PERSONAL INFORMATION

Lisa Borgatti

Affiliation
ALMA MATER STUDIORUM Università di Bologna
Dipartimento di Ingegneria Civile, Chimica, Ambientale e dei Materiali DICAM
Viale del Risorgimento, 2 40136 Bologna

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- Scopus Author ID 12239433000

WORK EXPERIENCE

2019 - **Full professor of Engineering Geology SSD GEOS-03/B Geologia applicata**

Department of Civil, Chemical, Environmental and Materials Engineering DICAM, ALMA MATER STUDIORUM Università di Bologna, Italy

- Teaching and Research. Director of studies of the Environmental Engineering Bachelor's and Master's degrees (until Oct. 2024)

2014 - 2019 **Tenured Associate professor of Engineering Geology**

Department of Civil, Chemical, Environmental and Materials Engineering DICAM, ALMA MATER STUDIORUM Università di Bologna, Italy

- Teaching and Research. Director of studies of the Environmental Engineering Bachelor's and Master's degrees (since Sept. 2018)

2007 - 2014 **Tenured Assistant professor of Engineering Geology**

Department of Civil, Chemical, Environmental and Materials Engineering DICAM, ALMA MATER STUDIORUM Università di Bologna, Italy

- Teaching and Research

2004 - 2007 **Post-doc in Engineering Geology**

Department of Earth Sciences, University of Modena & Reggio Emilia, Italy.

- Research

EDUCATION AND TRAINING

2018 Cambridge English Level 3 Certificate in ESOL International (Advanced), Grade A in the Certificate in Advanced English

Council of Europe Level C2 (Common European Framework of Reference for Languages

CEFR)

▪ Certificate number A6709915 16/08/2018

2001-2004 PhD in Earth Sciences

Department of Earth Sciences, University of Modena & Reggio Emilia, Italy. Thesis title: Le frane come indicatori di variazioni climatiche dal Tardiglaciale all'attuale, con particolare riferimento alle Alpi orientali"

▪ Grade: Excellent

1996-2000 MSc in Earth Sciences

Department of Earth Sciences, University of Modena & Reggio Emilia, Italy. Thesis title: "La frana del M. Valestra"

▪ Grade: 110/110 cum laude

WORK ACTIVITIES

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Main projects Unit participant in six international research projects and five national projects part of competitive calls selected by peer review.

International

- 2001-2004 ALARM "Assessment of Landslide Risk and Mitigation in Mountain Areas" (EVG1-2001-00018)
- 2002-2005 OASYS "Integrated Optimization of Landslide Alert Systems" (EVG1-2001-00061)
- 2007-08 Programma VIGONI. Analisi di interventi di mitigazione strutturale di grandi frane tramite modelli numerici. Partners: Bauhaus-Universitaet Weimar, Università di Modena e Reggio Emilia
- 2007-10 MOUNTAIN-RISKS: from prediction to management and governance. Marie Curie Action. Cluster Partnership Università di Firenze (Coord. Prof. N. Casagli), Università di Modena e Reggio Emilia
- 2006-08 MONITOR: Hazard Monitoring for Risk Assessment and Risk Communication. INTERREG IIIB Cadses project supported by the European Regional Development Fund ERDF
- 2009-11 MONITOR II: Practical use of Monitoring in natural disaster management. SEE - South East Europe Transnational Cooperation Programme supported by the European Regional Development Fund ERDF
- 2015-2018 CC-WARE MITIGATING VULNERABILITY OF WATER RESOURCES UNDER CLIMATE CHANGE finanziato da European Regional Development Fund ERDF, Call 4 Priority: Protection and Improvement of the Environment Area of intervention: Improve integrated water management and flood risk prevention
- 2018-21 Belt and Road Initiative (BRI) del Joint Laboratory tra Chinese Academy of Sciences - Institute of Mountain Hazards and Environment (CAS-IMHE), CNR-IRPI

National

- COFIN 1999 "I movimenti franosi come indicatori di variazioni climatiche dal Tardiglaciale ad oggi", Università di Modena e Reggio Emilia

- COFIN 2002 "Evoluzione geomorfologica dei versanti e cambiamenti climatici: analisi di fenomeni franosi e ricostruzioni paleoclimatiche", Università di Modena e Reggio Emilia
- PRIN-COFIN 2005 "Uso integrato di sistemi di monitoraggio per l'analisi di grandi frane a cinematica lenta nell'Appennino modenese e reggiano". Università di Firenze, Università di Modena e Reggio Emilia
- PRIN 2007 "Analisi e controllo di fenomeni franosi attraverso sistemi di monitoraggio wireless e airborne", Università di Bologna, Università di Modena e Reggio Emilia
- PRIN 2010-2011 "Dinamica dei sistemi morfoclimatici in risposta ai cambiamenti globali e rischi geomorfologici indotti", Università di Pisa, Università di Modena e Reggio Emilia
- ALMAIDEA "Studio teorico e sperimentale per la valutazione della suscettibilità alla liquefazione dei depositi sabbiosi: effetto delle condizioni stratigrafiche, dell'ambiente deposizionale e delle caratteristiche dell'azione sismica sull'innesco del fenomeno" finanziato nell'ambito del Bando Finanziamenti Alma Idea a supporto della ricerca di base – Linea di Intervento Senior
- PRIN 2022 Surface-subsurface flow modeling of leveed river systems affected by mammal bioerosion. Short title: Rivers Affected by Mammal Bioerosion – RAMB (Local Unit responsible)
- Return (Multi-Risk sciEnce for resilienT commUnities undeR a changiNg climate).

