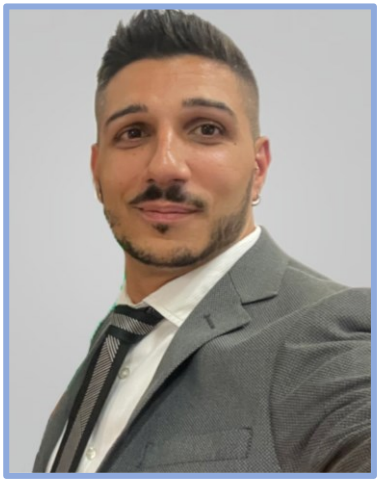
SIMONE BELLO, Ph.D.

Post-Doc Researcher



University "G. d'Annunzio Chieti – Pescara" – via dei Vestini 31, 66100 Chieti – Italy

Date of birth: September 13th, 1990 – Citizenship: Italian

Languages: Italian (native language) – English (advanced) – French (basic)

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CRUST member https://www.crust.unich.it/

Publications (On Scopus): **16** – h-index: **10** – citations: **363** – ID:57201214924

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Remote Pilot Certificate ITA-RP-016241

Curriculum online: https://www.crust.unich.it/sites/st17/files/cv_simone_bello.pdf

«Don't tell me how educated you are, tell me how much you have travelled» "Muhammed".
Albania, Croatia, Finland, France, Germany, Greece, Ireland, Italy, Malta, Montenegro, Morocco, Slovenia, Spain, Switzerland, United States (Arizona, Arkansas, California, Colorado, Delaware, Idaho, Kentucky, Louisiana, Maryland, Mississippi, Nevada, New Jersey, New Mexico, New York, Pennsylvania, Tennessee, Texas, Utah, Virginia), Turkey, United Kingdom (England, Northern Ireland, Scotland).

Contents

1. Scientific interests

My research focuses on Structural Geology, Seismotectonics, Active Tectonics, and High-Resolution Topography. I adopt a multidisciplinary approach, integrating field-based structural-geological observations (classic and modern techniques), with insights from seismology, geophysics, remote sensing and geochemistry to contribute to a comprehensive exploration of the dynamic processes shaping the Earth's crust, its deformation and evolution.

2. Academic Training and Qualifications

23/05/2023: **Abilitazione Scientifica Nazionale** (ASN) al ruolo di Professore Universitario di Seconda Fascia - *Settore 04/A2 – Geologia Strutturale, Geologia Stratigrafica, Sedimentologia e Paleontologia*. Validità fino al 23/05/2034.
(National Scientific Qualification as Associate Professor in the Italian higher education system, for the disciplinary field of 04/A2 – Structural geology, stratigraphy, sedimentology, and paleontology – Academic Recruitment Field 04/A – Earth Sciences, according to the national classification. Valid until 23/05/2034).

30 Nov 2021: Abilitazione all'esercizio della **Professione di Geologo** – Graduation to Professional Geologist (Italian legislation license to practice as geologist).

23 Jun 2021: **Ph.D.** *(cum laude)* in Earthquake & Environmental Hazards - School of Advanced Studies "G. D'Annunzio" – Via dei Vestini 31, 66100 Chieti (Italy) https://www.disputer.unich.it/eeh-phd;
Supervisor: Prof. Giusy Lavecchia; Co-supervisor: Prof. J Ramon Arrowsmith.
Title of the thesis: "*High-resolution surface faulting data analysis and interpretation of normal active fault earthquakes: case studies from the Apennines of Italy and from the Basin and Range Province of USA*."

23 Jun 2021: Ph.D. Additional Title of "**International Doctor of Philosophy"** (*cum Laude*) in Earthquake & Environmental Hazards.

