

# LIST OF PUBLICATIONS

**Name:** Francesco Ioli

**Date:** February 11, 2026

## Summary of Research Outputs

- **Total number of publications:** 24 (Source: Scopus)
- **Metrics:** H-index: 12, Total Citations: 272+ (as of February 2026)
- **Open Science Commitment:** 100% of recent research outputs (2020–2025) are available via DOI links
- **Five most significant publications are marked with ★** and my specific role in each is described.

## Complete List of Publications

### 2025

F. Gaspari, F. Barbieri, R. Fascia, **Ioli, F.**, L. Pinto, and F. Migliaccio. “Strategies for Glacier Retreat Communication with 3D Geovisualization and Open Data Sharing”. In: *ISPRS International Journal of Geo-Information* 14.2 (2025), p. 75. DOI: [10.3390/ijgi14020075](https://doi.org/10.3390/ijgi14020075)  
*Role: Software development, field survey execution, photogrammetric data processing, manuscript writing*

M. Bertulesi, F. Ceccato, **Ioli, F.**, F. Barbieri, F. Gaspari, L. Rossi, J. Helder, and L. Pinto. “Field Testing of a Smart Geomat Based on Fiber Optic Sensors and Sensor Fusion for Levee Monitoring”. In: *Journal of Flood Risk Management* 18 (2025), e70070. DOI: [10.1111/jfr3.70070](https://doi.org/10.1111/jfr3.70070)  
*Role: Field survey execution, data processing, manuscript writing*

### 2024

★ **Ioli, F.**, N. Dematteis, D. Giordan, F. Nex, and L. Pinto. “Deep Learning Low-cost Photogrammetry for 4D Short-term Glacier Dynamics Monitoring”. In: *PFG – Journal of Photogrammetry, Remote Sensing and Geoinformation Science* (2024). DOI: [10.1007/s41064-023-00272-w](https://doi.org/10.1007/s41064-023-00272-w)  
*Role: Leading author – conceived study, developed deep learning methodology, conducted field-work, performed data processing and analysis, wrote manuscript*

★ L. Morelli, G. Perda, **Ioli, F.**, P. Trybała, A. Sterpin, S. Rigon, N. Sutherland, M. Medici, F. Remondino, and A. Vitti. “Co-registering Laser Scanning Point Clouds and Photogrammetric Images with Deep Learning Multi-Modal Matching”. In: *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*. Vol. XLVIII-2/W8-2024. 2024, pp. 335–342. DOI: [10.5194/isprs-archives-XLVIII-2-W8-2024-335-2024](https://doi.org/10.5194/isprs-archives-XLVIII-2-W8-2024-335-2024)  
*Role: Software development, data processing, manuscript writing*

★ L. Morelli, **Ioli, F.**, F. Maiwald, G. Mazzacca, F. Menna, and F. Remondino. “Deep-Image-Matching: a Toolbox for Multi-view Image Matching of Complex Scenarios”. In: *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*. Vol. XLVIII-2/W4-2024. 2024, pp. 309–316. DOI: [10.5194/isprs-archives-XLVIII-2-W4-2024-309-2024](https://doi.org/10.5194/isprs-archives-XLVIII-2-W4-2024-309-2024)  
*Role: Co-developer of open-source software toolbox, algorithm implementation, data processing, manuscript writing*

L. Morelli, G. Mazzacca, P. Trybała, F. Gaspari, **Ioli, F.**, Z. Ma, F. Remondino, K. Challis, A. Poad, A. Turner, and J. P. Mills. “The Legacy of Sycamore Gap: The Potential of Photogram-

metric AI for Reverse Engineering Lost Heritage with Crowdsourced Data”. In: *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*. Vol. XLVIII-2-2024. 2024, pp. 281–288. DOI: [10.5194/isprs-archives-XLVIII-2-2024-281-2024](https://doi.org/10.5194/isprs-archives-XLVIII-2-2024-281-2024)  
*Role: Software development, data processing, web application implementation, manuscript writing*

