

PERSONAL DETAILS



Alberto Bosino

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Gender: M

Nationality: Italian

Date of birth: 28/4/1992

CURRENT POSITION

Researcher (RTDA), University of Milano-Bicocca, Department of Earth and Environmental Sciences, Piazza della Scienza, 1 - U1, 20126 Milano (Italy)

NATIONAL SCIENTIFIC
HABILITATION (ASN)

Habilitation in Physical Geography and Geomorphology at the Italian Ministry for Education, Universities and Research (for Associate Professor level - SSD Geo/04 - GSD GEOS-03/A - Geografia fisica e geomorfologia). Obtained on 05/6/2023.

BIBLIOMETRIC RECORDS

22 Research publications in International Scientific Journals (Scopus)
225 Citation (Scopus)
9 H-Index (Scopus)

SKILLS

Geomorphology, Cartography, GIS, Pedology, Applied Geomorphology

ACCADEMIC CAREER AND
EDUCATION ACTIVITIES

(10/01/2022-present)

-Researcher (RTDA) at the University of Milano-Bicocca - GEO/04

Project title: 'Sviluppo metodologico ed applicativo di cartografia tematica geomorfologica multiscala e multitemporale, a copertura completa, per applicazioni di valutazione ambientale delle attività territoriali e per la riduzione degli impatti del cambiamento climatico'
- Department of Earth and Environmental Sciences University of Milano-Bicocca

(01/3/2021-31/12/2021)

-Postdoctoral fellow at the University of Pavia – GEO/04 – Life DRIVE Project

Project title: 'Implementation of a model able to simulate the soil-water balance on slopes characterized by vineyards in the Lombardy-Emilia Apennines'

(2017-25/01/2021)

-PhD in Earth Sciences (XXXIII cycle), Excellent

-Title: 'Integrative assessment of Badland erosion dynamics in the Oltrepo area'
- Department of Earth and Environmental Sciences University of Pavia-Italy. Supervisor: Prof. Michael Maerker

(2015-29/9/2017)

-Master's degree in Applied Geology, LM-74, 110/110 with honor

-Title: 'A new methodology for detection and interpretation of land uplift using A-DInSAR techniques: London and South Wales Coalfield cases of study'
- Department of Earth and Environmental Sciences University of Pavia-Italy. Collaboration with the British Geological Survey (BGS), Keyworth-UK. Supervisor: Prof. Claudia Meisina

(2012-02/10/2015)

-Bachelor's degree in Geological Sciences, L-34, 109/110

-Title: 'Historical earthquakes and generation of shaking maps in GIS'
- Department of Earth and Environmental Sciences University of Pavia-Italy. Collaboration with the European Centre for Training and Research in Earthquake Engineering (EUCENTRE), Pavia. Supervisor: Prof. Francesco Zucca and Dr. Emilia Fiorini

PUBLICATIONS

Manuscript
(Accepted and published)