09 Oct 2017: **Master's degree** in Geological Sciences & Technologies **-** full mark 110/110 *cum laude* - Department of Engineering & Geology - Università G. d'Annunzio, Chieti – Pescara (Italy) https://www.ingeo.unich.it/;
Title of the thesis: "*The Irpinia 1980 earthquake: a 3D interpretation from new field evidence and seismological data*".
Supervisor: Prof. Giusy Lavecchia; Co-supervisors: Prof. Roberto Scarpa, Prof. Francesco Brozzetti

08 Oct 2014: **Bachelor's degree** in Geological Sciences - Department of Engineering & Geology - University G. d'Annunzio, Chieti – Pescara (Italy).

3. Employment

01 Mar 2023 – present: **Research Fellow** 04/A GEO/03 with the project "High-resolution morphotectonic and structural analysis of active faults in southern Apennines for the reconstruction of geometric and kinematic quantitative models".
Affiliation: DiSPuTer - University G. d'Annunzio, Chieti – Pescara (Italy).
Financial support: DPC (Civil Protection Department, Presidency of the Council of Ministers). Funds responsible: Prof. Rita de Nardis.

01 Mar 2021 – 1 March 2023: **Research Fellow** 04/A GEO/03 with the project "High-resolution morphotectonic and structural analysis of active faults in Southern Apennines for the reconstruction of geometric and kinematic quantitative models".
Affiliation: DiSPuTer - University G. d'Annunzio, Chieti – Pescara (Italy).
Financial support: PRIN-2017 (scientific research Programs of Relevant National Interest). Funds responsible: Prof. Giusy Lavecchia.

4. Digital skills

Unmanned Aerial Vehicles data acquisition, Microsoft Office, Corel, Adobe, Move (Petex Ltd), ArcGis, QGis, Agisoft Metashape

5. Participation in/Coordination of National/International research projects

FIS-2 (Fondo Italiano per la Scienza) Under evaluation (submitted on 08/11/2023)
Title of the Project: "DEFENS: 3D gEology-constrained seismic rupture dynamic models: a new interdisciplinary strategy For Earthquake forecastiNg and reSilience"
Specific role: **Principal Investigator**
Requested funding: ***€ 1.494.440,00***

Jun 2023 – present: project in collaboration with the CNR-IGAG (Centro Nazionale delle Ricerche – Istituto di Geologia Ambientale e Geoingegneria) after a scientific collaboration agreement between DiSPuTer (University d'Annunzio) and CNR.
Title of the Project: "SEISMICAS: Studying sEISMogenic faults by structural, geochemIcal, and topographic AnalyseS".
Specific role: **Principal Investigator** (Co-Coordination with Dr. Edoardo Peronace).
*Funded: **€ 3.000,00***

Nov 2022 – present: project admitted for funding on November 9, 2022, by the USGS (United States Geological Survey) on the basis of a competitive call with peer review.
Title of the Project: "Constraining Coseismic Surface Displacement and Fault Slip from Topographic Differencing for the 1983 M6.9 Borah Peak, Idaho, Earthquake".
Specific role: **Scientific Coordinator** of the "Topographic Differencing" Work-Package.
*Funded: **$ 54.534,00***

Mar 2018 – 2023: PRIN (scientific research Programs of Relevant National Interest) project (P.I. Prof. Giusy Lavecchia).
Title of the Project: "Overtime tectonic, dynamic and rheologic control on destructive multiple seismic events - Special Italian Faults & Earthquakes: from real 4D cases to models".
Specific role: member and **WG Referent** (https://www.crust.unich.it/node/7057).
*Funded: **€ 617.552,00***

6. Teaching activities

6.1. Ph.D. Courses

2022/2024: Lecturer *(10 hours/year)*, taught at the Ph.D. course in "Geosciences" at the School of Advanced Studies G. d'Annunzio (Italy).

2021/2022: Lecturer *(10 hours/year)*, taught at the Ph.D. course in "Earthquake and Environmental Hazards" at the School of Advanced Studies G. d'Annunzio (Italy).

2020/2021: Lecturer *(10 hours/year)*, taught at the Ph.D. course in "Earthquake and Environmental Hazards" at the School of Advanced Studies G. d'Annunzio (Italy).

