

PERSONAL INFORMATION

Bellanova Jessica

Consiglio Nazionale delle Ricerche (CNR) – Istituto di Metodologie per l'Analisi Ambientale (IMAA), C. da S. Loja, 85050 Tito (PZ) (Italia)

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Current Position: Researcher at National Research Council - Institute of Methodologies for Environmental Analysis (CNR-IMAA) in Tito (PZ)

RESEARCH INTERESTS

Summary

My research interests concern the study, application and integration of electrical and electromagnetic methods (Electrical Resistivity Tomography, Self-Potential, Induced Polarization, GPR, EM methods, etc.) for the geophysical monitoring of areas of high environmental, volcanic and seismic hazard. I have been involved in numerous national and international projects aiming on environmental and natural hazards.

I have published scientific papers in ISI and non-ISI journals on various topics in applied geophysics.

Bibliometric Indicators

SCOPUS: h-index 11, documents 24
WOS: h-index 12, documents 23
Google Scholar: h-index 14, i10-index 17

WORK EXPERIENCE

From 01/02/2022 to today

Researcher, Permanent Position

CNR - IMAA

Research topics are related to SSD GEO/11 and SSD GEO/10 concerning the application of geophysical techniques, including ERT and GPR, for the geophysical monitoring of areas with high environmental, seismic and volcanic hazard and the application and integration of these non – invasive techniques to urban geology, seismic microzonation, palaeoseismology and hydrogeology.

From 02/05/2013 to 31/01/2022

Researcher Fellowship

CNR-IMAA

Development and application of geophysical prospecting techniques for geophysical monitoring of areas with high environmental, seismic and volcanic hazard.

- ❖ Acquisition and analysis of geoelectromagnetic and seismic data in areas affected by natural and induced seismicity ;
- ❖ Geo-electromagnetic and geochemical-mineralogical investigations for the study of areas of high seismic and hydrogeological risk

The research activity took place within the framework of the Research Projects: SIR: "INSIEME - Induced Seismicity in Italy: Estimation, Monitoring and sEismic risk mitigation" and "OT4CLIMA – Tecnologie OT innovative per lo studio degli impatti del Cambiamento climatico sull'ambiente

From 01/07/2012 to 31/01/2013

Professional collaboration contract

CNR-IMAA

- ❖ " Geological surveys in areas with a high hydrogeological risk and creation and organisation of a database on a GIS platform of geological, geomorphological and geophysical data on landslide areas in the Southern Apennines"

EDUCATION AND TRAINING

2005

Degree in Geological Sciences

University of Bari "Aldo Moro" (Italy)

Experimental thesis: Geochemical and Microbiological Monitoring along the Basento River Basin.

2011 PhD in Earth Science

University of Bari "Aldo Moro" (Italy)

Experimental thesis: "Role of clay minerals in the transport of inorganic pollutants in sediments".

PERSONAL SKILLS

Mother tongue(s)

Italian

Other language(s)

English

COMPREHENSION		SPEAKING		WRITTEN PRODUCTION
Listening	Reading	Interaction	Oral production	
B1	B2	B1	B1	B2

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user

Common European Framework of Reference for Languages

NATIONAL AND
INTERNATIONAL Project
(as principal investigator)

From September 2023 to –
September 2025

Project "NEW integrated approach for seismic protection and valorisation of heritAGE buildings on historical soil deposits" (NEW AGE) - PRIN 2022 - 2022EZ4C9N_PE8-M.I.U.R. -P.R.I.N. Research projects of national interest . Role: Rresponsible for geoelectrical survey- CNR - IMAA

From July 2022 to December 024

Scientific Collaboration Agreement between CNR IGAG e CNR IMAA for the implementation of activities support to the Regional Department of Civil Protection of the Sicilian Region for the prevention and reduction of seismic risk within the framework of the Regional Seismic Microzonation Plan (ex Deliberazione Giunta Regionale 20 marzo 2017, n. 138) for the realisation of Seismic Microzonation (MS) studies under the national programme for the prevention of seismic risk (ex art. 11 Legge 77/2009). Role: Scientific Responsible: IMAA - CNR;

NATIONAL AND
INTERNATIONAL Project
(as project participant)

November 2022 – April 2025

ITINERIS: "Italian Integrated Environmental Research Infrastructures System". The primary objective of the project is to establish the italian integrated system of the Research Infrastructures in the environmental scientific domain, facilitating observation and study of processes in the atmosphere, marine domain, terrestrial biosphere, and geosphere.