1. Hamidova E., Franceschi L., **Bosino A.**, Szatten D., De Amicis M. (2024). Urbanization and flooding dynamics: A case study of the Seveso River in Northern Italy. *GOSPODARKA WODNA 6-2024 (WORLD CANALS CONFERENCE 2024 BYDGOSZCZ)*:20-25.
2. La Licata M., **Bosino A.**, Sadeghi S.H., De Amicis M., Mandarino A., Terret A., Maerker M. (accepted-2024). HOTSSED: A new integrated model for assessing potential hotspots of sediment sources and related sediment dynamics at watershed scale. *International Soil and Water Conservation Research*
3. Hamidova E., **Bosino A.**, Franceschi L., De Amicis M. (2024). Nature-Based Solution integration to enhance urban geomorphological mapping: a methodological approach. *Land* 2024, 13(4), 467
4. **Bosino A.**, Mandarino A., De Amicis M., Cazzini F.F., Abu El Khair D., Flores P. (2024). Assessment of piping-sinkhole development in relation to fluvial-terrace scarp retreat: a multi-temporal analysis on the lower Ticino River (Italy). *Geomorphology* 450, 109082.
5. Ferrando A., **Bosino A.**, Bonino E., Coratza P., Faccini F. (2023). Geomorphology and geoheritage in the Piana Crixia Natural Park (NW Italy). *Journal of Maps*, 2023, VOL. 19, NO. 1, 2257731, doi.org/10.1080/17445647.2023.2257731
6. Szatten D.A., Brzezińska M., & **Bosino A.** (2023). New sediment continuum measurements in the Brda River (Poland): the results of the functioning of the 50-year Koronowo dam. *J Soils Sediments* (2023). <https://doi.org/10.1007/s11368-023-03582-z>
7. La Licata M., **Bosino A.**, Bettoni M., Maerker M. (2023). Assessing landscape features and geomorphic processes influencing sediment dynamics in a geomorphologically highly active Mediterranean agroecosystem: The upper Val d'Arda case study (Northern Apennines, Italy). *Geomorphology* 433, 108724.
8. Bettoni M., Maerker M., **Bosino A.**, Conedera M., Simoncelli L., Vogel S. (2023). Land use effects on surface runoff and soil erosion in a southern Alpine valley. *Geoderma* 435, 116505
9. Bettoni M., Maerker M., Sacchi R., **Bosino A.**, Conedera M., Simoncelli L., Vogel S. (2023). What makes soil landscape robust? Landscape sensitivity towards land use changes in a Swiss southern Alpine valley. *STOTEN*, 858-159779.
10. Bettoni M., Vogel S., **Bosino A.**, Schillaci C., Maerker M. (2022). Bibliometric analysis on soil and landscape stability, sensitivity and resistivity. *Land* 11(8), 1328.
11. Bufalini M., Omran A., **Bosino A.** (2022). Assessment of badlands erosion dynamics in the Adriatic side of central Italy. *Geosciences* 12, 208.
12. **Bosino A.**, Szatten D.A., Omran A., Crema S., Crozi M., Becker R., Bettoni M., Schillaci C., Maerker M. (2022). Assessment of suspended sediment dynamics in a small ungauged badland catchment in the Northern Apennines (Italy) using an in-situ laser diffraction methodology (Italy). *Catena*, 209, 105796.
13. Bernini A., **Bosino A.**, Botha A. G., Maerker M. (2021). Assessment of gully erosion susceptibility using a Maximum Entropy modelling approach in the upper Mkhomazi River basin, KwaZulu-Natal, South Africa. *ISPRS Int. J. Geo-Inf.* 2021, 10, 729.
14. Schillaci C., Perego A., Valkama E., Maerker M., Saia S., Veronesi F., Lipani A., Lombardo L., Tadiello T., Gamper H. A., Tedone L., Moss C., Pareja-Serrano E., Amato G., Kühl K., Damatirca C., Cogato A., Mzid N., Eeswaran R., Rebelo M., Spreandino G., **Bosino A.**, Bufalini M., Tucay T., Ding J., Fiorentini M., Tiscornia G., Conradt S., Botta M., Acutis M (2021). New pedotransfer approaches to predict soil bulk density using WoSIS soil data and environmental covariates in Mediterranean agro- ecosystems. *Science of the Total Environment*, 780 (2021) 146609.
15. Bonacina G., Sanfilippo A., Zana S., **Bosino A.**, Previde Massara E., Viaggi P., Sabato L., Gallicchio S., Scotti P. (2021). Geochemical evidence for local variability in redox and depositional conditions in a deep-water Bonarelli equivalent section from southern Tethys (Fontana Valloneto section, southern Italy). *Ofioliti* 46(1), 43-62.
16. **Bosino A.**, Bernini A., Botha G. A., Bonacina G., Pellegrini L., Omran A., Hochschild V., Sommer C., & Maerker M. (2021). Geomorphology of the upper Mkhomazi River basin, KwaZulu-Natal, South Africa with emphasis on Late Pleistocene colluvial deposits. *Journal of Maps*, 2021, VOL. 17, NO. 3, 5-16.
17. Cama M., Schillaci C., Kropáček J., Hochschild V., **Bosino A.** & Maerker M. (2020). A probabilistic assessment of soil erosion susceptibility in a head catchment of the Jemma Basin, Ethiopian Highlands. *Geosciences* 10(7), 248.
18. **Bosino A.**, Giordani P., Quénéhervé G., Maerker M. (2020). Assessment of calanchi and rill-interrill erosion susceptibilities using terrain analysis and geostochastics: A case study in the Oltrepo Pavese, Northern Apennines, Italy. *Earth Surface Processes and Landforms* 45, 3025- 3041.
19. Maerker M., **Bosino A.**, Scopesi C., Giordani P., Firpo M., Rellini I. (2020). Assessment of calanchi and rill-interrill erosion susceptibility in northern Liguria, Italy: A case study using a probabilistic modelling framework. *GEODERMA* 371, 114367.
20. Cazzini F. F., Amadori C., **Bosino A.**, Fantoni R. (2020). New seismic evidence of the Messinian paleomorphology beneath Lake Maggiore area (Italy). *Italian Journal of Geosciences*, 139, 2, 195-211.
21. Maerker M., Schillaci C., Melis R. T., Kropáček J., **Bosino A.**, Vilímeck V., Hochschild V., Sommer C., Altamura F., Mussi M. (2019). Geomorphological processes, forms and features in the surroundings of the Melka Kunture Palaeolithic site, Ethiopia. *Journal of Maps* 2019, VOL. 15,

NO. 2, 797–806.

