1. Gamal M., Donkol A., Shaban A., Costantino F., Di Gravio G., **Patriarca R.** (2021). *Anomalies Detection in Smart Manufacturing Using Machine Learning and Deep Learning Algorithms*, atti del 4th European Conference on Industrial Engineering and Operations Management (IEOM 2021). 2-5 August 2021, Rome (Italy).
- 2. De Souza I., Haddad A., **Patriarca R.** (2021). *Uncovering resilience abilities in maintenance teams for buildings with Functional Resonance Analysis Method*, 15th Naturalistic Decision Making and 9th Resilience Engineering Symposium (REA 2021) extended abstract. 24-26 June 2021, Toulouse (France).
- 3. Adriaensen A., Pintelon L., **Patriarca R.**, (2021). Interdependency Analysis for collaborative robot applications through FRAM analysis, 15th Naturalistic Decision Making and 9th Resilience Engineering Symposium (REA 2021) extended abstract. 24-26 June 2021, Toulouse (France).
- 4. **Patriarca R.,** Falegnami A., Costantino F., Di Gravio G., De Nicola A., Villani M.L. (2021). *WAx on, WAx off: understanding the dynamics of cyber-socio-technical systems,* 15th Naturalistic Decision Making and 9th Resilience Engineering Symposium (REA 2021) extended abstract. 24-26 June 2021, Toulouse (France).
- 5. Adriaensen A., Pintelon L., Costantin, F., Di Gravi, G., **Patriarca, R.** (2021). *An STPA Safety Analysis Case Study of a Collaborative Robot Application,* Proceedings of the 17th IFAC Symposium on Information Control Problems in Manufacturing (INCOM 2021). 7-9 June 2021, Budapest (Hungary).
- 6. Sujan M., Watt J., **Patriarca R.,** Costantino F., Villani M.L., De Nicola A. (2021). *Developing safety indicators for industrial processes using the Functional Resonance Analysis Method*, Proceedings of online Safety Critical Systems Symposium. 9-11 February 2021 (online).
- 7. Costantino F., De Nicola A., Di Gravio G., Falegnami A., **Patriarca R.,** Tronci M., Vicoli G., Villani M.L. (2020). *Towards a Framework for Definition of Enterprise Safety Indicators*, Proceedings of the 10th International Conference on Interoperability for Enterprise Systems and Applications (I-ESA 2020 ICRIM Workshop). 17-20 November 2020, Tarbes (France).
- 8. Costantino F., De Nicola A., Di Gravio G., Falegnami A., **Patriarca R.,** Tronci M., Vicoli G., Villani M.L. (2020). *Transition from Work-As-Imagined to Work-As-Done Processes through Semantics: an Application to Industrial Resilience Analysis*, Proceedings of 10th International Conference on Interoperability for Enterprise Systems and Applications (IESA 2020). 17-20 November 2020, Tarbes (France).
- Costantino F., De Nicola A., Di Gravio G., Falegnami A., Patriarca R., Tronci M., Vicoli G., Villani M.L. (2020). Crowd sensitive indicators for proactive safety management: a theoretical framework, Proceedings of 30th European Safety and Reliability Conference (ESREL 2020). 1-5 November 2020, Venezia (Italy).
- 10. Paltrinieri N., **Patriarca R.**, Pacevicius M., Rossi P.S. (2020). *Lessons from past hazardous events: data analytics for severity prediction*, Proceedings of 30th European Safety and Reliability Conference (ESREL 2020). 1-5 November 2020, Venezia (Italy).
- 11. **Patriarca R.,** Di Gravio G., Fantini C., Volpini R., Mancini M., (2020). *Holistic data intelligence systems for ANSPs*, Proceedings of FABEC Online Research Workshops 2020 "Interdependencies with ATM performance in the context of a dynamic environment". 21-23 October 2020 (online).