6.2. Bachelor's and master's degree courses

2022/2024: *30 hours/year* teaching, class of Structural Geology, Department of Engineering & Geology - University G. d'Annunzio Chieti – Pescara (Italy).

2019/2022: *30 hours/year* teaching, class of "Tectonics", Department of Engineering & Geology - University G. d'Annunzio Chieti – Pescara (Italy).

2019/2020: *20 hours* teaching, class of Geologic mapping, taught at the Department of Engineering & Geology - University G. d'Annunzio, Chieti – Pescara (Italy) by Prof. Francesco Brozzetti.

May – June 2019: field teaching assistant, tectonic structures related to the volcanic complexes of Lanzarote island (Spain) - Class of Volcanology, Department of Engineering & Geology - University G. d'Annunzio Chieti – Pescara (Italy).

2018/2019: *30 hours* teaching, class of Tectonics, Department of Engineering & Geology - University G. d'Annunzio Chieti – Pescara (Italy).

Mar 2016 – Feb 2017: teaching, class of Geologic mapping, taught at the Department of Engineering & Geology - University G. d'Annunzio Chieti – Pescara (Italy) by Prof. Francesco Brozzetti.

6.3. Students advising and theses supervision

1. Camillo de Novellis, M.S. (co-advisor with Prof. Rita de Nardis): Integrated structural-geological and geophysical analyses for the geometric-kinematic reconstruction of post-LGM deformation along the normal fault system of the Middle Aterno Valley, Abruzzo (Italy).

7. Visiting positions and research experiences abroad

22-28 Oct 2023: European Earthquake Geology Task Force (EuQuaGe) experience in Turkey. The goal was to acquire detailed field observations of the **February 2023 Turkish seismic sequence** effects on the landscape. EuQuaGe team was composed of 18 researchers from Italy, France, Portugal and Turkey.

Jan – Dec 2019: Visiting researcher, School of Earth and Space Exploration – Arizona State University (SESE-ASU); research on Basin and Range normal faulting and earthquakes.

8. Honors and Awards

2022-2023 – Present: Nominated "Subject Expert" ("Cultore della Materia" of the Italian legislation) at the Faculty of Structural Geology by the Department of Engineering & Geology - University G. d'Annunzio, Chieti – Pescara (Italy).

Jan 2023: Winner of the "Fabrizia Arduini" Award, consisting of an economic contribution of € 2,000.00, for highly qualified Ph.D theses of the 33rd and 34th cycle judged "*cum laude*" by the final Examining Committee. The award is granted by the Department of Psychological, Health and Territory Sciences (DiSPuTer) of the G. d'Annunzio University.

Jun 2021: Recognition of Laude and of the additional title of International Doctor, after the proclamation of Doctor of Philosophy in Earthquake and Environmental hazards

Jul 2019: Awarded with the second place at the BEST POSTER COMPETITION – CRUST workshop in memory of Giampaolo Pialli – Perugia 9–10 July 2019; Abstract title: "The 1983 Borah Peak earthquake (M_w 7.3, Io IX MCS) (Idaho - USA) - 3D architecture and seismotectonics".

Sep 2018: Awarded with a scholarship from the Italian Geological Society for the participation at the Joint Conference SGI-SIMP Catania 2018, for the presentation of the work: "*3d fault model of the Campania-Lucania (southern Italy) 1980 earthquake from new field evidence and seismological data*" (Bello S.*, Lavecchia G., Scarpa R., Brozzetti F., Cirillo D. & Ferrarini F.)

09 Oct 2017: Awarded for the performance of a CRUST Master's Thesis, full mark 110/110 *cum laude.*

9. Service

9.1. Outreach and University public roles held

02 Oct 2023: Participation to the XI edition of the "Settimana del Pianeta Terra" event (Earth Planet week) with the production of the documentary: "The Abruzzo Apennines between natural disasters and climate crisis", by Bello S., Brozzetti F., Cipressi G., Cirillo D. Palmucci A., Pietrolungo F., & Talone D.

