

Alessio Gatto

 **Work:** University of Florence (Italy), Department of Earth Sciences, Via La Pira 4, 50121, Florence, Italy

 **Home:** [REDACTED]

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 **Mobile:** [REDACTED]

Date of birth: [REDACTED] | **Nationality:** [REDACTED]

WORK EXPERIENCE

[01/11/2022 – Current]

PhD in Earth and Planetary Sciences (current position)

Earth Sciences Department – University of Florence

City: Firenze (FI) | **Country:** Italy | **Cycle:** XXXVIII

"Analysis of the interactions between hydro-geomorphological risks and anthropic environment"

[01/02/2022 – 31/10/2022]

Research Fellow

Earth Sciences Department – University of Florence

City: Firenze (FI) | **Country:** Italy

"Data collection on a national scale for analysis of correlation between hydro-geomorphological risk indicators and economic indicators"

RESEARCH PROJECTS

Projects participation

- Team member for the annual reports of the Italian Civil Protection Department on "Mapping and Monitoring" activities (2023 – 2025), *CPC UNIFI*
- Team member of the Erasmus+ project "HUMAN Intelligence on WORLD – From Core to Life" (May 2025 – present), *DST UNIFI*
- Team member of the PNRR RETURN project (Multi-Risk sciEnce for resilienT commUnities undeR a changiNg climate) (10/2023 – ongoing), *DST UNIFI*
- Department of Civil Protection - monitoring deformations of Stromboli volcano (06/2023 – ongoing), *CPC UNIFI*
- Development and maintenance of the Web-GIS Portal related to the investigation databases of the VEL program (01/01/2023 – 31/12/2024), *DST UNIFI*
- RISICOT (RISchi Idro-geomorfologici e Competitività Territoriale: interazione tra processi economici e dinamiche naturali), European Union – NextGenerationEU (02/2022 – 05/2024), *DST UNIFI*
- "Studio della frana di Thielly nel Comune di Fontainemore (AO): modello geologico, condizioni di innesco e indicazioni per la mitigazione del rischio", Project report, *CPC UNIFI*

EDUCATION

[10/2018 – 06/2021]

Master's Degree in Geological Sciences and Technologies

Earth Sciences Department – University of Florence

City: Firenze (FI) | **Country:** Italy

Thesis: "Testing of low-cost GNSS networks for landslides monitoring"

Field(s) of study: Geotechnologies for the Environment and the Territory, (Geotechnics and applied geology).

Final grade: 110/110 with honours

[09/2015 – 10/2018]

Bachelor's Degree in Geological Sciences

Earth Sciences Department – University of Florence

City: Firenze (FI) | **Country:** Italy

Thesis: "Evaluation of the accuracy of 3D laser scanner surveys in the identification of discontinuities by comparison with detailed geological-structural surveys"

Final grade: 98/110

[09/2010 – 10/2015]

Scientific High School Diploma

G.D. Cassini Scientific High School

City: Sanremo (IM) | Country: Italy

Final grade: 78/100

PROFESSIONAL QUALIFICATIONS

- Professional license as Senior Geologist, Italy (2022)

TRAINING

[09/2024 – 12/2024]

PhD visiting period

British Geological Survey, Nottingham (United Kingdom)

- Implementation of the methodological framework developed during the PhD on UK case studies

[04/09/2023 – 15/09/2023]

International School on LANDslides Risk Assessment and Mitigation "LARAM School 2023"

University of Salerno (SA), Italy

- Lectures on assessing, forecasting and mitigating landslide risk

FIELD WORK

[18/09/2023 – 21/09/2023]

CPC UNIFI Landslide monitoring for ENI S.p.A.

