

MARTA GALUPPI

Curriculum Vitae



Place Roma, Italy
Date 22/03/2024.

Part I – General Information

Full Name	Marta Galuppi
Birth Date	09/12/1997
Spoken Languages	Italian (mother tongue), English, Spanish

Part II – Education

Type	Year	Institution	Notes
University Graduation: bachelor's degree in chemical engineering (L-9)	2019	Faculty of Civil and Industrial Engineering, Sapienza University of Rome	Title of final dissertation: Removal of heavy metals from drinking water using ion exchange resins.
University Graduation: master's degree in safety and civil protection Engineering (LM- 26)	2021	Faculty of Civil and Industrial Engineering, Sapienza University of Rome	Title of final dissertation: Sensitivity Analysis of Simplified Analysis Models for the Transportation of Hazardous Goods by Rail: Representativeness and Replicability. Final Mark: 110 cum laude
Licensure	2021	Order of Engineers of the Province of Rome	Registered member at the Engineering Professional Order – Industrial Section
Licensure	2021	Faculty of Civil and Industrial Engineering, Sapienza University of Rome	Health and Safety Officer (D.Lgs. 81/2008)
Licensure	2021	Sapienza, university of Rome	24 CFU for Teaching
PhD – Infrastructure and Transport	2022-Current	Faculty of Civil and Industrial Engineering, Sapienza University of Rome	Project Title: Safety solutions for Smart tunnel: green island, technical devices and technological systems for sustainable development goals.
Licensure	2022	Order of Engineers of the Province of Rome	Registered member at the Engineering Professional Order – Civil and Environmental Section
Licensure	2022	Faculty of Civil and Industrial Engineering, Sapienza University of Rome	Forensic Engineering
Licensure	2023	Faculty of Civil and Industrial Engineering, Sapienza University of Rome	Registered Member at the Fire Design Register Minister of the Interior, Department of firefighter, public rescue (DPR 151/2011)
Licensure	2023	LUND University Sweden	Tunnel Fire Dynamics Course
PhD Guest	2023	DTU- Denmark Technical University, Denmark	Main activities: Probabilistic Approach for Safety and Sustainability in Tunnel

Part III – Appointments

IIIA – Academic Appointments

Start	End	Institution	Position
2021	2022	Faculty of Civil and Industrial Engineering, Sapienza University of Rome	Tutoring for the course Risk Analysis (SSD ING-IND/28)
2022	2023	Sapienza University of Rome	Winner of fellowship for tutoring the project ORIENTAMENTO NEXT GENERATION
2022	2023	Faculty of Civil and Industrial Engineering, Sapienza University of Rome	Tutoring for the course Risk and Territorial Resilience (SSD ING-IND/28)
2023	2024	Faculty of Civil and Industrial Engineering, Sapienza University of Rome	Tutoring for the course Risk Analysis (SSD ING-IND/28)
2023	2024	Sapienza University of Rome	Winner of fellowship for tutoring the project ORIENTAMENTO NEXT GENERATION
2023	2024	Faculty of Civil and Industrial Engineering, Sapienza University of Rome	Tutoring for the course Risk and Territorial Resilience (SSD ING-IND/28)

IIIB – Other Appointments

Start	End	Institution	Position
2020	2022	freelance	Writer at the newspaper "Pillole di Sicurezza" (Safety Pills). www.pillolesicurezza.com
Jun. 2021	Oct. 2021	Contea and Partners S.r.l	Application of safety principles according to Legislative Decree 81/08 for the development of documents such as Risk Documents, Health and Safety Plan and Work Procedures in civil contexts.
2021	2022	SPE Student Chapter of Rome	Vice president
2020	2021	Aeroporto G. Marconi di Bologna	Member of scientific research Committee: "Research activities related to the study of probabilistic scenarios regarding the risk of aircraft accidents for the G. Marconi Airport in Bologna. (rif. Masterplan 2016-2023)". PI: Prof.ssa Mara Lombardi
2021	2022	International conference on industrial engineering and operations management (IEOM)	Reviewer
2021	-	4 th international conference on industrial engineering and operations management (IEOM)	Outstanding Student Leadership Award
2021	2022	Aeroporto G. Marconi di Bologna	Member of scientific research Committee: "Research and technical coordination activities related to the authorization process for the construction of a new aviation fuel depot within the Bologna airport – Borgo Panigale "G. Marconi". PI: Prof.ssa Mara Lombardi
2021	2022	GEIE - TMB	Member of scientific research Committee: Consultancy activities for regulatory and best practice verification regarding the adoption, in the event of incidental events, of control