F. Gaspari, F. Barbieri, R. Fascia, **Ioli, F.**, and L. Pinto. “An Open-Source Web Platform for 3D Documentation and Storytelling of Hidden Cultural Heritage”. In: *Heritage 7.2* (2024), pp. 517–536. DOI: [10.3390/heritage7020025](https://doi.org/10.3390/heritage7020025)  
*Role: Software development, field survey execution, data processing, manuscript writing*

F. Gaspari, **Ioli, F.**, F. Barbieri, S. Bonora, R. Fascia, L. Pinto, and F. Migliaccio. “Bridging Geomatics Theory to Real-World Applications in Alpine Surveys through an Innovative Summer School Teaching Program”. In: *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*. Vol. XLVIII-4/W12-2024. 2024, pp. 59–66. DOI: [10.5194/isprs-archives-XLVIII-4-W12-2024-59-2024](https://doi.org/10.5194/isprs-archives-XLVIII-4-W12-2024-59-2024)  
*Role: Field survey execution, data preparation, database and web application implementation, manuscript writing*

**Ioli, F.**, C. De Gaetani, F. Barbieri, F. Gaspari, L. Pinto, and L. Rossi. *Belvedere Glacier long-term monitoring Open Data (Version 2.0)*. Zenodo [Data set]. 2024. DOI: [10.5281/zenodo.10817029](https://doi.org/10.5281/zenodo.10817029)  
*Role: Leading author and data curator – compiled and curated multi-temporal datasets, prepared metadata and documentation*

## 2023

**Ioli, F.**, E. Bruno, D. Calzolari, M. Galbiati, A. Mannocchi, P. Manzoni, M. Martini, A. Bianchi, A. Cina, C. De Michele, and L. Pinto. “A Replicable Open-Source Multi-Camera System for Low-Cost 4D Glacier Monitoring”. In: *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*. Vol. XLVIII-M-1-2023. 2023, pp. 137–144. DOI: [10.5194/isprs-archives-XLVIII-M-1-2023-137-2023](https://doi.org/10.5194/isprs-archives-XLVIII-M-1-2023-137-2023)  
*Role: Leading author – designed multi-camera system, developed data processing workflows, conducted fieldwork, wrote manuscript*

**Ioli, F.**, F. Barbieri, F. Gaspari, F. Nex, and L. Pinto. “ICEpy4D: A Python Toolkit for Advanced Multi-Epoch Glacier Monitoring with Deep-Learning Photogrammetry”. In: *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*. Vol. XLVIII-1/W2-2023. 2023, pp. 1037–1044. DOI: [10.5194/isprs-archives-XLVIII-1-W2-2023-1037-2023](https://doi.org/10.5194/isprs-archives-XLVIII-1-W2-2023-1037-2023)  
*Role: Leading author – developed open-source Python toolkit, designed software architecture, implemented deep learning integration, wrote manuscript*

L. Morelli, **Ioli, F.**, R. Beber, F. Menna, F. Remondino, and A. Vitti. “COLMAP-SLAM: a Framework for Visual Odometry”. In: *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*. Vol. XLVIII-1/W1-2023. 2023, pp. 317–324. DOI: [10.5194/isprs-archives-XLVIII-1-W1-2023-317-2023](https://doi.org/10.5194/isprs-archives-XLVIII-1-W1-2023-317-2023)  
*Role: Software development, data processing, manuscript writing*

F. Gaspari, F. Barbieri, J. P. Duque, R. Fascia, **Ioli, F.**, G. Zani, D. Carrion, and L. Pinto. “A Geo-Database For 3D-Aided Multi-Epoch Documentation of Bridge Inspections”. In: *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*. Vol. XLVIII-1/W2-2023. 2023, pp. 299–306. DOI: [10.5194/isprs-archives-XLVIII-1-W2-2023-299-2023](https://doi.org/10.5194/isprs-archives-XLVIII-1-W2-2023-299-2023)