March 2022 – February 2026

IRPAC: Infrastruttura tecnologica e di ricerca per lo studio del passato umano, la conservazione e gestione del patrimonio culturale". An Infrastructural Upgrading Project for creating a multidisciplinary and multisensor advanced laboratory for the monitoring of the cultural heritage and civil infrastructures.

February 2022 – to February 2023

MitiGO: "Mitigazione dei rischi naturali per la sicurezza e la mobilità nelle aree montane del Mezzogiorno" The project proposes hydrogeological and seismic risk mitigation solutions for road connections and strategic structures in mountainous urban areas affected by landslides and earthquakes, lack of services, mobility difficulties and depopulation phenomena

2021

Scientific Collaboration Agreement between CNR-IGAG and CNR-IMAA for the investigation of Active and Capable Faults reported by seismic microzonation studies carried out in the municipal area of Norcia, affected by the seismic events that occurred starting from 24 August 2016 "(Prot. CNR 0000421/2021 of 03/18/2021)".

2015 - 2021

"ERTAFROST:" Electrical Resistivity Tomography surveys to characterize Arctic permafrost", Founded by CNR-IMAA, RIS-ID 10307, (<http://www.researchinsvalbard.no/project/7811>).

2015 - 2019

INSIEME: "INDuced Seismicity in Italy: Estimation, Monitoring and sEismic risk mitigation"

2019

Agreement for the realization of Geophysical Surveys with the Geoelectric method in the context of Level 3 Seismic Microzonation in the Municipality of Sulmona (AQ) between the Abruzzo Region – Dep. of Territorial Government and Environmental Policies - Civil Protection Risks Prevention Service and CNR-IMAA.

2014 - 2019

"CLARA - CCloud pLatform and smart underground imaging for natural Risk Assessment" (MIUR "Smart Cities and Communities and Social Innovation

2014

Operational agreement between the CNR-IMAA and CNR-IGAG, as part of the DPC-CNR/IGAG Project "Territory management in prevention and emergency: applications of Seismic Microzonation"

- 2014 Seismic Microzation Study of Fivizzano (MS) funded by the Tuscany Region - Seismic Prevention - Technical Office of the Civil Engineers - Seismic Prevention, with the collaboration of the National Civil Protection Department and the University of Pisa.
- 2013 - 2014 FP7 European Project "ELITE: Elicit to learn Crucial Post-Crisis Lesson" GA nr. 312497.
- 2011-2012 Agreement project with the Province of Potenza: "Assessment of the combined hydrogeological risk (landslides and floods) and the relative degree of exposure of the road network of the Province of Potenza" – Univ. of Basilicata - Dept. of Environmental Engineering and Physics (DIFA) - CNR-IMAA - Program agreement between the Basilicata Region and the Province of Potenza signed on 1 December 2009 - Rep. N. 11124 - Regional Council Resolution of 28.7.2009, n. 1438 - Resolution of the Provincial Council of 17.9.2009, n. 93.

FURTHER INFORMATION

Research monographs and chapters in collective volumes

Baglione et al., (2019). Level Three Seismic Microzonation: the example of Fivizzano (Massa-Carrara Province, Italy). CNR Edition, Roma. https://doi.org/10.32053/MICROZONAZIONE_FIVIZZANO. ISBN printed version: 978 88 8080 334 8 – digital version: 978 88 8080 335 5.

D'Intinosante et al. (2019). Level three seismic microzonation: the example of Fivizzano (MS), English Section, 142–157]. CNR Edition, Roma. https://doi.org/10.32053/MICROZONAZIONE_FIVIZZANO. ISBN printed version: 978 88 8080 334 8 – digital version: 978 88 8080 335 5.

Evaluation of research results

Reviewer of papers for international journals: Water, Air & Soil Pollution, Arabian Journal of Geosciences, Sustainable Civil Infrastructures.

