
PEGAH AFLAKIAN

Email Address: [REDACTED]

Location: Italy [REDACTED]

PhD student in Security, Risk and Vulnerability at the University of Genoa, with research interests in wildfire risk assessment, compound fire-weather extremes, geospatial modelling, and climate-risk analysis. My work combines statistical, probabilistic, and geospatial approaches to improve wildfire risk assessment and support climate adaptation and disaster risk reduction.

Education

University of Genoa | Savona, Italy - Ph.D. in Security, Risk and Vulnerability (Started November 2025)

University of Genoa | Savona, Italy - M.Sc. in Engineering for Natural Risk Management (Sep 2022-Dec 2024) - **GPA: 110/110 with honors**

Shahid Beheshti University | Tehran, Iran - Master-level Program in Post-Disaster Reconstruction (Sep 2019- May 2021)

Bu Ali Sina University | Hamedan, Iran - B.Sc. of Architecture (Sep 2013- Dec 2017)

Master Thesis

Wildfire Risk Mapping and Climate Projections (December 2024)

- Developed wildfire risk-mapping strategies for Catalonia under future climate scenarios using machine learning and GIS. The research was conducted in collaboration with CIMA Research Foundation as part of the EU Horizon CLIMAAX project.
 - Supervisor: Prof. Andrea Trucchia - Thesis Grade: 6/6 URI: <https://unire.unige.it/handle/123456789/10897>
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Research and Professional Experience

Teaching Assistant | University of Genoa (UniGe) (Sep 2025 – Present) / Savona, Italy

- Supporting the master's course Wildfire Risk Assessment and Management.
- Assisting in lectures and student guidance on wildfire risk concepts and methodologies.

Short-term Technical Support & Interpreter | United Nations APDIM-ESCAP (Sep 2025) / Rome - Savona, Italy

- Provided English-Persian interpretation and technical assistance during meetings on wildland fire management and disaster-risk governance with senior officials from Iranian governmental institutions and Italian partners.

Research Intern | CIMA Research Foundation (Mar 2025 – Oct 2025) / Savona, Italy

- Contributing to the EU-funded FIRE-SCENE project on wildfire risk planning and governance, with attention to tourist and forest areas.
- Conducting geospatial and statistical analysis of wildfire risk with GIS and python.
- Producing cartographic outputs to support climate-related risk assessment.

Academic Internship | CIMA Research Foundation (Oct 2024 – Nov 2024) / Savona, Italy

- Conducted wildfire susceptibility, fuel, hazard, and risk mapping using Machine Learning techniques.
- Analyzed wildfire risk management by integrating climate projections.
- Applied Random Forest and XGBoost algorithms for wildfire hazard assessment.

Junior Architect | M.M Design Studio (May 2019 - Dec 2021) / Hamedan, Iran

Junior Architect | Sharestan-e Haft Hesar (May 2017– Apr 2018) / Hamedan, Iran

Awards and Achievements

1st Place Poster Award winner — Annual Poster Session of the PhD in Security, Risk and Vulnerability , University of Genoa (*March 2026*) / *Genoa, Italy*

Finalist & Special Award Winner — B-Prepared Hackathon (*Sep 2025*) / *Budapest, Hungary*

For this challenge, I developed an educational tool on *wildfire awareness and preparedness transforming scientific knowledge into minimal, accessible, and citizen-friendly guidance.*

Selected Member, Iran National Elites Foundation (INEF) (*Jul 2019-Present*) / *Tehran, Iran*

Ranked 3rd nationally, competitive entrance exam for admission to the Post-Disaster Reconstruction program. (*Jul 2019*) / *Tehran, Iran*

Selected Scholarships, Grants, and Financial Support

COST Financial Support, X-Fire 2026 – 2nd International Workshop on Extreme Wildfire Events. (*Jun 2026*) / *Prague, Czech*

COST YRI Conference Grant, EGU 2026 Poster Presentation: Event-Based Copula Modeling of Compound Fire-Weather Extremes. (*May2026*) / *Vienna, Austria*

COST Financial Support, NERO Training School on Strategic Fire Analysis for Operational Decision Support. (*Apr 2026*) / *Brussels, Belgium*

PNRR Scholarship (€6,000), RETURN Academy 2025 (84-hour program, Italian), University of Naples Federico II. (*Sep–Nov 2025*) / *Naples, Italy*

B-Prepared Consortium Travel Grant, B-Prepared Hackathon Final Competitive Travel Grant (*Sep 2025*) / *Budapest, Hungary*

Training Schools, Workshops & Academic Programs

X-Fire Workshop 2026 | Faculty of Forestry and Wood Sciences, Czech University of Life Sciences Prague, Czech Republic - June 2026

- 2nd International Workshop on Extreme Wildfire Events.
- On-site poster presentation: "Event-Based Copula Modeling of Compound Fire-Weather Extremes in a Moderate-Risk Region."

MaLGa Summer School – Machine Learning Crash Course (MLCC 2026) | Genoa, Italy - June 2026

- Introductory machine learning course covering core concepts and applications.

NERO Training School on Strategic Fire Analysis for Operational Decision Support | ERCC, Brussels, Belgium - April 2026

- Training school on strategic fire analysis for operational decision support, hosted at the Emergency Response Coordination Centre of the European Commission DG ECHO.

RETURN Academy 2025 | University of Naples Federico II, Naples, Italy - Sep - Nov 2025

- Completed an 84-hour in-person program in Italian on multi-risk assessment, climate resilience, and disaster risk management.

Manuscripts & Presentations

Manuscripts:

Perello, N., Vissio, G., **Aflakian, P.**, Biondi, G., D'Andrea, M., Trucchia, A., Baudena, M., & Fiorucci, P. (2026). **Vegetation and fires under climate change: A Mediterranean modelled case study from central Italy.** Preprint. <https://doi.org/10.64898/2026.05.29.728691>

Trucchia, A., Ghasemiazma, F., **Aflakian, P.**, Meschi, G., Casajús Vallés, A., Gasulla Fernández, N., Rebora, N., & Fiorucci, P. (2024). **Wildfire Risk Mapping in a Changing Climate: Insights from the Catalonia Pilot of the CLIMAAX Project.** Mediterranean Geosciences Union Annual Meeting (MedGU 2024), Barcelona, Spain, 25–28 November 2024. **In Press, Springer ASTI Series.**

Abstracts and Presentations:

Aflakian, P., Colavitto, B., Trucchia, A., Ghizzoni, T., & Fiorucci, P. (2026). **Event-Based Copula Modeling of Compound Fire-Weather Extremes for Wildfire Risk Assessment.** Poster presentation at the EGU General Assembly 2026, Vienna, Austria, 3–8 May 2026. <https://doi.org/10.5194/egusphere-equ26-11241>

Ghasemiazma, F., **Aflakian, P.**, Perello, N., Degli Esposti, S., Fiorucci, P., & Rebora, N. (2025). **Wildfire Risk Mapping in a Changing Climate: Insights from the Catalonia Pilot of the CLIMAAX Project.** Poster presented at the CLIMAAX Workshop 2025, Barcelona, Spain, June 2025.

Volunteer Activities

Volunteer Student Representative | University of Genoa, Italy - 2023–2024; 2026–present

- Represented students in the Master Program of 'Engineering for Natural Risk Management' and 'Security, Risk and Vulnerability' PhD program by facilitating discussions and enhancing student engagement.

Skills & Competencies

- **GIS and Remote Sensing:** QGIS, ArcGIS, raster/vector analysis, cartographic production
- **Programming and Data Analysis:** Python, MATLAB, statistical and probabilistic analysis
- **Machine Learning:** Random Forest, XGBoost, wildfire hazard/risk assessment applications
- **Climate and Risk Analysis:** climate projections, wildfire risk mapping, disaster risk reduction

Languages:

- English (C1), Italian (A2), Persian (Native)

Online Courses and Certifications

- Introduction to Machine Learning for Earth Observation, EO College, January 2026
- Introduction to Digital Twin, LinkedIn Learning, November 2023
- MATLAB Onramp, MathWorks, February 2023
- Disaster Preparedness, Coursera (By University of Pittsburgh), April 2023