			and traffic blocking systems (barriers) at the Mont Blanc tunnel. PI: Prof.ssa Mara Lombardi
2021	2022	Santa Maria Novella Station	Participant at technical group Fire prevention checks through a performance-based approach at Santa Maria Novella Station: Application of Performance-Based Fire Safety Engineering (FSE) principles to fire prevention checks for regulated activities. Simulation of relevant scenarios using software such as FDS, PyroSim, and Pathfinder to verify the thermal resistance of materials present in the station (specifically, fiber-cement). Processing of results and preparation of a comprehensive technical report. PI: Prof.ssa Mara Lombardi
2022	-	Tema Sistemi	Member of the research group for technical-scientific coordination related to experimental activities aimed at certifying the AQUATECH® high and low-pressure water mist system for the installation of a fire suppression system at the Galleria Borghese art gallery. PI: Prof.ssa Mara Lombardi
Mar. 2022	Dec. 2022	Sicurezza 4.0 start up Sapienza	Technical services in support of the internal design of the Automatic Metro of Turin - Line 2, specifically focusing on CFD modeling and simulation of the evacuation of different types of structures along the Rebaudengo-Politecnico section (Client: INFRATO - Infrastructure for Mobility Turin).
2022	-	International conference on industrial engineering and operations management (IEOM)	Participant "In Proceedings of the 5th european International conference on industrial engineering and operations management; IEOM", July 26-28, 2022, Rome, Italy,. Title: Real Time Dynamic Quantitative Risk Analysis Approach for Smart Tunnel.
2022		5 th international conference on industrial engineering and operations management (IEOM)	Outstanding Student Leadership Award

Part IV – Teaching experience

Year	Institution	Lecture/Course
2020-2021	Faculty of Civil and Industrial Engineering, Sapienza University of Rome	PCTO - Percorsi per le Competenze Trasversali e l'Orientamento - Progetti 2020-2021. Rendi la tua città resiliente: - Rischi + Sostenibilità
2021-2022	Faculty of Civil and Industrial Engineering, Sapienza University of Rome	PCTO - Percorsi per le Competenze Trasversali e l'Orientamento - Progetti 2021-2022. Rendi la tua città resiliente: - Rischi + Sostenibilità
2022-2023	Faculty of Civil and Industrial Engineering, Sapienza University of Rome	PCTO - Percorsi per le Competenze Trasversali e l'Orientamento - Progetti 2022-2023. Rendi la tua città resiliente: - Rischi + Sostenibilità
2023-	Faculty of Civil and Industrial Engineering,	PCTO - Percorsi per le Competenze Trasversali e

2024	Sapienza University of Rome	l'Orientamento - Progetti 2022-2023. Rendi la tua città resiliente: - Rischi + Sostenibilità
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Part V – Honour and Awards

Year	Title	Institution	Notes
2022	Excellent Graduate	Sapienza University of Rome	Graduate Day: Award ceremony for outstanding students of the University - 5th edition (January 12th).

Part VI – Research Activities

Keywords	Brief Description
Road and Rail Safety and Risk Analysis	Definition of the best practice for safety analysis and management applied to network TERN. Reliability of Quantitative Risk Analysis considering stochastic uncertainties and ethical aspect of acceptability criteria. (see Guarascio, M.; Berardi, D.; Despabeladera, C.; Alakbarli, E.; Di Benedetto, E.; Galuppi, M.; Lombardi, M. Road Tunnel Risk-Based Safety Design Methodology by gu@larp Quantum Risk Model. In <i>WIT Transactions on The built environment</i> ; 2022 ; Vol. 1, pp 39–50.)
Risk Analysis	Risk analysis is the science of risks and in a probabilistic risk assessment is a strategy to analyse the safety and to consider risks as the probability of occurrence of a consequence and the magnitude of a potential consequence. (see Lombardi, M.; Berardi, D.; Stantero, L.; Galuppi, M. Real Time Dynamic Quantitative Risk Analysis Approach for Smart Tunnel. In Proceedings of the 5th European International conference on industrial engineering and operations management; IEOM Society: Canton, Michigan, 2022; pp 1–9 .) Research activity concerning the study of probabilistic scenarios on the risk of air accidents for the G. Marconi airport of Bologna. Research and technical coordination activities concerning the authorization procedure for the construction of a new aviation fuel depot within the Bologna airport.
Fire Safety Engineering	Experimentation activities aimed at the certification of the AQUATECH® high- and low-pressure water mist system for the construction of an extinguishing system at the Galleria Borghese art gallery. Experimental Analysis of Full-Scale Tunnel Fire Safety: Back Analysis and Model Validation. This study aims to conduct an experimental analysis to evaluate fire safety measures in a full-scale tunnel. The research will focus on two key aspects: back analysis and model validation. Back analysis involves the interpretation of data collected from previous tunnel fire incidents, allowing to assess the effectiveness of existing safety measures and identify areas for improvement. Model validation aims to verify the accuracy and reliability of numerical models used to simulate tunnel fire scenarios and validate it comparing the on-site fire test. (see Lombardi, M.; Berardi, D.; Galuppi, M. A Critical Review of Fire Tests and Safety Systems in Road Tunnels: Limitations and Open Points. <i>Fire</i> 2023 , 6, 213. https://doi.org/10.3390/fire6050213)
Sustainability Energy	Study on renewable energy sources to conserve energy and address issues of disaster risk management, territorial resilience and vulnerability, especially as these issues relate to critical infrastructures (CIs), such as roads and railways. (see Lombardi, M.; Berardi, D.; Galuppi, M.; Barbieri, M. Green Tunnel Solutions: An Overview of Sustainability Trends in

the Last Decade (2013–2022). *Buildings* **2023**, *13*, 392. 8.)