22. **Bosino A.**, Omran A., Maerker M. (2019). Identification, characterisation and analysis of the Oltrepo Pavese calanchi in the Northern Apennines (Italy). *Geomorphology* 340, 53-66.
23. **Bosino A.**, Pellegrini L., Omran A., Bordoni M., Meisina C., & Maerker M. (2019). Litho-structure of the Oltrepo Pavese, Northern Apennines (Italy). *Journal of Maps* 2019, VOL. 15, NO. 2, 382–392.
24. Boni R., **Bosino A.**, Meisina C., Novellino A., Bateson L., McCormack H. (2018). A Methodology to Detect and Characterize Uplift Phenomena in Urban Areas Using Sentinel-1 Data. *Remote Sens.* 2018, 10, 607.

Extended Abstract (Published)

1. Maerker M., **Bosino A.**, Lunini D., Cherici G. (2019). Quantitative Assessment of Hydrological Processes and Sediment Discharge in the Northern Apennines, Italy. V all-Russian scientific conference with international participation: "Models of manifestation of erosion and channel processes in various environmental conditions". Moscow State University, Moscow, 3-6 September 2019.
2. Maerker M., **Bosino A.**, Bernini A., Cüppers A., Hardenbicker U. (2019). Badland and gully erosion assessment using remotely sensed data, non-invasive field techniques and stochastic modelling approaches. Global Symposium on soil EROSION | FAO Hq | Rome, Italy, 15-17 May 2019.

Abstract in congress (Submitted and published)

1. Franceschi L., **Bosino A.**, Hamidova E., De Amicis M. (2024). Dalla cartografia regionale al 'Quaderno 13' ISPRA: gestire l'innovazione attraverso i geodatabase. Il caso studio sulla cartografia geologica applicativa di Regione Lombardia. XVIII Convegno Nazionale delle Sezioni "GIT - Geosciences and Information Technologies".
2. **Bosino A.**, Franceschi L., La Licata M., Brzezińska M., De Amicis M. (2024). Rivers and canals as art elements: observing the paintings in a geomorphological perspective. World Canal Conference 2024-Bydgoszcz.
3. Hamidova E., Franceschi L., **Bosino A.**, Szatten D., De Amicis M. (2024). Urbanization and flooding events, a biunivocal relation? The Seveso River case study (N-Italy). World Canal Conference 2024-Bydgoszcz.
4. La Licata M., **Bosino A.**, Sadeghi S.H.R., Maerker M. (2024). Assessing hotspots of sediment sources and related sediment dynamics through the integration of geomorphological data, sediment connectivity and sediment transport modelling – The HOTSED model. EGU 2024.
5. **Bosino A.**, Hamidova E., Maggi V., De Amicis M. (2023). Geomorphology at the service of the society. From field survey to geomorphological maps applications. DISAT day - G. Martinotti Auditorium 26/9/2023.
6. Hamidova E., **Bosino A.**, De Amicis M. (2023). Modern Approach in Urban Geomorphology and Urban Geo Heritage Study A review. IAG 2023
7. La Licata M., **Bosino A.**, Maerker M. (2023). Evaluation of sediment dynamics in a mesoscale catchment of the Northern Apennines (Italy) characterized by intensive soil erosion and mass movement processes. IUGG Berlin 2023
8. La Licata M., **Bosino A.**, Maerker M. (2023). Assessment of a geomorphologically highly active catchment in the Northern Apennines, Italy: linking sediment sources mapping with a morphometric connectivity approach. International Conference on Fluvial Sedimentology. 2-7/7/2023 Riva del Garda.
9. Ferrando A., **Bosino A.**, Chiarlone M.P., Coratza P., Faccini F. (2022). Sustainable geoheritage and geosites in the Piana Crixia Natural Park (Liguria, Italy). 16th European Geoparks Conference – Verbania.
10. Alessia Pica and **the AIGeo working group on Urban Geomorphology (2022)**. The urban geomorphological survey and mapping as a support to risk assessment and communication tools, through the enhancement of the geological heritage. ICG2022
11. Bufalini M., Ferrando A., Silvani F., **Bosino A.** (2022). Geomorphological remarks in the eastern part of Monte Primo, Central Apennines, Marche, (Italy). 91° Congresso della Società Geologica Italiana. Torino, Settembre 2022.
12. La Licata M., Bettoni M., Bernini A., **Bosino A.**, Maerker M. (2022). Identification and characterization of landslide processes in a Mediterranean catchment: The Val d'Arda case study (Northern Apennines, Emilia-Romagna, Italy). 91° Congresso della Società Geologica Italiana. Torino, Settembre 2022.
13. La Licata M., **Bosino A.**, Bettoni M., Maerker M. (2022). Identification and assessment of sediment sources and sediment transfer processes in a Mediterranean Agroecosystem in the Northern Apennines, Italy. AIGEO 2022-Palermo
14. **Bosino A.**, Menegoni N., Ferrari E., Lupi C., Perotti C. (2022). Art and Drones: retracing the paths of Torquato Taramelli 100 years later. D-SITE Drones - Systems of Information on cultural Heritage. International Seminar meeting. 16-18 June 2022, Pavia.
15. Simoncelli L., **Bosino A.**, Vilimek V., Kropáček J., Maerker M. (2022). Paleogeographic reconstruction of Segrino Lake area: Southern Alps, Northern Italy. EGU 2022.
16. Bettoni M., **Bosino A.**, Vogel S., Bernini A., Adeniyi O.D., Maerker M. (2021). What makes a soil landscape robust? Land use changes in a southern Alpine valley (Ticino, Switzerland). 1° Congresso Nazionale dei Giovani Scienziati 7-10/10/2021 Napoli.
17. Adeniyi O.D., Bettoni M., Bernini A., **Bosino A.**, Maerker M. (2021). Mapping soil properties in a lowland area of Lombardy region using terrain attributes and different predictive modelling