- 12. De Nicola A., Villani M.L., Costantino F., Falegnami A., **Patriarca R.**, (2020). *Drivers of knowledge conversion in sociotechnical systems*, Proceedings of the 6th International Workshop on Socio-Technical Perspectives in IS Development (STPIS 2020). 8-9 June 2020, Grenoble (France) (online).
- 13. **Patriarca R.**, Di Gravio G., Costantino F., (2019). *About resilience of modern societies*, 13th International Scientific Conference "Humanitarian economic and management aspects of modern government and business structures. 1-3 December 2019, Domodedovo Moscow (Russia). (manuscript selected for publication in Economy and Management: Problems, Solutions Ekonomka I Upravlenie: Problemy, Resheniya)
- 14. Hosseinnia B., Khakzad N., **Patriarca R.**, Paltrinieri N., (2019). *Modeling Risk Influencing Factors of Hydrocarbon Release Accidents in Maintenance Operations using FRAM*, Proceedings of 4th International Conference on System Reliability and Safety (ICSRS 2019), 20-22 November 2019, Rome (Italy).
- 15. Di Gravio G., Costantino F., Falegnami A., **Patriarca R.**, (2019). *Actionable safety analyses in socio-technical systems with myFRAM*, Proceedings of 4th International Conference on System Reliability and Safety (ICSRS 2019), 20-22 November 2019, Rome (Italy).
- 16. Di Gravio G., Venanzi L., Costantino F., **Patriarca R.**, Tronci M. (2019). *About Spare Parts Cannibalization for Rotable Items a preliminary approach for inventory control*, Proceedings of 4th International Conference on System Reliability and Safety (ICSRS 2019), 20-22 November 2019, Rome (Italy).
- 17. Lališ A., **Patriarca R.**, Ahmad J., Di Gravio G., Kostov B., (2019). Functional modeling in safety by means of foundational ontologies, Proceedings of the 8th International Conference on Air Transport INAIR 2019 Global Trends In Aviation, 12-13 November 2019, Budapest (Hungary).
- 18. Quatrini E., Costantino F., Di Gravio G., **Patriarca R.**, (2019). *Load forecast for onboard high-speed railway catering service using machine learning*, Proceedings of XXIV Summer School "Francesco Turco" Impianti Industriali Meccanici "Augmented Knowledge: A new era of industrial systems engineering", 11-13 September 2019, Brescia (Italy).
- 19. **Patriarca R.,** Di Gravio G., Costantino F., Tronci M., (2019). WHO? WHAT? WHERE? WHEN? A scientometric perspective on Resilience Engineering. Proceedings of the 8th Resilience Engineering Association (REA) symposium. Kalmar (Sweden), 24-27 June 2019.
- 20. **Patriarca R.,** Adriaensen A., Peters M., Putnam J., Costantino F., Di Gravio G., (2019). *Receipt and disptach of an aircraft. A functional risk analysis*. Proceedings of the 8th Resilience Engineering Association (REA) symposium. Kalmar (Sweden), 24-27 June 2019.
- 21. **Patriarca R.**, Di Gravio G., Costantino F., (2019). myFRAM one year later: recap and agenda, proceedings (abstract) of 13th FRAMily meeting & workshop, 27-29 May 2019, Malaga (Spain).
- 22. **Patriarca R.,** Di Gravio, G., Costantino, F., (2019). *Risk, Safety and Reliability in satellite operations: The intellectual structure of a research field*. 10th IAASS Conference "Making safety happen", 15-17 May 2019 Los Angeles (California).
- 23. **Patriarca R.**, Cioponea R., Di Gravio G., Licu A., (2018). *Managing safety data: the TOKAI experience for the ANSPs*, Proceedings of the 7th International Conference on Air Transport INAIR 2018, Hainburg an der Donau (Austria), 20-21 November 2018.
- 24. **Patriarca R.**, Di Gravio G., Costantino F., Tronci M. (2018). *Project risk management in complex socio-technical systems: A resilience perspective*. Proceedings of the 3rd PMI Italian Academic Workshop "Project Management: Driving Complexity", 20-21 September 2018 Rome (Italy). ISBN 978-88-9377-086-6 Sapienza Università Editrice.
- 25. **Patriarca R.**, Di Gravio G., Costantino F., (2018). *About myFRAM: An Open Tool Support for the FRAM,* Proceedings (abstract) of 12th FRAMily meeting and workshop, 11-13 June 2018, Cardiff (Galles).
- 26. **Patriarca R.**, Falegnami A., De Nicola A., Villani M.L., Paltrinieri N., (2018). Gamification for industrial safety: an approach for developing resilience early warning indicators. 27th SRA-E conference "Risk & Uncertainty From Critical Thinking to Practical Impact", Ostersund (Sweden), 18-20 June 2018.
- Gattola V., Patriarca R., Tomasi G., Tronci M., (2018). Functional resonance in industrial operations: A case study in a manufacturing plant. Proceedings of the 16th IFAC symposium on Information Control Problems in Manufacturing (INCOM), Begamo (Italy), 11-13 June 2018,— published in IFAC-PapersOnLine, vol.51(11), pp.927-932. doi: 10.1016/j.ifacol.2018.08.489.
- 28. **Patriarca R.**, Di Gravio G., Costantino F., (2018). *myFRAM: an open tool support for the Functional Resonance Analysis Method*. 2017 2nd International Conference on System Reliability and Safety (ICSRS 2017), Milan (Italy), 20-22 December 2017.
- 29. **Patriarca R.,** (2018). New trends for risk and safety management in the aviation domain: A resilience engineering perspective. 19th international conference "New trends in civil aviation", 7-8 December 2018, Prague (Czech Republic) ISBN 978-0-8153-7602-6 CRC Press Proceedings and Monographs in Engineering, Water and Earth Sciences.
- De Nicola A., Falegnami A., Patriarca R., Vicoli G., Villani M.L., (2017). Enhancement of Safety Imagination in Socio-Technical Systems with Gamification and Computational Creativity. ESReDA 53rd Seminar "Enhancing Safety: the Challenge of Foresight", Ispra (Italy), 14-15 November 2017.
- 31. Adriaensen A., **Patriarca R.**, Smoker A., Bergstrom J., (2017). *Can artefacts be analyzed as an agent by itself yes or no: what does Hutchins 'how does a cockpit remember its speeds' tell us.* Proceedings of 7th REA Symposium, 26th-29th June 2017 Liege (Belgium).
- 32. **Patriarca R.**, Di Gravio G., Costantino F., Tronci M., (2017). *FRAM to assess performance variability in everyday work:* functional resonance in the railway domain. Proceedings of 7th REA Symposium, 26th-29th June 2017 Liege (Belgium).
- 33. Costantino F., Di Gravio G., **Patriarca R.,** Tronci M., (2017). *A systemic approach for spare parts management in a Performance Based Contract.* Proceedings of XXII Summer School "Francesco Turco": "Innovation and development in engineering applications" 13-15 September 2017, Mondello (Italy), ISBN 978-88-908649-0-2.