- Contribution to field investigations and reporting for landslide monitoring

[12/06/2023 – 14/06/2023]

CPC UNIFI 2023 Emilia-Romagna Region national hydrogeological emergency

- Support to the Civil Protection Center during national hydrogeological emergencies, including field surveys and technical reporting

[06/2022; 06/2023]

DST UNIFI Geoelectrical Surveys

- Geoelectrical field surveys on salt leaching in melon crops, Grosseto (Italy)

[06/10/2022; 11/10/2022]

CPC UNIFI 2022 Marche Region national hydrogeological emergency

- Support to the Civil Protection Center during national hydrogeological emergencies, including field surveys and technical reporting

ACADEMIC ENGAGEMENT

[11/2024 – Current]

Representative of PhD Students, Department of Earth Sciences, University of Florence

- Participated in committees and academic decision-making
- Organized outreach activities within the department
- Coordinated PhD courses
- Provided support to PhD students

[??/2019 – 06/2021]

Representative of Bachelor and Master's degree students, Department of Earth Sciences, University of Florence

- Participated in committees and academic decision-making
- Organized activities within the department
- Provided support to students

TEACHING ACTIVITY

[09/2023 – 12/2023]

Geologia Tecnica (Geotechnic and Applied Geology)

Total of hours: 14

- Assistant Professor for the Master's degree course "Geologia Tecnica" (Applied Geology) Department of Earth Sciences (School of Mathematics, Physics and Natural Sciences, University of Florence, Italy)

[12/2023]

Valutazione di Impatto Ambientale (Environmental Impact Assessment)

Total of hours: 2

- Didactic support for the Environmental Impact Assessment course, Master's degree in Geological Sciences and Technologies, Department of Earth Sciences (School of Mathematics, Physics and Natural Sciences, University of Florence, Italy)

Total of hours: 7

- Didactic support for the Applied Geology course, Bachelor's degree in Geological Sciences Department of Earth Sciences (School of Mathematics, Physics and Natural Sciences, University of Florence, Italy)

TUTORING ACTIVITY

Tutor activities

- Academic tutor for Master's students, providing thesis supervision and support
- Academic tutor for Bachelor's students, providing thesis supervision and support

EDITORIAL ACTIVITY

Reviewer activity

Reviews for the following journals:

- Natural Hazards (NHAZ) – Springer

**THIRD MISSION AND
OUTREACH ACTIVITY**

- Student orientation guide for high school classes as part of the University of Florence PCTO program, including guided thematic tours in the city of Florence (01/06/2025 – current)
- Official press team member at the international congress 6th World Landslide Forum
- Working group member for the 6th World Landslide Forum side event "Here be Landslides"
- Participant in the Bright-Night – European Researchers' Night event
- Participant in university Open Days and student orientation initiatives
- Participant to events and public awareness campaigns during Civil Protection Day
- Participant in the UNIFI OpenLab Events

CONFERENCES

[15/07/2025]

1° FORUM AIGU "Formazione per la Ricerca e l'Innovazione Sostenibile"

- **Oral presentation:** *Approcci innovativi per mappatura multirischio e multi-scala applicata al patrimonio culturale.* Gatto A.

[27/05/2025 – 28/05/2025]

ASI Workshop "Tecnologie satellitari e analisi multi-rischio: l'esperienza dei progetti I4DP_SCIENCE e prospettive future"

- **Poster on site:** *Mapping multi-risk for cultural heritage at the national scale.* Gatto A., Intrieri E., Arrighi C., Bianchini S., Cardinali V., Castelli F., Centauro I., De Stefano M., Fiorucci P., Marra A.M., Meschi G., Segoni S., Trucchia A.

[27/04/2025 – 02/05/2025]

EGU General Assembly 2025

- **Poster on site:** *Mapping multi-risk for cultural heritage at the national scale.* Intrieri E., Arrighi C., Bianchini S., Cardinali V., Castelli F., Centauro I., De Stefano M., Fiorucci P., **Gatto A.**, Marra A.M., Meschi G., Segoni S., Trucchia A.

[08/01/2025 – 09/01/2025]

1st UNIFI – CUG joint workshop on hydro-geological hazard and risk

- **Oral presentation:** *The downward spiral entangling soil sealing and hydrogeological disasters.* **Gatto A.**, Martellozzo F., Clo' S., Ciulla L., & Segoni S.

[27/06/2024 – 29/06/2024]

8° Congresso AIGAA 2024

- **Poster on site:** *Interrelations between national hydro-geomorphological emergencies and urban sprawl at the province and municipality level in Italy.* Gatto A., Clo' S., Martellozzo F., Segoni S.