22 Mar 2023 – present: member of the "Internationalization" committee at the degree course in Geological Sciences.

22 March 2023 – present: member of the " Relations with schools" committee at the degree course in Geological Sciences.

2022 – present: head of the Social Media and WEB Working Group at the degree course in Geological Sciences.

03 Mar 2021 – present: member of the educational guidance committee (commissione orientamento) for schools at the degree course in Geological Sciences.

22 Nov 2022: member of the organizing committee of the 30th anniversary of the Degree Course in Geology at the G. d'Annunzio University of Chieti.

2017 – 2021: member of the faculty board as Ph.D. student's representative for the Ph.D. Course in Earthquake and Environmental Hazards – EEH (Art. 1.2.1. - EEH Internal Regulation - https://www.disputer.unich.it/eeh-phd/eeh-internal-regulation)

2017 – 2021: Ph.D. students' representative in the Department of Psychological, Health and Territorial Sciences (DiSPUTer - https://www.disputer.unich.it)

9.2. Editorial activities

1. Editor of "Open Geosciences" journal (https://www.degruyter.com/journal/key/geo/html#editorial)
2. Academic Editor of PLOS ONE (https://journals.plos.org/plosone/static/editorial-board)

9.3. Review activity

Reviewer for: Journal of Structural Geology (#1), Tectonophysics (#2), Natural Hazards and Earth System Sciences (EGU) (#1), Frontiers in Earth Sciences (#2), Geosciences (#22), Applied Sciences (#5), Journal of Asian Earth Sciences: X (#1), Remote Sensing (#12), Minerals (#2)

10. Membership to Research Groups or Societies

1. Member of the "European earthquake Geology Task Force" (EuQuaGe)
2. CRUST – (InteRUniversity Center for 3D-SeismoTectonics) https://www.crust.unich.it/
3. Geological Society of America https://www.geosociety.org/
4. Società Geologica Italiana https://www.socgeol.it/
5. Member of the Open EMERGEO Working Group (Active during the 2016 – 2017 Seismic Sequence in Central Italy)

11. Training courses and activities

17-19 Ju 2019: Lectures on «Active faulting and topographic analysis» taught by Professor J Ramón Arrowsmith (School of Earth and Space Exploration - Arizona State University, Tempe, U.S.A.) and Professor Federica Ferrarini (University G. d'Annunzio Chieti – Pescara, Italy).

2019 Spring semester: Advanced Structural Geology (SES 598) taught by Dr. Chelsea Scott and Prof. J Ramon Arrowsmith – Arizona State University (AZ – USA).

31 Jul 2018: Acquisition certificate 24 CFU for FIT registration - credits for teaching.

11-16 Jun 2018: Advanced English Course - Academic writing and speaking - Nazareth College of Rochester (USA) - Chieti (Italy).

23-24 Apr 2018: Training course H2020 - ERC and MSCA Marie Sklodowska-Curie Actions - Scrittura di un progetto - APRE - Agenzia per la Promozione della Ricerca Europea.

Aug 2017 – Dec 2017: trainee for the digital mapping of the surface faulting produced by the Central Italy seismic sequence.

12. Collaborations

12.1. Major foreign collaborations

Prof. Arrowsmith J Ramon, Arizona State University (USA)
Prof. Faure Walker Joanna, University College London (UK)
Prof. Roberts Gerald, University College London (UK)
Prof. Scott Chelsea, Arizona State University (USA)

12.2. Major Italian collaborations

Prof. Barchi Massimiliano R., University of Perugia
Prof. Brozzetti Francesco, University G. d'Annunzio, Chieti-Pescara
Dr. Cattaneo Marco, INGV Ancona
Dr. Galli Paolo, Dipartimento Protezione Civile - Presidenza del Consiglio dei Ministri
Dr. Monachesi Giancarlo, INGV Ancona
Prof. Monaco Carmelo, University of Catania – INGV Osservatorio Etneo
Prof. de Nardis Rita, University G. d'Annunzio, Chieti-Pescara
Prof. Ferrarini Federica, University G. d'Annunzio, Chieti-Pescara
Prof. Lavecchia Giusy, University G. d'Annunzio, Chieti-Pescara
Prof. Orecchio Barbara, University of Messina
Dr. Peronace Edoardo, CNR
Prof. Presti Debora, University of Messina
Prof. Scarpa Roberto, University "E.R. Caianiello", Salerno
Prof. Stoppa Francesco, University G. d'Annunzio, Chieti-Pescara