- 34. **Patriarca R.**, Di Gravio G., Costantino F., Tronci M., (2017). *An inventory management model to manage the stock level for irregular demand items*, ICCIE 2017: 19th International Conference on Computers and Industrial Engineering, 13th -14th July 2017, Stockholm (Sweden).
- 35. **Patriarca R.**, Bergstrom J., Di Gravio G., Costantino F., Falegnami A., (2017). *A multi-layer FRAM: The Abstraction/Agency framework for modelling complex socio-technical systems*, proceedings (abstract) of 11th FRAMily meeting & workshop, 24/26 May 2017, Roma (Italy).
- 36. **Patriarca R.**, Di Gravio G., Costantino F., (2016). *Monte Carlo simulation to assess performance variability in the FRAM*, proceedings (abstract) of10th FRAMily meeting & workshop, 1-3 June 2016, Lisbon (Portugal).
- 37. **Patriarca R.**, Costantino F., Di Gravio G., (2016). *Resilience Engineering for space missions safety assessment*. Proceedings of 8th IAASS Conference "Safety first, Safety for all", 18-20 May 2016 Melbourne (Florida).
- 38. Sikora I., **Patriarca R.**, Di Gravio G., Costantino F., (2016). *MARS A fresh look at risk assessment modelling and effective safety data communication*. Proceedings of Znanost I Razvitak Prometa (ZIRP 2016), 12 April 2016, Zagreb (Croatia), ISBN 978-953-243-081-3, pp.193-209.
- 39. Costantino F., Di Gravio G., **Patriarca R.,** Tronci M., (2015). *Simulation model of spare parts management in a commercial pool contract*. 5th International Conference of Production Engineering and Management, 1-2 October 2015, Trieste (Italy), ISBN 978-3-941645-11-0.
- 40. Di Gravio G., Mancini M., **Patriarca R.**, Costantino F., (2014). *ATM safety management: reactive and proactive indicators*. Proceedings of 4th SESAR Innovation Days (SIDs 2014) EUROCONTROL, 25-27 November 2014, Madrid (Spain), ISBN 978-2-87497-077-1.
- 41. Costantino F., Di Gravio G., **Patriarca R.,** Tronci M., (2014). *Spare parts inventory control model for the aeronautical industry.* Proceedings of XIX Summer School "Francesco Turco": "A challenge for the future" 9-12 September 2014, Senigallia (Italy), ISBN 978-88-908649-1-9.
- 42. **Patriarca R.,** (2014). Forecasting overall safety performance of Air Traffic Management System. Proceedings of 10th Pegasus AIAA Student Conference, Prague (Czech Republic), 23-25 April 2014, ISBN 978-80-01-05459-8, 2014.