*Role: Software development for geodatabase implementation, manuscript writing*

F. Gaspari, F. Barbieri, I. Demnati, **Ioli, F.**, L. Pinto, and V. Toscani. “Mobile Mapping Solutions for the Update and Management of Traffic Signs in a Road Cadastre Free Open-Source GIS Architecture”. In: *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*. Vol. XLVIII-4/W7-2023. 2023, pp. 61–66. DOI: [10.5194/isprs-archives-XLVIII-4-W7-2023-61-2023](https://doi.org/10.5194/isprs-archives-XLVIII-4-W7-2023-61-2023)

*Role: Software development, paper revision*

## 2022

★ **Ioli, F.**, A. Bianchi, A. Cina, C. De Michele, P. Maschio, D. Passoni, and L. Pinto. “Mid-Term Monitoring of Glacier’s Variations with UAVs: The Example of the Belvedere Glacier”. In: *Remote Sensing* 14.1 (2022), p. 28. DOI: [10.3390/rs14010028](https://doi.org/10.3390/rs14010028)

*Role: Leading author – designed monitoring methodology, conducted multi-year UAV surveys, performed all photogrammetric processing, wrote manuscript*

★ **Ioli, F.**, A. Pinto, and L. Pinto. “UAV-Photogrammetry for Metric Evaluation of Concrete Bridge Cracks”. In: *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*. Vol. XLIII-B2-2022. 2022, pp. 1025–1032. DOI: [10.5194/isprs-archives-XLIII-B2-2022-1025-2022](https://doi.org/10.5194/isprs-archives-XLIII-B2-2022-1025-2022)

*Role: Leading author – developed crack detection methodology, conducted fieldwork, performed analysis, wrote manuscript*

F. Gaspari, **Ioli, F.**, F. Barbieri, E. Belcore, and L. Pinto. “Integration of UAV-LiDAR and UAV-Photogrammetry for Infrastructure Monitoring and Bridge Assessment”. In: *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*. Vol. XLIII-B2-2022. 2022, pp. 995–1002. DOI: [10.5194/isprs-archives-XLIII-B2-2022-995-1002](https://doi.org/10.5194/isprs-archives-XLIII-B2-2022-995-1002)

*Role: Field survey execution, data integration and processing, manuscript writing*

## 2021

C. I. De Gaetani, **Ioli, F.**, and L. Pinto. “Aerial and UAV Images for Photogrammetric Analysis of Belvedere Glacier Evolution in the Period 1977–2019”. In: *Remote Sensing* 13.18 (2021), p. 3787. DOI: [10.3390/rs13183787](https://doi.org/10.3390/rs13183787)

*Role: Photogrammetric processing of multi-temporal imagery spanning 42 years, point cloud analysis and change detection, manuscript writing*

L. Rossi, **Ioli, F.**, E. Capizzi, L. Pinto, and M. Reguzzoni. “Improving UAV Telemetry Positioning for Direct Photogrammetry”. In: *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*. Vol. XLIII-B2-2021. 2021, pp. 61–68. DOI: [10.5194/isprs-archives-XLIII-B2-2021-61-2021](https://doi.org/10.5194/isprs-archives-XLIII-B2-2021-61-2021)

*Role: Field survey execution, paper revision*

## 2020

**Ioli, F.**, L. Pinto, D. Passoni, V. Nova, and M. Detert. “Evaluation of Airborne Image Velocimetry Approaches Using Low-cost UAVs in Riverine Environments”. In: *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*. Vol. XLIII-B2-2020. 2020, pp. 597–604. DOI: [10.5194/isprs-archives-XLIII-B2-2020-597-2020](https://doi.org/10.5194/isprs-archives-XLIII-B2-2020-597-2020)

*Role: Leading author – developed velocimetry methodology, conducted field experiments, performed analysis, wrote manuscript*

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