13. National and International Conferences and Workshops

13.1. Organization

EGU-2024 General Assembly (14-19 Apr 2024, Vienna, Austria)

Role: Co-convener

Session Title (Session S41): "*Integrated multidisciplinary approaches applied to seismotectonic studies"* – Conveners: F. Carboni, N. Menegoni, **S. Bello**, M. Ercoli

SIMP, SGI, SOGEI, AIV Joint Congress 2023 – "The Geoscience paradigm Resources, Risk and future perspectives" (19-21 Sept 2023, Potenza, Italy)

Role: Convener

Session Title (Session S41): "*Data and Questions on the deformation history of the southern Apennines of Italy: from long-term tectonics to seismogenic faulting*" – Conveners: F. Brozzetti, **S. Bello**, C. Monaco, B.Orecchio, L. Valoroso

Fieldtrip: MUSE 4D ITINERANT WORKSHOP (12-16 Jul 2022, Southern Apennines)

Role: Main Leader

Title: "*A geological tour across some of the most destructive southern Apennines's earthquakes (Italy) from Campania-Lucania to Calabria*". https://www.crust.unich.it/node/7110

Participating institutions: CRUST; Università G. d'Annunzio Chieti-Pescara; Università di Catania; INGV, Rome; INGV, Osservatorio Etneo - Sezione di Catania; Università di Napoli Federico II; Università degli Studi di Urbino Carlo Bo; Università di Messina; Università degli Studi di Perugia.

13.2. Participation

(*= speaker; ***= invited speaker)

SIMP, SGI, SOGEI, AIV Joint Congress (19-21 Sept 2023, Potenza, Italy)

- Andrenacci C., **Bello S.**, Barbano M.S.*, de Nardis R., Pirrotta C., Pietrolungo F. & Lavecchia G.
  "Revision and analysis of macroseismic data of some strong Calabria earthquakes (Italy) for seismotectonic purposes"
- Andrenacci C.*, **Bello S.**, de Nardis R., Carducci A. & Lavecchia G.
  "Evaluations and processing of kinematic classifications for the integration of seismological and geological-structural data in active tectonic contexts"
- **Bello S.***, Brozzetti F., de Nardis R., Cirillo D., Andrenacci C., Pietrolungo F. & Lavecchia G.
  "The 1857 Basilicata earthquake (M_w 7.2): is the Trans-Ridge Caggiano-Montemurro en-echelon normal fault the responsible?"
- **Bello S.**, Perna M.G.*, Consalvo A., Brozzetti F., Galli P., Cirillo D., Andrenacci C., Tangari A.C., Carducci A., Menichetti M., Lavecchia G., Stoppa F. & Rosatelli G.
  "Studying fault scarps with geochemical and topographic analyzes to understand past earthquakes: an example from the southern Apennines of Italy"
- Cirillo D.*, Cerritelli F., Agostini S., **Bello S.**, Lavecchia G. & Brozzetti F.
  "Structural-Geological Analysis through Integration of PPK-UAV Photogrammetry and Digital Field Mapping"
- De Matteo A.*, Toscani G., **Bello S.**, Lavecchia G. & Seno S.
  "The Campania-Lucania Extensional Fault System, Southern Italy: an analog modeling perspective"
- Ferranti L.*, Akimbekova A., Carboni F., Bacchiani A., Ercoli M., Diaferia G., Valoroso L., **Bello S.**, Brozzetti F. & Toscani G.
  "Crustal structure and last 15 years instrumental seismicity distribution in the Marzano-Irpinia area"
- Ferranti L.*, Akimbekova A., Carboni F., Bacchiani A., Ercoli M., Diaferia G., Valoroso L., **Bello S.**, Brozzetti F. & Toscani G.
  "Structural architecture and tectonic evolution of the west-central Campania-Lucania arc (Southern Apennines, Italy): constraints from seismic reflection profiles, well data and structural-geologic analysis"
- Lavecchia G.*, **Bello S.**, Andrenacci C., Cirillo D., Pietrolungo F., Faure Walker J., Sgambato C., Talone D., Menichetti M., Monaco C., Gambino S., De Guidi G., Barreca G., Carnemolla F., Giuffrida S., Ferranti L., Carboni F., Valoroso L., de Nardis R., Roberts G. & Brozzetti F.
  "QUaternary fault strain INdicators database (QUIN 1.0 and 2.0) – a release of more than 7000 fault/slip data with strain parameters from the Extensional Belt of Peninsular Italy"
- Palmucci A.*, Brozzetti F., Akimbekova A., **Bello S.**, Ercoli M., Pauselli C., Carboni F., Barchi M.R., Lavecchia G. & Cirillo D.
  "Extensional Quaternary faulting and basin development in the southern Campania-Lucania arc (Italy): architecture and kinematics constrained by field and seismic reflection data"
- Peronace E.*, Cirillo D., Brozzetti F., **Bello S.**, Messina P. & Galli P.
  "UAV photogrammetry for geomorphological and stratigraphic application in active tectonics perspective: The the case of the Vallone della Fornaca fan system"

