

PERSONAL DETAILS

Alberto Bosino



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 alberto.bosino@unipv.it

Gender: M

Nationality: Italiana

Date of birth: 28/4/1992

SKILLS

GIS, Cartography, Geomorfology, Pedology, Remote Sensing, Applied Geology

EDUCATION AND ACADEMIC CAREER

- (01/3/2021-28/2/2022) **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 characterised by vineyards in the Lombardy-Emilia Appennines'
- (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
- 24 CFU for teaching **Achieved in July 2020**
- University of Pavia
- (2015-29/9/2017) **Master's degree in applied Geology, 110/110 with honour**
- 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.ssa Claudia Meisina and Dott.ssa Roberta Boni
- (2012-02/10/2015) **Bachelor's degree in Geological Sciences, 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 Dott.ssa Emilia Fiorini

WORK EXPERIENCES

- (January-February 2020) **Collaboration with the 'Technische Universität Bergakademie Freiberg'**
- Soil and Water Conservation Unit, Freiberg, (Germany).
- Physically based models' application on soil erosion in Apennine areas (EROSION 2D/3D MODEL). Grain size analysis and lab work. Granted by UNIPV.
- (November 2019) **Field work in Poland, municipality of Koronowo**
- Collaboration with the University of Bydgoszcz.
- Soil profiles, geomorphological mapping, geoelectric measurements (ERT catenas). Granted by the ATB of Potsdam (Germany).

(February-March 2019)

Field work in South Africa, KwaZulu-Natal

- Collaboration with the Council for Geosciences – Pietermaritzburg office. Granted by Heidelberg Academy of Sciences and from UNIPV.
- Geomorphological mapping, soil profile description, stochastic modelling. Ref: Dr. Greg Botha.

(January-February 2018)

Field work in South Africa, KwaZulu-Natal

- Collaboration in ‘The Role of Culture in Early Expansions of Humans, “ROCEEH” project’. Granted by the Heidelberg Academy of Sciences.
- Geological and geomorphological mapping, soil description, geoelectric survey (ERT catena) and electromagnetic (EMP)

(March-June 2017)

Erasmus+ Traineeship

- Collaboration with the British Geological Survey (BGS)-Natural Environmental Research Council (NERC), (Keyworth, UK).
 - Uplift phenomena analysis in urban and rural areas through the use of A-DInSAR techniques. London and South Wales case studies.
- Supervisor: Dr. Luke Bateson and Dr. Alessandro Novellino.

PERSONAL COMPETENCE

Mother language

Italian

Other

English

Personal skills

GIS and Cartography

- In the last years I published several geological and geomorphological maps on International Journals. Software ArcMap, QGIS e SAGA.

Geophysics

- Proficient user of electromagnetometer (EMP 400); Geoelectric tools i.e., ERT catena.

Soil analysis (laboratory and field)

- Soil colour and physical analysis (Munsell); Ph; Suspended sediment analysis with LISST instrument; Grain size analysis in the field and in laboratory following the ASTM; Bulk density, aggregate stability, Ksat measurements (AmuZZimeter).

Compure skills

Proficient user with ArcGIS, QGIS, SAGA-GIS, Corel Draw (Inkscape), MaxEnt, Principles of R, Google Earth, Office suite e Internet

Soft skills

Scientific analysis and negotiation.

Drive licence

B for the car

RESEARCH ACTIVITIES

Manuscript
(Accepted and published)

- 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. *Stoten*, 780 (2021) 146609.
- Bonacina Greta, Sanfilippo Alessio, Zana Simone, **Bosino Alberto**, Previde Massara Elisabetta, Viaggi Paolo, Sabato Luisa, Gallicchio Salvatore, Scotti Paolo (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.

3. **Bosino Alberto**, Bernini Alice, Botha Greg A., Bonacina Greta, Pellegrini Luisa, Omran Adel, Hochschild Volker, Sommer Christian, and Maerker Michael (2020-accepted, 2021). Geomorphology of the upper Mkhomazi River basin, KwaZulu-Natal, South Africa with emphasis on Late Pleistocene colluvial deposits. *Journal of Maps*, <https://doi.org/10.1080/17445647.2020.1790435>
4. Maeriaelena Cama, Calogero Schillaci, Jan Kropáček, Volker Hochschild, **Alberto Bosino** and Michael Maerker (2020). A probabilistic assessment of soil erosion susceptibility in a head catchment of the Jemma Basin, Ethiopian Highlands. *Geosciences* 10(7), 248.
5. **Bosino Alberto**, Giordani Paolo, Quénéhervé Geraldine, Maerker Michael (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.
6. Maerker Michael, **Bosino Alberto**, Scopesi Claudia, Giordani Paolo, Firpo Marco, Rellini Ivano (2020). Assessment of calanchi and rill-interrill erosion susceptibility in northern Liguria, Italy: A case study using a probabilistic modelling framework. *GEODERMA* 371, 114367.
7. Cazzini Ferdinando Franco, Amadori Chiara, **Bosino Alberto**, Fantoni Roberto (2020). New seismic evidence of the Messinian paleomorphology beneath Lake Maggiore area (Italy). *Italian Journal of Geosciences*, 139, 2, 195-211.
8. Maerker Michael, Schillaci Calogero, Melis Rita T., Kropáček Jan, **Bosino Alberto**, Vilímek Vít, Hochschild Volker, Sommer Christian, Altamura Flavio, Mussi Margherita (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.
9. **Bosino Alberto**, Omran Adel, Maerker Michael (2019). Identification, characterisation and analysis of the Oltrepo Pavese calanchi in the Northern Apennines (Italy). *Geomorphology* 340, 53-66
10. **Bosino Alberto**, Pellegrini Luisa, Omran Adel, Bordoni Massimiliano, Meisina Claudia, & Maerker Michael (2019). Litho-structure of the Oltrepo Pavese, Northern Apennines (Italy). *Journal of Maps* 2019, VOL. 15, NO. 2, 382-392.
11. Boni Roberta, **Bosino Alberto**, Meisina Claudia, Novellino Alessandro, Bateson Luke, McCormack Harry (2018). A Methodology to Detect and Characterize Uplift Phenomena in Urban Areas Using Sentinel-1 Data. *Remote Sens.* 2018, 10, 607.