Tutoring activities

Since 2012 advisor and co-advisor of 9 PhD students and 4 research fellows at DICAM
Supervisor of more than 50 BSc and MSc Theses in Engineering Geology

Awards

- Best Paper award al 2014 Geosciences and Information Technologies GIT meeting (Sezione della Società Geologica Italiana), Montefalco, 2014
- Premio "Ivo Ricchetti 2014", Addressing ground lithological variability for numerical modelling through a stochastic approach: the Mortisa landslide case study, Bossi G., Marcato G., Pasuto A., Borgatti L.
- Best Poster award V Convegno Nazionale di Geologia Applicata e Ambientale, Cagliari, Italy, 2015. Premio assegnato a Margherita Cecilia Spreafico per il suo contributo dal titolo Hydrogeological features of a highly fractured rock-slab, Spreafico M.C., Cervi F., Vincent M., Borgatti L.
- DICAM Best paper awards 2017 per il lavoro Spreafico M.C., Cervi F., Francioni M., Stead D. & Borgatti L., 2017. An investigation into the development of toppling at the edge of fractured rock plateaux using a numerical modelling approach. Geomorphology, 288, pp. 83-98.

Editorial activity

Member of the Editorial Board of the journals Geomorphology and Geosciences. Service as a Journal Peer Reviewer for several international leading journals in the fields of Engineering Geology and Geomorphology. Guest Editor of 5 Special Issues in indexed journals (Geomorphology, Geografia Fisica e Dinamica Quaternaria, Rendiconti online della Società Geologica, Geosciences, Remote sensing)

Reviewer activity

- Geomorphology;
- Geografia Fisica e Dinamica Quaternaria;

- CATENA;
- Natural Hazards and Earth System Sciences;
- Earth Surface Processes and Landforms;
- Climatic change;
- Landslides;
- Engineering geology;
- European Journal of Remote Sensing;
- Applied geomatics;
- Geosciences.

Invited talks Author and co-author of more than 90 original scientific papers, 79 of which are indexed in Scopus on engineering geological and geomorphological applications. Organized and convened numerous sessions in the frame of national and international conferences. Invited talks in national (2) and international conferences (3)

Grants

- 2002 Travel Fellowship for Young Scientists, International Association of Geomorphologists IAG "for participating at the BGRG course for PhD students", Windsor, UK.
- 2003 Travel Fellowship for Young Scientists, International Association of Geomorphologists IAG "to present a paper at the IAG International conference in Mexico City, Mexico".
- 2003 Grant for Young Scientists, French Mountain Institute "to participate in the workshop "Clim Alp' Holocene climate in the Alps: toward a common framework?" held within the program Climate variability in Mountainous regions, Aix-Les-Bains, France.
- University of Bologna mobility grant "to foster the collaboration with the University of British Columbia UBC, Vancouver, Canada".
- 2013 Grant for Study Visits for Academics from Deutscher Akademischer Austauschdienst (DAAD) "to strengthen the collaboration with RUB Bochum, Germany".
- University of Bologna mobility grant "to foster the collaboration with the University of British Columbia UBC, Vancouver, Canada".
- Best Paper award al 2014 Geosciences and Information Technologies GIT meeting (Sezione della Società Geologica Italiana), Montefalco, 2014.
- 2002 Travel Fellowship for Young Scientists, International Association of Geomorphologists IAG "for participating at the BGRG course for PhD students", Windsor, UK.
- 2003 Travel Fellowship for Young Scientists, International Association of Geomorphologists IAG "to present a paper at the IAG International conference in Mexico City, Mexico".
- 2003 Grant for Young Scientists, French Mountain Institute "to participate in the workshop "Clim Alp' Holocene climate in the Alps: toward a common framework?" held within the program Climate variability in Mountainous regions, Aix-Les-Bains, France.
- University of Bologna mobility grant "to foster the collaboration with the University of British Columbia UBC, Vancouver, Canada".
- 2013 Grant for Study Visits for Academics from Deutscher Akademischer Austauschdienst (DAAD) "to strengthen the collaboration with RUB Bochum, Germany".

- University of Bologna mobility grant “to foster the collaboration with the University of British Columbia UBC, Vancouver, Canada”.

International Scientific Organizations International Association of Engineering Geology and the Environment IAEG, former member of the Italian section Executive Committee

Professional Visits 2023 and 2024 Visiting Scientist, Tsukuba University, Japan, January-February.
2014 Visiting Scientist, Simon Fraser University, Department of Earth Sciences, Vancouver, British Columbia, Canada. July and August 2014.
2013 Visiting Scientist, Rühr Universität Bochum, Lehrstuhl für Grundbau, Boden und Felsmechanik, Germany. June 2014
2010 Visiting Scientist, University of British Columbia UBC, Department of Earth, Ocean and Atmospheric Sciences, Vancouver, British Columbia, Canada. July and August 2010.
2007 Visiting Post-Doc researcher, Bauhaus-Universität Weimar, Grundbau, Germany. June 2007.
2002 Visiting PhD Student, Durham University, Department of Geography, Durham, UK. June 2002.

Teaching Professor of Engineering Geology for the undergraduate course in environmental engineering (3 ECTS) and civil engineering (2 ECTS) and of Engineering Geology M (6 ECTS) for the master's degree at the University of Bologna. Supervisor and co-supervisor of more than 20 graduation and master theses.
2010. European and Canadian Summer Schools and Field Courses 2010 in the frame of geoNatHaz Enhancing International Earth Science Competence In Natural Hazards Research.
2010. Master class for Latin American engineers “Design of river engineering works and structural/non-structural measures for the prevention of hydro-geological disasters” sponsored by IILA - Italo-Latin American Institute, through the Italian Department of Foreign Affairs.

ADDITIONAL INFORMATION

Publications and congresses Author and co-author of more than 100 original scientific papers on engineering geological and geomorphological applications.
Has participated as speaker, organized and convened numerous sessions in the frame of national and international conferences.
Total number of publications indexed in Scopus 93
Total number of citations 1462
H index (Scopus) 22

Some relevant publications:

1. Borgatti L., Corsini A., Barbieri M., Sartini G., Truffelli G., Caputo G. & Puglisi C., 2006. Active large-scale slow moving landslides in weak rock masses: a case study from the Northern Apennines (Italy). Landslides, 3(2), 115-124.
2. Borgatti L. & Soldati. M., 2010. Landslides as a geomorphological proxy for climate change: A record from the Dolomites (northern Italy). Geomorphology. vol. 120, pp. 56 - 64.
3. Cervi F., Berti M., Borgatti L., Ronchetti F., Manenti F. & Corsini A., 2010. Comparing predictive capability of statistic and deterministic methods for landslide susceptibility mapping: a case study in the Northern Apennines (Reggio Emilia Province, Italy). Landslides, 7, 433-444.

4. Marcato G., Mantovani M., Pasuto A., Zabuski L. & Borgatti L., 2012. Monitoring, numerical modelling and hazard mitigation of the Moscardo landslide (Eastern Italian Alps). Engineering Geology, 128, 95-107.
5. Schädler W., Borgatti L., Corsini A., Meier J., Ronchetti F. & Schanz T., 2015. Geomechanical assessment of the Corvara earthflow through numerical modelling and inverse analysis. Landslides, 12 (3), pp. 495-510.
6. Spreafico M.C., Francioni M., Cervi F., Stead D., Bitelli G., Ghirotti M., Girelli V.A., Lucente C.C., Tini M.A. & Borgatti L 2016. Back analysis of the 2014 san leo landslide using combined terrestrial laser scanning and 3D distinct element modelling. Rock Mechanics and Rock Engineering, 49 (6), pp. 2235-2251.
7. Spreafico M.C., Cervi F., Francioni M., Stead D. & Borgatti L., 2017. An investigation into the development of topplin at the edge of fractured rock plateaux using a numerical modelling approach. Geomorphology, 288, pp. 83-98.
8. Spreafico M.C., Wolter A., Picotti V., Borgatti L., Mangeney A. & Ghirotti M., 2018. Forensic investigations of the Cima Salti Landslide, northern Italy, using runout simulations. Geomorphology, 318, pp. 172-186.
9. Bossi G., Borgatti L., Gottardi G., Marcato, G. 2019. Quantification of the uncertainty in the modelling of unstable slopes displaying marked soil heterogeneity. Landslides,16(12), pp. 2409–2420.
10. Titti, G., Borgatti, L., Zou, Q., Cui, P., Pasuto, A. Landslide susceptibility in the Belt and Road Countries: continental step of a multi-scale approach. Environmental Earth Sciences, 2021, 80(18), 630.
11. Titti, G., van Westen, C., Borgatti, L., Pasuto, A., Lombardo, L. When enough is really enough? On the minimum number of landslides to build reliable susceptibility models. Geosciences (Switzerland), 2021, 11(11), 469
12. Titti, G., Sarretta, A., Lombardo, L., ...Pasuto, A., Borgatti, L., 2022. Mapping Susceptibility With Open-Source Tools: New Plugin for QGIS. Frontiers in Earth Science, 10, 842425.

Bologna, 20th November 2024

Lisa BORGATTI