MUSE 4D Workshop (23-24 May 2023, INGV, Roma, Italy):

- *Bello S.**
  "Geochemical and high-resolution topographic analyses of fault scarps to infer past earthquake events: a case study from the Lucanian Apennines"

EGU 2023 (23-28 Apr, Vienna, Austria):

- de Nardis R.*, Pandolfi C., Cattaneo M., Monachesi G., Cirillo C., Ferrarini F., **Bello S.**, Brozzetti F., & Lavecchia G.
  "Geometry and stress interaction of a complex lithospheric-scale thrust system as unveiled by background seismicity and moderate seismic sequences - the Marche-Adriatic case (eastern Central Italy)".

GNGTS 2023 (07-09 Feb, Bologna, Italy):

- **Bello S.*****
  "*The Borah Peak Earthquake and the Lost River Fault (Idaho, M_w 6.9): A Case Study for Earthquake Geology and Seismogenesis"*
- **Bello S.***, Perna M. G., Consalvo A., Brozzetti F., Galli P., Cirillo D., Andrenacci C., Tangari A. C., Carducci A., Menichetti M., Lavecchia G., Stoppa F., Rosatelli G.
  "Investigating past earthquakes with Rare Earth Elements and high-resolution topography: a multidisciplinary approach applied along the Caggiano fault (southern Apennines, Italy)"
- de Nardis R., Pietrolungo F., Pandolfi C., **Bello S.**, Talone D., Lavecchia G.
  "The 2022 compressional seismic sequence (M_w 5.5): another piece of information to the 3D seismotectonic fault model of the Marche-Adriatic offshore area (Italy)"

TSG - Tectonics Studies Group AGM 2023 (10-12 Jan, Leeds, United Kingdom):

- **Bello S.***
  "Morphotectonic anatomy and segmentation pattern of the 1983, M_w 6.9 Borah Peak earthquake (Idaho, USA)"
- Pietrolungo F.*, Lavecchia G., Pandolfi C., **Bello S.**, Talone D., & de Nardis R.
  "The November 9, 2022, compressional seismic sequence (M_w 5.5)- another piece of information to the 3D seismotectonic fault model of the coastal Marche-Adriatic offshore area (Italy)"

GeoEarth-2022 (22-23 Sept, Barcelona, Spain):

- **Bello S.*****
  "*QUIN 1.0: a QUaternary fault strain INdicators database from Italy*."