- approaches. 1° Congresso Nazionale dei Giovani Scienziati 7-10/10/2021 Napoli.
18. Bernini A., Adeniyi O. D., **Bosino A.**, Bettoni M., Maerker M. (2021). Comparing different approaches to set up SWAT model in a flat intensively irrigated area. 1° Congresso Nazionale dei Giovani Scienziati 7-10/10/2021 Napoli.
 19. Fantoni R., **Bosino A.**, Cazzini F., & Toscani G. (2021). The Pedalpine Backthrust in the western sector of the Southern Alps. 90° Congresso della Società Geologica Italiana. Trieste, Settembre 2021.
 20. **Bosino A.**, Bettoni M., Omran A., Bernini A., Simoncelli L., Adeniyi O. D., Maerker M. (2021). Assessment of Badland area variations for two study sites in the Northern Apennines (Italy). 90° Congresso della Società Geologica Italiana. Trieste, Settembre 2021.
 21. Odunayo A., D., Bernini A., **Bosino A.**, Maerker M. (2021). Digital soil mapping in a lowland area: a case study of Lombardy irrigation area, Italy. XXIV Dokuchaev Conference for Young Scientists "Soil Science in a Digital Society".
 22. Simoncelli L., **Bosino A.**, Maerker M. (2020-postponed in 2022). Fluvio-geomorphological dynamics and hydrogeological risk assessment of the Lambro River: A case study of the Cologno Monzese section (Lombardy, Italy). IAHS/ICCE International Symposium 'River sediment quality and quantity: environmental, geochemical and ecological perspectives'. Bydgoszcz, Poland on October 26-30, 2020.
 23. **Bosino A.**, Szatten D. A., Bettoni M., Maerker M. (2020-postponed). In situ measurements of suspended sediment dynamics using a LISST-25X: a case study in the Oltrepò Pavese, Northern Apennines (Italy). IAHS/ICCE International Symposium 'River sediment quality and quantity: environmental, geochemical and ecological perspectives'. Bydgoszcz, Poland on October 26-30, 2020.
 24. Acutis M., Perego A., Valkama E., Maerker M., Sacco D., Saia S., Veronesi F., Lipani A., Lombardo L., Amato G., **Bosino A.**, Cogato A., Conradt S., Damatirca C., Gamper H., Kuhl K., Moss C., Pareja-Serrano E., Tedone L., Tiscornia G., Schillaci C. (2020). Pedotransfer function to predict soil bulk density in Mediterranean agro-ecosystems, a systematic map. EGU General Assembly, 4-8 May 2020. <https://doi.org/10.5194/egusphere-egu2020-16930>.
 25. Bonasera M., Cerrone, C., Masseroli A., Prampolini M., and the **Italian Young Geomorphologists' Group** (2020). The Italian young geomorphologists' group: a dynamic reality within the Italian geomorphological community. Journées des Jeunes Géomorphologues 2020, Paris.
 26. **Bosino A.**, Bernini A., Botha G., Omran A., Pellegrini L., Maerker M. (2019). Using web-based applications to enhance traditional geomorphic mapping: a case study of the Upper Mkhomazi River basin, KwaZulu-Natal, South Africa. Congresso SIMP, SGI SOGEI, Parma 16-19 September 2019.
 27. **Bosino A.**, Bernini A., Maerker M. (2019). The role of colluvial deposits in gully formation: Example of the upper Mkhomazi basin, KwaZulu-Natal, South Africa. VIII ITALIAN YOUNG GEOMORPHOLOGISTS' DAYS. "Sharing experiences on geomorphological research in different morphogenetic and morphoclimatic environments" Milan & Veny Valley, 26th-28th June 2019.
 28. Boni R., **Bosino A.**, Meisina C., Novellino A., Bateson L., McCormack H. (2019). Geological interpretation of ground deformation effects after the termination of engineering works using Sentinel-1 data: the London case of study (UK). 2019 Living Planet Symposium 13-17 May 2019, MiCo - Milano Congressi Milan, Italy.
 29. Boni R., **Bosino A.**, Meisina C., Novellino A., Bateson L., McCormack H. (2018). Monitoring and characterization of the ongoing ground displacement in London (UK) using Persistent Scatterer Interferometry (PSI) data acquired by Sentinel-1 satellites. '6° Congresso Nazionale AIGA (Courmayeur, 27-29/06/2018)'.