Keynote Speeches and other magazines (7)

- 1. **Patriarca R.,** (2020). Road to Resilience: Uncovering Hidden Functional Patterns in Aviation Safety Management. Online International conference "New trends in civil aviation", 23-24 November 2020, Prague (Czech Republic) (online).
- Patriarca R. (2019). Risk management in complex systems, Heroes meet in Maratea Innovation, Future, Companies, Maratea (Italy), 20 September 2019.
- 3. **Patriarca R.,** (2019). *Safety Intelligence dashboards*. Safety & Security Conference, 20-21 November 2019, Prague (Czech Republic) keynote speech.
- 4. **Patriarca R.,** (2018). *Failure is always an option: shifting from linear to complex analyses.* Safety & Security Conference, 21-22 November 2018, Prague (Czech Republic) keynote speech.
- Patriarca R., (2018). New trends for risk and safety management in the aviation domain: A resilience engineering perspective. 19th international conference "New trends in civil aviation", 7-8 December 2018, Prague (Czech Republic) – keynote speech.
- 6. **Patriarca R.,** (2016). *Dynamic safety models for space safety*. Space Safety Magazine, 11 July 2016, online reference: http://www.spacesafetymagazine.com/magazine/dynamic-models-enhance-space-safety/ online magazine.
- Patriarca R., (2016). Il punto di vista sulla safety: Safety-I vs Safety-II. SAFEBULL ENAV S.p.A. Safety journal, Vol. 9/2015 (in Italian) - ENAV safety magazine.

Book chapters (1)

1. **Patriarca R.,** (2021). *Resilience Engineering for socio-technical safety management.* In book: Multisystemic Resilience: Adaptation and Transformation in contexts of change, edited by Michael Ungar. Chapter 24, pp. 491-506.

LANGUAGES

Italian: mother tongue

English: C2 French: B1

Rome, 16th August 2021

Riccardo Patriarca, PhD

(firma autografa omessa ai sensi dell'art. 3 del D.lgs. n. 39/1993)