SGI-SIMP 2022 (19-21 Sep, Turin, Italy):

- Adinolfi G.M.*, De Matteis R., **Bello S.**, Garofalo A. & Lavecchia G.
  "*A recent, low-magnitude seismic sequence in the epicentral area of Ms 6.9, 1980 Irpinia earthquake"*
- Andrenacci C.*, **Bello S.**, Barbano M.S., Carducci A., Pirrotta C., Pietrolungo F. & Lavecchia G.
  "*A reappraisal of macroseismic data with statistical analysis for the strongest Calabrian earthquakes of the XVIII to XX centuries (southern Italy)"*
- Cirillo D.*, Totaro C., Lavecchia G., Orecchio B., de Nardis R., Presti D., Ferrarini F., **Bello S.** & Brozzetti F.
  "*3D fault model building and seismic potential in the Pollino area (Calabria–Basilicata, southern Italy)"*
- Lavecchia G., **Bello S.***, Andrenacci C., Cirillo D., Ferrarini F., De Nardis R. & Brozzetti F.
  "QUaternary fault strain INdicators database - QUIN 1.0 - first release from the Apennines of central Italy"

GNGTS 2022 (27-29 Jun, Trieste, Italy):

- **Bello S.***, Lavecchia G., Andrenacci C., Ercoli M., Cirillo D., Carboni F., Barchi M. R. & Brozzetti F.
  "*Unveiling trans-ridge en-echelon fault patterns possibly responsible for the 1857 Basilicata earthquake (Mw 7.2)"*
- Lavecchia G., **Bello S.***, Andrenacci C., Cirillo D., Ferrarini F., De Nardis R. & Brozzetti F.
  "A regional collection of fault/slip data and associated strain parameters for the intra-Apennine extensional belt of central Italy"

BeGeo Scientists 2021 (7-10 Oct, Naples, Italy):

- **Bello S.***, Andrenacci C., Cirillo D., Scott C.P.
  "*Segmentation pattern and morphotectonic anatomy of the 1983, Mw 6.9 Borah Peak earthquake (Idaho, USA)*".

SGI 2021 (16 Sept, "Geology without borders"):

- **Bello S.***, Andrenacci C., Cirillo D., Scott C.P., Brozzetti F., Arrowsmith J.R. & Lavecchia G.
  "*High detail fault segmentation: deep insight into the anatomy of the 1983 Borah Peak earthquake rupture zone (Mw 6.9, Idaho, USA)*".

INGV, 23 Nov 2020:

- **Bello S.*** -** invited speaker at the "TERREMOTO80: scienza, memoria, testimonianza" Webinar – Istituto Nazionale di Geofisica e Vulcanologia (INGV) with the video "*Il terremoto Campano-Lucano del 1980* - il video dei risultati di una ricerca dell'Università di Chieti, a cura di Simone Bello" (http://terremoto80.ingv.it/terremoto-e-scienza/).

Webinar, 23 Nov 2020:

- **Bello S.*** -** invited speaker at the "*FATE PRESTO: 40 anni dopo*" – Salerno.

GSA – Geological Society of America – 2020 (26-30 Oct, Connects Online):

- **Bello S.***, Scott C., Ferrarini F., Lavecchia G., Arrowsmith J R.
  "*Dense surface faulting data for the study of coseismic and long-term extensional rupture: the case of the Lost River Fault (Idaho, USA)*"

GSA – Geological Society of America 2019 (22-25 Sep, Phoenix, Arizona, USA):

- **Bello S.***, Lavecchia G., Arrowsmith J R., De Nardis R., Brozzetti F., Cirillo D., Ferrarini F.
  "*A new 3D interpretation of the Irpinia 1980 earthquake (M_w 6.9, Italy) fault system: 40 years later*".