-Bosino Alberto, Szatten Dawid Aleksander, Omran Adel, Becker Rike, Bettoni Manuele, Schillaci Calogero, Maerker Michael (submitted). Assessment of sediment dynamics in a small Northern Apennines catchment (Italy). *Catena*

-Ferdinando Franco Cazzini, **Alberto Bosino**, Giovanni Toscani, Roberto Fantoni (in prep). The back thrusts of the South Margin of the Western Southern Alps evaluated with seismic and wells data.

Manuscript
(Submitted and in prep.)

Extended Abstract
(Published)

12. Maerker Michael, **Bosino Alberto**, Lunini Debora, Cherici Giovanni (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.
13. Maerker Michael, **Bosino Alberto**, Bernini Alice, Cüppers Annika, Hardenbicker Ulrike (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
(Accepted and published)

14. Simoncelli Laura, **Bosino Alberto**, Michael Maerker (2020). 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.
15. **Bosino Alberto**, Szatten Dawid Alexander, Bettoni Manuele, Maerker Michael (2020). In situ measurements of suspended sediment dynamics using a LISST-25X: a case study in the Oltrepo 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.
16. Acutis M., Perego A., Valkama E., Maerker M., Sacco D., Saia S., Veronesi F., Lipani A., Lombardo L., Amato G., **Bosino Alberto**, 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>

17. 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.
18. **Bosino Alberto**, Bernini Alice, Botha Greg, Omran Adel, Pellegrini Luisa, Maerker Michael (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.
19. **Bosino Alberto**, Bernini Alice, Maerker Michael (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.
20. Boni Roberta, **Bosino Alberto**, Meisina Claudia, Novellino Alessandro, Bateson Luke, McCormack Harry (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.
21. Boni Roberta, **Bosino Alberto**, Meisina Claudia, Novellino Alessandro, Bateson Luke, McCormack Harry (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)'.

Editorial activity Reviewer for: SN Applied Sciences; Geoderma; Earth Sciences Research Journal; Environmental Earth Sciences; Remote Sensing; Water; Agronomy.

Supervisor activity -2017-2021: Co-supervisor for the Master thesis in Applied Geology of: Giovanni Cherici, Debora Lunini, Alice Bernini, Laura Simoncelli.
-2019-2020: Co-supervisor for the Bachelor thesis in Natural Sciences of: Laura Simoncelli.
-2020-2021: Co-supervisor for the Bachelor thesis in Geological Sciences of Michael Milan, Nicole Curci

Lectures (Teaching) -2017/2018/2019 – 12 Seminar for the course 'Laboratory of GIS' (4°-year students of Applied geology-UNIPV)
-2017/2018/2021 – 12 Seminar for the course 'Physical geography and cartography' (1°-year students of Natural Sciences- UNIPV)
-2018/2019 – 12 Seminar for the course 'Geopedology' (5°-year students of Applied Geology-UNIPV)

Tutoring -2020/2021 20 hours for the course of Cartography (1°-year students of Geological Sciences-UNIPV)
-2020, 17 hours for the course 'Geomorphology' (2°-year students of Geological Sciences-UNIPV)

Field School and Courses -Statistical Regression Models for Engineering Geology through R. Organized by University of Pavia. 3 ECTS
-PF 24: i) Antropologia, ii) Metodologie e tecnologie didattiche, iii) Psicologia, iv) Pedagogia. Courses offered by the University of Pavia, 2020 (24 CFU).
-"Eni, giacimenti e trasformazione energetica" - Competenze Trasversali. 28/5/2020 (0.5 CFU).
-1st International Summer School on Statistical analysis of spatial Data in Agro-Environmental research. 26-30/8/2019 Como (4 CFU).
-Field course "The Meaning of a Disaster", organized by University of Pavia in the Vajont valley. 23-24/5/2019 (2 CFU).
-PhD Congress 2019 - University of Pavia – oral presentation: "Detection of the Masotcheni Formation using Multispectral satellite data, terrain analysis and geostatistical modelling. KwaZulu-Natal, South Africa. (Preliminary Results)" Pavia, 7-8/3/2019
-Soil Water Assessment Tool (SWAT) course 01-03/10/2018 (3 CFU).
-R. Course offered by the University of Pavia (6 CFU).
-Geopedology. Course offered by the University of Pavia (6 CFU).
-Laboratorio di GIS. Course offered by the University of Pavia (6 CFU).
-2nd International Summer School (Pavia, Lombardy, Italy) 02-06/07/2018 (10 CFU).

Dati personali

-PhD Congress 2018 - University of Pavia - poster presentation: "Characterizon and spatial distribution of Northern Apennine Badlands: the Oltrepo Pavese case of study" Pavia, 10-11/5/2018

Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali".