

ALICE GALLAZZI

Curriculum Vitae

KEY SKILLS

- **Flood risk assessment and mitigation** (flood damage modelling; post-event damage surveys)
- **Decision support systems (DSS)** (multi-criteria decision analysis, MCDA; stakeholder engagement / participatory processes)
- **Spatial data analysis and mapping** using GIS software
- **Software:** ArcGIS, QGIS, HEC-RAS, MATLAB | **Other:** Microsoft Office

WORK EXPERIENCE

May 2025 – Present

Postdoctoral researcher, Poliedra – Politecnico di Milano (Milan, Italy)

Consultancy and applied research on environmental assessments and risk-informed decision support

- *Technical support to the Po River Basin Authority on SEA monitoring of river basin plans*
- *Development and application of MCDA/DSS methods for flood risk management within the DROP research project*

February 2022 – September 2025

Ph.D. Student at Politecnico di Milano, Dept. of Civil and Environmental Engineering (Milan, Italy)

Research on decision-support methods for flood risk management

- *Developed an MCDA-based decision-support framework to evaluate and prioritize flood mitigation projects for the Lombardy Region (institutional partner)*
- *Enabled transparent, sustainability-oriented allocation of public funding across multiple, non-comparable criteria*

Supervisors: Francesco Ballio, Daniela Molinari (Politecnico di Milano), Immacolata Tolone (Regione Lombardia)

January 2022 – February 2025

Teaching assistant at Politecnico di Milano (Milan, Italy)

Courses (Italian): Fluid Mechanics (BSc Mechanical Engineering); Hydraulics (BSc Civil Engineering); Applied Hydraulics (BSc Building and Construction Engineering); Natural risks: methods, values, society ("Passion in action" course)

April 2019 – January 2022

Research fellow at Politecnico di Milano, Dept. of Civil and Environmental Engineering (Milan, Italy)

Research on flood risk and flood damage assessment

- *Contributed to the MOVIDA project, supporting the update of flood damage maps for the Po River Basin Authority*
- *Thesis co-supervision:*
2019/2020 – A modelling approach to support the emergency management in Health Care Facility in case of flood, D. Teofilo (MSc Civil Engineering for Risk Mitigation)

2021/2022 – Sviluppo del modello di danno alluvionale AGRIDE-c per le colture orticole nell'ambito del distretto idrografico del fiume Po, V. Caldano (MSc Environmental and Land Planning Engineering; thesis in Italian)
2021/2022 – Implementazione e sviluppo della procedura MOVIDA a supporto della mitigazione del rischio alluvionale nel comune di Ayas, S. Lorenzini (MSc Environmental and Land Planning Engineering; thesis in Italian)

Supervisors: prof. Francesco Ballio, prof. Daniela Molinari

July 2018 – March 2019

Research intern at Politecnico di Milano, Dept. of Civil and Environmental Engineering (Milan, Italy)

Tasks on flood risk assessment and damage modelling, including dissemination activities

Supervisor: prof. Daniela Molinari

EDUCATION

February 2022 – September 2025

Ph.D. in Environmental and Infrastructure Engineering, Politecnico di Milano

Thesis: A Multi-Criteria Decision Framework for Flood Risk Mitigation Planning in the Lombardy Region

Supervisors: Francesco Ballio, Daniela Molinari (Politecnico di Milano), Immacolata Tolone (Regione Lombardia)

May 2024 – July 2024

Visiting Ph.D. student, University of Macedonia - Dept. of Business Administration (Thessaloniki, Greece)

Research topic: MCDA approaches and decision-support tools

Supervisor: prof. Jason Papathanasiou

September 2015 – April 2018

Master of Science in Environmental and Land Planning Engineering, Politecnico di Milano

Thesis: AGRIDE: un modello esperto per la valutazione del danno alluvionale al settore agricolo (thesis in Italian; it presents a conceptual model for crop flood damage assessment)

Supervisor: prof. Daniela Molinari

Final mark: 110/110 cum laude

September 2012 – September 2015

Bachelor of Science in Environmental and Land Planning Engineering, Politecnico di Milano

Thesis: L'utilizzo del georadar per la mappatura di rinforzi metallici in edifici storici (thesis in Italian)

Supervisor: prof. Luigi Zanzi

Final mark: 110/110

TRAINING

EURO PhD School on Multiple Criteria Decision Making (MCDM): Methodologies and Applications to the Sustainable Development Goals, Universidad de Málaga, 4-15 November 2024, Málaga, Spain
3 ECTS Credits (75 hours) | Group casework + oral presentation | Grade: A