Books

1. **Bosino A.**, Bufalini M., Ferrando A. (2023). Geomorfologia di terreno delle forme Fluviali, Fluvio-Glaciali e dovute al Dilavamento. Atlante pratico per il rilevamento e la cartografia. Dario Flaccovio Editore, Palermo, 2023. ISBN: 9788857915401
2. **Bosino A.**, & Ferrari E. (2021). Nel sangue le Quattro Province. Genealogia della famiglia Bosino. pp 175, (available on request).

Other contributions

- 2022: For the AIGEO 'GIS and Geomorphological Cartography' Working Group. Bollati I, De Amicis M, Leonelli G, Chelli A, Aucelli P.P.C. Bonasera M, Bondesan A, **Bosino A.**, Bufalini M, Fubelli G, Gionta A, Marsico A, Materazzi M, Pambianchi G, Pelfini M, Pellegrini, Petriccione M, Piacentini T, Randazzo G, Scardino G, Tagliaferri A, Valente E (2022). Metodi per la costruzione di una cartografia geomorfologica con QGIS e ArcGIS a confronto. Poster IV, AIGEO 2022 Palermo.
- 2022: For the AIGEO 'GIS and Geomorphological Cartography' Working Group. Bollati I, **Bosino A.**, Chelli A, De Amicis m, Leonelli G, Pelfini M, Pellegrini I, Tagliaferri A. Poster III, AIGEO 2022 Palermo.
- 2021: For the IAG 'Badlands' Working Group Newsletter. Page, December 2021.

Editorial activity

-**Reviewer for:** SN Applied Sciences; Geoderma; Earth Sciences Research Journal; Environmental Earth Sciences; Remote Sensing; Water; Agronomy; International Journal of Environmental Research and Public Health; Geocarto International; Geosciences; Artificial Intelligence in Geosciences; Natural Hazards; International Soil and Water Conservation Research; CATENA;

-**Special Issue Guest Editor:** "Soil Erosion and Shallow Landslides: Prediction of the Phenomena and Measures of Sediments Delivery", *Geosciences*, 2023.

-**International Editorial Board Member:** Hydrology, Hydrochemistry and Hydroecology. ISSN:

2306-5680

Invited presentation speaker	-In the 7th Badlands IAG workshop. Title 'Expert based method to univocally map badlands in different climate contexts'. 27 November 2023. -In the 3rd Badlands IAG workshop. Title 'Assessment of Badlands erosion dynamics in the Northern Apennines, Italy'. 29 November 2021. -In the 1st Badlands IAG working group meeting. Title 'Inventory of Badlands sites'. 5 November 2021. -Invited speaker for the "3rd Edition of Webinar on Geology & Climate Change", 28-29/9/2021.
Convener and Co-Convener activity	-Llena M., Kasanin-Grubin M., Bosino A. , Tarolli P., Xiao P., Nadal Romero E. (2022). New challenges in measuring geomorphological dynamics and estimating erosion rates in badland areas. EGU 2022, Vienna 23-27/5/2022 (accepted session, SSS11.11).
Membership and association	-Italian Geological Society (SGI), Italian Association of Physical Geography and Geomorphology (AIGeo), International Association of Geomorphologists (IAG)