ATTACHMENT

List of the top publications in the main research field (in the last ten years)

Personal data

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV

Date: 15/01/2025

Signature:

Jessica Bellanova

List of the top publications in the main research field (in the last ten years)

1. Rizzo E., Caputo R., Petronio L., Giampaolo V., Capozzoli L., De Martino G., Piscitelli S., **Bellanova J.**, Rapti D., Baradello L., Affatato A., Lapenna V. (2024). Deep geophysical investigations (DERT and Seismic Reflection) to unravel the Ferrara urban area geology. *GEOMATICS, NATURAL HAZARDS AND RISK*, vol. 15, no. 1, 2423748, <https://doi.org/10.1080/19475705.2024.2423748>
2. Calamita G., Gallipoli M.R., Gueguen E., Sinisi R., Summa V., Vignola L., Stabile T.A., **Bellanova J.**, Piscitelli S., Perrone A. (2023). Integrated geophysical and geological surveys reveal new details of the large Montescaglioso (southern Italy) landslide of December 2013. *Engineering Geology*, 313, 106984.
3. Bentivenga M., Gizzi F.T., Palladino G., Piccarreta M., Potenza M.R., Perrone A., **Bellanova J.**, Calamita G., Piscitelli S. (2022). Multisource and Multilevel Investigations on a Historical Landslide: The 1907 Servigliano Earth Flow in Montemurro (Basilicata, Southern Italy). *LAND*, vol. 11, p. 1-24, ISSN: 2073-445X, doi: 10.3390/land11030408.
4. Perrone A., Canora F., Calamita G., **Bellanova J.**, Serlenga V., Panebianco S., Tragni N., Piscitelli S., Vignola L., Doglioni A., Simeone V., Sdao F., Lapenna V. (2021). A multidisciplinary approach for landslide residual risk assessment: the Pomarico landslide (Basilicata Region, Southern Italy) case study. *LANDSLIDES*, vol. 18, p. 353-365, ISSN: 1612-510X, doi: 10.1007/s10346-020-01526-z.
5. Bentivenga M., **Bellanova J.**, Calamita G., Capece A., Cavalcante F., Gueguen E., Guglielmi P., Murgante B., Palladino G., Perrone A., Saganèiti L., Piscitelli S. (2021). Geomorphological and geophysical surveys with InSAR analysis applied to the Picerno earth flow (southern Apennines, Italy). *LANDSLIDES*, vol. 18, p. 471-483, ISSN: 1612-510X, doi: 10.1007/s10346-020-01499-z.
6. Moscatelli M., Vignaroli G., Pagliaroli A., Razzano R., Avale A., Gaudiosi I., Giallini S., Mancini M., Simionato M., Sirianni P., Sottili G., **Bellanova J.**, Calamita G., Perrone A., Piscitelli S., Lanzo G. (2021). Physical stratigraphy and geotechnical properties controlling the local seismic response in explosive volcanic settings: the Stracciaccappa maar (central Italy). *BULLETIN OF ENGINEERING GEOLOGY AND THE ENVIRONMENT*, vol. 80, p. 179-199, ISSN: 1435-9529, doi: <https://doi.org/10.1007/s10064-020-01925-5>.
7. **Bellanova J.**, Calamita G., Catapano I., Ciucci A., Cornacchia C., Gennarelli G., Giocoli A., Fisangher F., Ludeno G., Morelli G., Perrone A., Piscitelli S., Soldovieri F., Lapenna V. (2020). GPR and ERT Investigations in Urban Areas: the Case-Study of Matera (Southern Italy). *REMOTE SENSING*, vol. 12, p. 1-17, ISSN: 2072-4292, doi: 10.3390/rs12111879.
8. Calamita G., Serlenga V., Stabile T.A., Gallipoli M.R., **Bellanova J.**, Bonano M., Casu F., Vignola L., Piscitelli S., Perrone A. (2019). An integrated geophysical approach for urban underground characterization: the Avigliano town (southern Italy) case study. *GEOMATICS, NATURAL HAZARDS & RISK*, vol. 10, p. 412-432, ISSN: 1947-5705, doi: 10.1080/19475705.2018.1526220.
9. Rizzo E., Piscitelli S., **Bellanova J.**, Capozzoli L., De Martino G., Guerriero M., Morelli G., Fischanger F., Caputo R., Lapenna V. (2019). Deep Geoelectric Tomographies (DERT) for the geological-hydrogeological study of Ferrara. *BOLLETTINO DI GEOFISICA TEORICA ED APPLICATA*, vol. 60, p. S100-S105, ISSN: 2239-5695.
