UNIVERSITÀ POLITECNICA DELLE MARCHE

Supervisor: Fausto Marincioni

Activities

Prof. Fausto Marincioni is a scholar of **Environmental Geography** and **Disaster Risk Reduction** with a focus on climate change adaptation and community resilience.

He holds a PhD in Geography from the University of Massachusetts (USA). Previous to **UNIVPM**, he worked with the **United States Geological Survey** (USGS) at the Woods Hole Coastal and Marine Science Center and taught Human and Environmental Geography at **Long Island University** (LIU Post) in New York.

His research adopts a **multidisciplinary approach** that combines geographic, physical, and natural scientific methods with socio-anthropological ones to investigate natural hazards and disasters. Using field data, Geographic Information Systems, and remote sensing techniques, his work aims to develop **innovative strategies** to **enhance preparedness and adaptive capacity** of vulnerable communities facing extreme events.

Throughout his career, Prof. Marincioni has successfully coordinated several **national and international research projects**. For example, the **PRIN REFOCUSING** (Fostering Climate Change Adaptation of Local Communities through a Participatory Risk Communication Strategy), the **EU Interreg RESPONSe** (Strategies to Adapt to Climate Change in Adriatic Regions), and the **EU LIFE PRIMES** (Preventing Flooding Risks by Making Resilient Communities), all aimed at strengthening resilience and climate adaptation strategies.

These projects highlight a commitment to bridging scientific research and practical solutions for **sustainable risk management**.

HR EXCELLENCE IN RESEARCH

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Description

Prof. Fausto Marincioni serves as the Director of the **Disaster Risk Reduction Laboratory (DLab)**, a multidisciplinary research unit integrating natural and social sciences to address environmental risk challenges., in the Department of Life and Environmental Science.

He is also an Associate Editor of the **International Journal of Disaster Risk Reduction** and fellow of the Royal Geographical Society and the American Association of Geographers. Prof. Marincioni is author and co-author of 84 publications with papers published in high-impact journals such as *International Journal of Disaster Risk Reduction*, *Natural Hazards* and *Earth System Sciences*, and *Regional Environmental Change*. He has also participated in numerous national and international conferences, delivering both oral and poster presentations. These contributions consolidate his standing as a leading scholar in disaster risk assessment and management.
His mentorship record is substantial: he has supervised +20 MSc theses, +20 BSc theses, and 17 PhD students.

Many of his former students have gone on to successful careers as researchers, consultants, and international officers, including positions within the United Nations. This highlights his ability to foster **transdisciplinary training** with strong **societal impact**.

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Staff, equipment and laboratories

DLab

Disaster Risk Reduction Laboratory – Disaster Lab (DLAB)

The main research lines of the Disaster Lab relate to **Disaster Risk Reduction (DRR)**. The methodological approaches are multidisciplinary, typically of geographic nature, integrating the research methods of the physical and the natural sciences with those of the socio-anthropological disciplines

Members of the research group

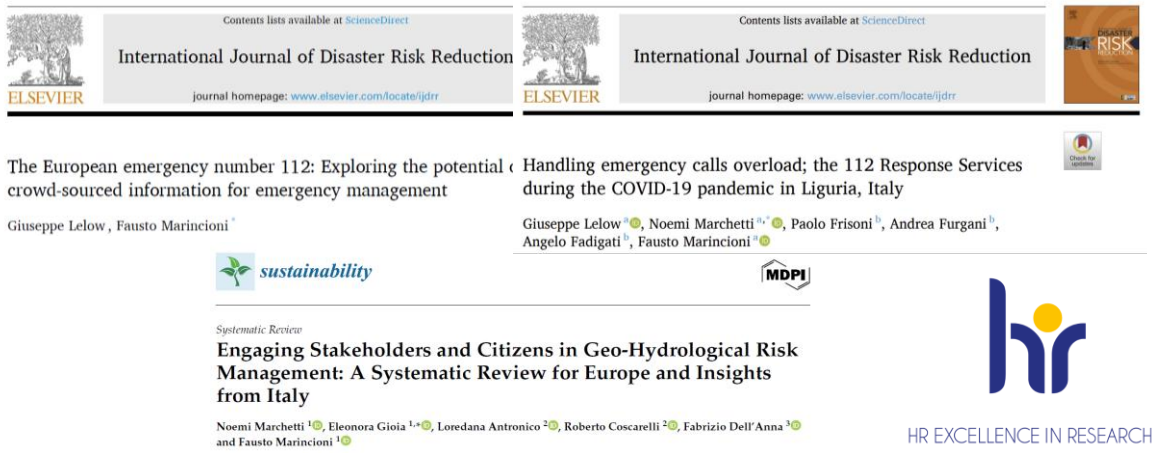
- Fausto Marincioni (Professor)
- Eleonora Gioia (Research fellow)
- Paolo Garbati (PhD Candidate)
- Giuseppe Lelow (PhD Candidate)
- Giulia Sestilli (PhD Student)

Main thematic clusters

- Natural hazard, vulnerability, and resilience
- Risk perception
- Climate change adaptation
- Emergency prevention and management
- Application of Geographic Information Systems

Recent Peer-Reviewed Publications

Recent DLAB research advances geo-hydrological risk management and innovations in emergency communication through citizen engagement and crowd-sourced data



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Project idea

DLab

Research context. The increasing frequency and intensity of extreme events driven by climate change are placing unprecedented pressure on emergency management systems. Floods, wildfires, and severe weather events challenge the capacity of authorities to monitor rapidly evolving situations and coordinate effective responses. While conventional environmental monitoring networks provide essential data on physical processes, they often fail to capture the real-time impacts of disasters on communities and infrastructure.

Rationale. Advances in artificial intelligence (AI) and digital communication are transforming emergency management. Citizens now generate real-time crowd-sourced data through social media and emergency calls, providing critical insights during crises. Integrating AI-driven analysis of these data with environmental monitoring systems can significantly enhance situational awareness and support faster, more effective disaster response.

Research Objectives. This proposed project aims at developing an AI-driven framework that integrates sensor-based territorial monitoring with crowd-sourced data from social media and emergency call systems. It will explore how these data streams can reveal patterns and early signals of emergencies, enhancing situational awareness and supporting timely, evidence-based decision-making. The project will deliver innovative tools to strengthen emergency preparedness and resilience.

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