EGU General Assembly 2024

[14/04/2024 – 19/04/2024]

- **Oral presentation:** *Interrelations between urban sprawl and national hydro-geomorphological emergencies in Italy.* Gatto A., Clo' S., Martellozzo F., Segoni S.

[05/03/2024]

Joint Italy-Ukraine Workshop "Landslide hazards: analysis, assessment, monitoring and forecasting"

- **Oral presentation:** *Analysis of the interactions between hydro-geomorphological risks and anthropic environment.* Gatto A., Clo' S., Martellozzo F., Segoni S.

Dissemination Workshop RETURN

- **Poster on site:** *Guidelines for systematic multi-risk mapping for cultural heritage, from site to urban to regional and national scales.* Intrieri E., Bianchini S., **Gatto A.**, Segoni S., Arrighi C., Marra A.M., Di Bacco M., Stipo G., Cardinali V., Tanganelli M., De Stefano M., Castelli F.

6th World Landslide Forum

- **Oral presentation:** *Interplay between urban expansion and national hydro-geomorphological emergencies at municipality level in Italy.* **Gatto A.**, Clo' S., Martellozzo F., Segoni S.
- **Poster on site:** *Application of Empirical Approaches for Fast Landslide Hazard Management: The Case Study of Theilly (Italy).* **Gatto A.**, Barbadori F., Segoni S.

XII Convegno Nazionale Giovani Ricercatori di Geologia Applicata (AIGAA)

- **Poster on site:** *Data collection of hydro-geomorphological emergencies in Italy at municipality level: a nationwide dataset and some preliminary considerations.* **Gatto A.**, Clo' S., Martellozzo F., Segoni S.

EGU General Assembly 2023

- **Oral presentation:** *Tracking a decade of hydro-geological emergencies in Italy and their interplay with urban expansion.* **Gatto A.**, Martellozzo F., Segoni S.
- **Poster on site:** *Empirical approaches for quick management of cascading hazards in the Italian Alps: a warning procedure for landslide reactivation, river damming and outburst waves.* **Segoni S.**, Barbadori F., **Gatto A.**

**JOURNAL
PUBLICATIONS**[2025] **[A novel prototype national-scale landslide nowcasting system for Italy combining rainfall thresholds and risk indicators](#)**

Nocentini, N., Medici, C., Barbadori, F., **Gatto, A.**, Franceschini, R., del Soldato, M., Rosi, A., & Segoni, S. (2023). Optimization of rainfall thresholds for landslide early warning through false alarm reduction and a multi-source validation. *Landslides*, 1–15. <https://doi.org/10.1007/S10346-023-02176-7/TABLES/7>

[2024] **[The downward spiral entangling soil sealing and hydrogeological disasters](#)**

Gatto, A., Martellozzo, F., Clo', S., Ciulla, L., & Segoni, S. (2024). The downward spiral entangling soil sealing and hydrogeological disasters. *Environmental Research Letters*, 19(8), 084023. <https://doi.org/10.1088/1748-9326/ad5fa1>

[2023] **[Optimization of rainfall thresholds for landslide early warning through false alarm reduction and a multi-source validation](#)**

Nocentini, N., Medici, C., Barbadori, F., **Gatto, A.**, Franceschini, R., del Soldato, M., Rosi, A., & Segoni, S. (2023). Optimization of rainfall thresholds for landslide early warning through false alarm reduction and a multi-source validation. *Landslides*, 1–15. <https://doi.org/10.1007/S10346-023-02176-7/TABLES/7>

[2023] **[Tracking a Decade of Hydrogeological Emergencies in Italian Municipalities](#)**

Gatto, A., Clò, S., Martellozzo, F., & Segoni, S. (2023). Tracking a Decade of Hydrogeological Emergencies in Italian Municipalities. *Data* 2023, Vol. 8, Page 151, 8(10), 151. <https://doi.org/10.3390/DATA8100151>

[2022] **[Application of Empirical Approaches for Fast Landslide Hazard Management: The Case Study of Theilly \(Italy\)](#)**