LANGUAGES

Italian: native | **English:** B2 (FCE); TOEIC Listening & Reading

PUBLICATIONS

Articles in Journals

- Molinari, D., Scorzini, A. R., **Gallazzi, A.**, Ballio, F. (2019). *AGRIDE-c, a conceptual model for the estimation of flood damage to crops: development and implementation*, Nat. Hazards Earth Syst. Sci., 19, 2565–2582, <https://doi.org/10.5194/nhess-19-2565-2019>
- Molinari, D., Scorzini, A. R., Arrighi, C., Carisi, F., Castelli, F., Domeneghetti, A., **Gallazzi, A.**, Galliani, M., Grelot, F., Kellermann, P., Kreibich, H., Mohor, G. S., Mosimann, M., Natho, S., Richert, C., Schroeter, K., Thieken, A. H., Zischg, A. P., Ballio, F. (2020). *Are flood damage models converging to “reality”? Lessons learnt from a blind test*, Nat. Hazards Earth Syst. Sci., 20, 2997–3017, <https://doi.org/10.5194/nhess-20-2997-2020>
- Rrokaj, S., Arrighi, C., Ballocci, M., Bertoli, G., da Porto, F., De Lucia, C., Di Bacco, M., Di Fluri, P., Domeneghetti, A., Donà, M., **Gallazzi, A.**, Gennaro, A., Hammouti, M., Lelli, G., Mozzon, S., Petruccelli, N., Saler, E., Scorzini, A. R., Sterlacchini, S., Treglia, G., Voltolina, D., Zazzeri, M., Molinari, D. (2025). *Survey data of damaged residential buildings and business premises from the 2022 record-breaking flood in the Marche region, Italy*, Earth Syst. Sci. Data, 17, 6487–6496, <https://doi.org/10.5194/essd-17-6487-2025>

Conference papers

- Minucci, G., Molinari, D., Gemini, G., Pezzoli, S., Galliani, M., **Gallazzi, A.** (2019). *Co-mapping lab: un’esperienza di costruzione collaborativa delle mappe di rischio alluvionale*, Atti della XXII Conferenza Nazionale SIU, Planum Publisher, Roma-Milano, 660–666, ISBN 9788899237219
- **Gallazzi, A.**, Molinari, D., Ballio, F., Scorzini, A. R. (2021). *Development of a flood damage model for urban drainage networks*, Proceedings of the 4th European Conference on Flood Risk Management, <https://doi.org/10.3311/FloodRisk2020.6.2>
- Arrighi, C., Ballio, F., Carisi, F., Castelli, F., Domeneghetti, A., **Gallazzi, A.**, Galliani, M., Grelot, F., Kellermann, P., Kreibich, H., Molinari, D., Mohor, G. S., Mosimann, M., Natho, S., Richert, C., Schroeter, K., Scorzini, A. R., Thieken, A. H., Zischg, A. P. (2021). *A comparative analysis of flood damage models: lessons learnt and future challenges*, Proceedings of the 4th European Conference on Flood Risk Management, <https://doi.org/10.3311/FloodRisk2020.9.15>
- Ballio, F., Armaroli, C., Arosio, M., Arrighi, C., Borgogno-Mondino, E., Carisi, F., Castelli, F., Ciavola, P., De Biaggi, S., Di Pietro, G., Domeneghetti, A., Duo, E., Farina, G., **Gallazzi, A.**, Ghilardi, F., Giusti, R., Hammouti, M., Luino, F., Martina, M. L. V., Molinari, D., Monteleone, B., Petruccelli, N., Pilotti, M., Scorzini, A. R., Simonelli, T., Sterlacchini, S., Turconi, L., Vasini, C., Zazzeri, M., Zoppi, L. (2022). *The MOVIDA Project to Support the Update of Flood Risk Maps in the Po River District: methodology for flood damage assessment*, Proceedings of the 39th IAHR World Congress, 6653–6657, <https://doi.org/10.3850/IAHR-39WC2521711920221136>
- Petruccelli, N., Mantecchini, L., **Gallazzi, A.**, Molinari, D., Hammouti, M., Zazzeri, M., Sterlacchini, S., Ballio, F., Brath, A., Domeneghetti, A. (2024). *Qualitative flood risk assessment for road and railway infrastructures: The experience of the MOVIDA project*, Proceedings of IAHS, 385, 407–413, <https://doi.org/10.5194/piahs-385-407-2024>
- **Gallazzi, A.**, Molinari, D., Credali, M., Muratori, S., Ballio, F., Tolone, I. (2024). *A Multi-Criteria Analysis procedure for the evaluation and classification of flood risk mitigation measures*, Atti del XXXIX Convegno Nazionale di Idraulica e Costruzioni Idrauliche - IDRA2024, ISBN 979-12-210-6941-9, <https://doi.org/10.5281/zenodo.13584918>

EDITORIAL CONTRIBUTIONS

Co-editor (editorial role; not an author), *Multi-Criteria Decision Aiding techniques in the sustainability arena*, Poliedra – Politecnico di Milano, ISBN 979-12-210-9455-8, 2025

CONFERENCE PRESENTATIONS

- **Gallazzi, A.**, Ballio, F., Molinari, D., Credali, M., Tolone, I., *Flood risk assessment in support of the evaluation and selection of risk mitigation measures*, EGU General Assembly 2023, 23-28 April 2023, Vienna, Austria (oral)
- **Gallazzi, A.**, Molinari, D., Ballio, F., Credali, M., Tolone, I., Muratori, S., Asaridis, P., *A Multi-Criteria Analysis procedure for the evaluation and classification of flood risk mitigation strategies*, EGU General Assembly 2024, 14-19 April 2024, Vienna, Austria (poster)
- **Gallazzi, A.**, Molinari, D., Credali, M., Muratori, S., Ballio, F., Tolone, I., *A Multi-Criteria Analysis procedure for the evaluation and classification of flood risk mitigation measures*, XXXIX Convegno Nazionale di Idraulica e Costruzioni Idrauliche Parma - IDRA2024, 15-18 September 2024, Parma, Italy (oral)
- **Gallazzi, A.**, *A participatory MCDA-based decision support tool for sustainable flood risk governance: the Lombardy case study and beyond*, SOS4CC - Social Sciences 4 Climate Change Conference, 4-5 September 2025, Bolzano, Italy (oral)