10. Vignola L., Gallipoli M.R., Chiauzzi L., Stabile T.A., Piscitelli S., Santarsiero G., **Bellanova J.**, Calamita G., Perrone A. (2019). Geophysical and engineering analysis of different earthquake damage in Pescara del Tronto and Vezzano (Arquata del Tronto Municipality) following the 24th August 2016 central Italy earthquake. *BULLETIN OF EARTHQUAKE ENGINEERING*, vol. 17, p. 5471-5493, ISSN: 1570-761X, doi: 10.1007/s10518-018-0450-5.
11. Soldovieri F., Piscitelli S., Perrone A., **Bellanova J.**, Calamita G., Catapano I., Gennarelli G., Ludeno G., Morelli G., Catanzariti G., Lauriti E., Graziano G. (2019). Geophysical measurements carried out in Piazza San Giovanni in the Villa dell'Unità d'Italia in Matera. *BOLLETTINO DI GEOFISICA TEORICA ED APPLICATA*, vol. 60, p. S39-S51, ISSN: 2239-5695.
12. Piscitelli S., Soldovieri F., Morelli G., Perrone A., **Bellanova J.**, Calamita G., Catapano I., Gennarelli G., Ludeno G., Catanzariti G., Lauriti E., Graziano G. (2019). Integration of geophysical measurements in Piazza Duomo in the Sassi di Matera. *BOLLETTINO DI GEOFISICA TEORICA ED APPLICATA*, vol. 60, p. s52-S60, ISSN: 2239-5695.
13. Giocoli A., Hailemikael S., Bellanova J., Calamita G., Perrone A., Piscitelli S. (2019). Site and building characterization of the Orvieto Cathedral (Umbria, Central Italy) by electrical resistivity tomography and single-station ambient vibration measurements. *ENGINEERING GEOLOGY*, vol. 260, ISSN: 0013-7952, doi: 10.1016/j.enggeo.2019.105195.
14. **Bellanova J.**, Calamita G., Giocoli A., Luongo R., Macchiato M., Perrone A., Uhlemann S., Piscitelli S. (2018). Electrical resistivity imaging for the characterization of the Montaguto landslide (southern Italy). *ENGINEERING GEOLOGY*, vol. 243, p. 272-281, ISSN: 0013-7952, doi: 10.1016/j.enggeo.2018.07.014.
15. Galli P., Galderisi A., Ilardo I., Piscitelli S., Scionti V., **Bellanova J.**, Calzoni F. (2018). Holocene paleoseismology of the Norcia fault system (Central Italy). *TECTONOPHYSICS*, vol. 745, p. 154-169, ISSN: 0040-1951, doi: 10.1016/j.tecto.2018.08.008.
16. Galli P., Giaccio B., Messina P., Peronace E., Amato V., Naso G., Nomade S., Pereira A., Piscitelli S., **Bellanova J.**, Billi A., Blamart D., Galderisi A., Giocoli A., Stabile T., Thil F. (2017). Middle to Late Pleistocene activity of the northern Matese fault system (southern Apennines, Italy). *TECTONOPHYSICS*, vol. 699, p. 61-81, ISSN: 0040-1951, doi: 10.1016/j.tecto.2017.01.007.
17. Masi A., Santarsiero G., Chiauzzi L., Gallipoli M.R., Piscitelli S., Vignola L., **Bellanova J.**, Calamita G., Perrone A., Lizza C., Grimaz S. (2016). Different damage observed in the villages of Pescara del Tronto and Vezzano after the M6.0 August 24, 2016 Central Italy earthquake and site effects analysis. *ANNALS OF GEOPHYSICS*, vol. 59, ISSN: 1593-5213, doi: 10.4401/AG-7271.
18. Giocoli A., Quadrio B., **Bellanova J.**, Lapenna V., Piscitelli S. (2014). Electrical resistivity tomography for studying liquefaction induced by the May 2012 Emilia-Romagna earthquake (Mw=6.1, northern Italy). *NATURAL HAZARDS AND EARTH SYSTEM SCIENCES*, vol. 14, p. 731-737, ISSN: 1561-8633, doi: 10.5194/nhess-14-731-2014.
19. Galli PAC., Giocoli A., Peronace E., Piscitelli S., Quadrio B., **Bellanova J.** (2014). Integrated near surface geophysics across the active Mount Marzano Fault System (southern Italy): seismogenic hints. *INTERNATIONAL JOURNAL OF EARTH SCIENCES*, vol. 103, p. 315-325, ISSN: 1437-3254, doi: 10.1007/s00531-013-0944-y.