Occupational Safety

The main goal of this research activity is the analysis of statistical evidence between the size of work organization and the propensity to accidents. Specially, the research aims to verify the original hypothesis of a statistically significant relationship between the increase of work organization and resilience to risk, both about the single worker that about the working group, as measured by statistical indicators of organization and effective injury rate and in order to recognize, by analysis of familiarity (cluster analysis), factors of hazard and ways of injury most sensitive to increase of the organization level. The research also aims to investigate the statistical relationships between the dimensions of work organization and quantitative indicators of accidents, comparing, by means the ANOVA model, the variables obtained from an available sample with those of a check sample, by measuring the "pre and post" performance indicators. (see 2. Lombardi, M.; Mauro, F.; Berardi, D.; Galuppi, M. Occupational Road Safety Management: A Preliminary Insight for a Landfill Remediation Site. *Buildings* **2023**, *13*, 1238. <https://doi.org/10.3390/buildings13051238>)

Wildfire

The main goal of this research is to use the geostatistical model and risk analysis for the prediction of wildfire events and modelling the territorial resilience. This is regarding the protection and prevention of territory and safety for people. (see 1. Berardi, D.; Galuppi, M.; Libertà, A.; Lombardi, M. Geostatistical Modeling of Wildfire Occurrence Probability: The Case Study of Monte Catillo Natural Reserve in Italy. *Fire* **2023**, *6*, 427. <https://doi.org/10.3390/fire6110427> .)

Part VII – Summary of Scientific Achievements

Product type	Number	Data Base	Start	End
Papers [international]	6	Scopus - WOS	2022	2024

Hirsch (H) index	2
Total Citations	9
Total Impact factor	15.424
Average Impact Factor	2.203

Part VIII–Publications

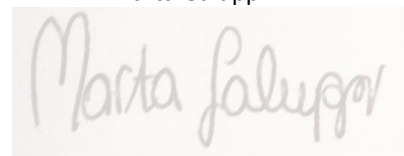
List of publications.

1. Berardi, D.; **Galuppi, M.**; Libertà, A.; Lombardi, M. Geostatistical Modeling of Wildfire Occurrence Probability: The Case Study of Monte Catillo Natural Reserve in Italy. *Fire* **2023**, *6*, 427. <https://doi.org/10.3390/fire6110427> . IF: 2.726. CiteScore: 4.9
2. Berardi, D.; **Galuppi, M.**; Lombardi, M. Experimental Study on the Effectiveness of Water Mist Extinguishing Systems for Protecting Paintings in Art Gallery Museums: Developing an Initial Methodological Model. *Buildings* **2023**, *13*, 1806. <https://doi.org/10.3390/buildings13071806> 3.324. CiteScore: 3.8
3. Lombardi, M.; Berardi, D.; **Galuppi, M.** A Critical Review of Fire Tests and Safety Systems in Road Tunnels: Limitations and Open Points. *Fire* **2023**, *6*, 213. <https://doi.org/10.3390/fire6050213> IF: 2.726. CiteScore: 4.9.
4. Lombardi, M.; Mauro, F.; Berardi, D.; **Galuppi, M.** Occupational Road Safety Management: A Preliminary Insight for a Landfill Remediation Site. *Buildings* **2023**, *13*, 1238. <https://doi.org/10.3390/buildings13051238> IF: 3.324. CiteScore: 3.8.

5. Lombardi, M.; Berardi, D.; **Galuppi, M.**; Barbieri, M. Green Tunnel Solutions: An Overview of Sustainability Trends in the Last Decade (2013–2022). *Buildings* **2023**, *13*, 392. <https://doi.org/10.3390/buildings13020392>. IF: 3.324. CiteScore: 3.8.
6. Guarascio, M.; Berardi, D.; Despabeladera, C.; Alakbarli, E.; Di Benedetto, E.; **Galuppi, M.**; Lombardi, M. Road Tunnel Risk-Based Safety Design Methodology by GU@LARP Quantum Risk Model. In *WIT Transactions on The built environment*; **2022**; Vol. 1, pp 39–50. <https://doi.org/10.2495/SSR220031>. CiteScore: 0.9.
7. Lombardi, M.; Berardi, D.; Stantero, L.; **Galuppi, M.** Real Time Dynamic Quantitative Risk Analysis Approach for Smart Tunnel. In *Proceedings of the 5th european International conference on industrial engineering and operations management*; IEOM Society: Canton, Michigan, 2022; pp 1–9.

Rome, 22 March 2024

Marta Galuppi

A rectangular box containing a handwritten signature in grey ink that reads "Marta Galuppi".