

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. Bertulessi, 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

For a complete publication list with citation metrics, see my Scopus profile: <https://www.scopus.com/authid/detail.uri?authorId=57219022961>