Segoni, S., Barbadori, F., **Gatto, A.**, & Casagli, N. (2022). Application of Empirical Approaches for Fast Landslide Hazard Management: The Case Study of Theilly (Italy). *Water (Switzerland)*, 14(21). <https://doi.org/10.3390/w14213485>

**OTHER
PUBLICATIONS**[2025] • Segoni S., Nardini O., **Gatto, A.**, *"Energy and Sustainability: Role-Playing in the Classroom"*, EDUCATION FOR SUSTAINABLE CITIES, 1 55, 2025[2025] • Intrieri E., Arrighi C., Bianchini S., Cardinali V., Castelli F., Centauro I., De Stefano M., Fiorucci P., **Gatto A.**, Marra A. M., *"Mapping multi-risk for cultural heritage at the national scale"*, 2025, Copernicus Meetings[2024] • **Gatto, A.**, Clò, S., Martellozzo, F., & Segoni, S. *"Interrelations between urban sprawl and national hydro-geomorphological emergencies in Italy"*, EGU General Assembly Conference Abstracts, 11779

- [2024] • Segoni S., Nocentini, N., Medici, C., Barbadori, F., **Gatto, A.**, Franceschini, R., del Soldato, M., Rosi, A., *"Optimized 3D rainfall thresholds: false alarms reduction and multi-source validation"*, EGU General Assembly Conference Abstracts, 11530, 2024
- [2024] • **Gatto, A.**, Martellozzo, F., Clo', S., Ciulla, L., & Segoni, S. *"Tracking a decade of hydro-geological emergencies in Italy and their interplay with urban expansion"*, EGU General Assembly Conference Abstracts, EGU-5489, 2023
- [2023] • Segoni, S., Barbadori, F., **Gatto, A.**, & Casagli, N. *"Empirical approaches for quick management of cascading hazards in the Italian Alps: a warning procedure for landslide reactivation, river damming and outburst waves"*, EGU General Assembly Conference Abstracts, EGU-6076, 2023

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s): English

LISTENING: B2 READING: B2 WRITING: B2

SPOKEN PRODUCTION: B2 SPOKEN INTERACTION: C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

GIS: ArcGis Pro, ArcMap, QGIS, Map Plus, Google Earth, SAGA

Specific softwares: CloudCompare, RTKLib, Agisoft Photoscan

Tools: Matlab, Python, LaTeX

Office: ECDL Certification

OSs: Windows, Mac

COMMUNICATION SKILLS

- Strong communication, public speaking, and dissemination skills, developed through international conference presentations and outreach activities.
- Skilled in fostering multidisciplinary collaboration with researchers from diverse fields.
- Experienced in student mentoring and academic representation, facilitating dialogue between students and faculty.
- Proven ability to work effectively in teams while maintaining strong independence and problem-solving skills.

ORGANIZATIONAL / MANAGERIAL SKILLS

- Strong sense of responsibility, with proven ability to foster teamwork, patience, and diplomacy in solving interpersonal challenges.
- Excellent organizational and project management skills, with effective workload and time allocation strategies.
- Persistent and results-oriented, with resilience in overcoming technical issues and determination in meeting deadlines.
- Highly adaptable, able to integrate smoothly into diverse work environments; collaborative team player while maintaining strong autonomy and motivation.
- Skills consolidated through five years of study, PhD research, and experience as student and PhD representative.

PERSONAL DATA

I authorize the processing of my personal data in accordance with Legislative Decree No. 196 of June 30, 2003, "Personal Data Protection Code."

Self-declaration according to Articles 46 and 47 of Presidential Decree 445/2000

The undersigned Alessio Gatto, born in Sanremo (IM) on 10/02/1997, residing in Sanremo, Via Riccasterone 27, 18038 (IM), being aware of the criminal liabilities in the case of false declarations, according to and for the purposes of Article 76 of Presidential Decree 445/2000, and being aware that, under Article 13 of EU Regulation 2016/679 (GDPR), this declaration will be published on the Administration's website in the dedicated section of "Transparent Administration", under his own responsibility,

DECLARES

that the information reported in this Curriculum Vitae is true and accurate.

Firenze, 26/08/2025