SCEC (Southern California Earthquake Center) 2019 (7-11 Sep, Palm Springs, California, USA):

- **Bello S.***, Arrowsmith J R, Scott C., Lavecchia G., Scott T., Cirillo D., De Nardis R., Ferrarini F.
  "*The 1983 Borah Peak earthquake (M_w 6.9, Io IX MCS) (Idaho - USA) - 3D architecture and seismotectonics from field observations and high-resolution topography integrated with seismological data along the Lost River fault (LRF)*".

CRUST workshop 2019 (in memory of Giampaolo Pialli) - (9-10 Jul, Perugia, Italy):

- **Bello S.***, Arrowsmith J R., Scott C., Scott T.
  "*The 1983 Borah Peak earthquake (M_w 7.3, Io IX MCS) (Idaho - USA) - 3D architecture and seismotectonics*".

SGI-SIMP 2018 (12-14 Sep, Catania, Italy):

- **Bello S.***, Lavecchia G., Scarpa R., Brozzetti F., Cirillo D. & Ferrarini F.
  "*3d fault model of the Campania-Lucania (southern Italy) 1980 earthquake from new field evidence and seismological data*".
- Scarpa R.*, Lavecchia G., Di Lieto B., Romano P., **Bello S.** & Brozzetti F.
  "*Rupture mechanism of the Campania-Lucania (southern Italy) 1980 earthquake inferred from seismological and geodetic data*".
- Brozzetti F.*, Cirillo D., Boncio P., Ferrarini F., de Nardis R., Testa A., **Bello S.** & Lavecchia G.
  "*Field image of a foreshock-mainshock pair: the Amatrice (M_w 6.0) - Norcia (M_w 6.5) 2016 earthquakes case (central Italy)*".

EGU 2017 (23-28 Apr, Vienna, Austria):

- D. Pantosti & the Open EMERGEO Working Group Team (2017)
  "*The Surface faulting produced by the 30 October 2016 Mw 6.5 Central Italy earthquake: the Open EMERGEO Working Group experience*". Geophysical Research Abstracts Vol. 19, EGU2017-14161-2, 2017 EGU General Assembly 2017.

SGI 2016 (7-9 Sep, Naples, Italy):

- Lavecchia G.*, Brozzetti F., De Nardis R., Cirillo D., Ferrarini F., Boncio P., **Bello S.**, Minafra A., Vicentini N.
  "*The Accumoli 2016 Earthquake: Coseismic surface fractures and seismotectonic framework*".

14. Publications

14.1 Refereed publications

(*= corresponding author)

2024 Lavecchia G., **Bello S.*** (co-first author), Andrenacci A., Cirillo D., Pietrolungo F., Talone D., Ferrarini F., de Nardis R., Galli P., Faure Walker J., Sgambato C., Menichetti M., Monaco C., Gambino S., De Guidi G., Barreca G., Carnemolla F., Brighenti F., Giuffrida F., Carboni F., Ferranti L., Valoroso L., Toscani G., Barchi M.R., Roberts G. & Brozzetti F. "QUIN 2.0 - new release of the Quaternary fault strain INdicators database from the Southern Apennines of Italy" **Sci. Data,** in review

2024 Ferranti L.*, Carboni F., Akimbekova A., Ercoli M., **Bello S.**, Brozzetti F., Bacchiani A., Toscani G. "Structural architecture and tectonic evolution of the Campania-Lucania arc (Southern Apennines, Italy): constraints from seismic reflection profiles, well data and structural-geologic analysis" **Tectonophysics,** in review

2023 Lavecchia G., Pietrolungo F., **Bello S.**, Talone D., Pandolfi C., Andrenacci C., Carducci A., de Nardis R.* "Slowly-deforming megathrusts within the continental lithosphere: a case from Italy" **GSA Today,** 34, 4-10, https://doi.org/10.1130/GSATG573A.1

2023 **Bello S.***, Perna M.G., Consalvo A., Brozzetti F., Galli P., Cirillo D., Andrenacci C., Tangari A.C., Carducci A., Menichetti M., Lavecchia G., Stoppa F., Rosatelli G. "Coupling rare earth elements analyses and high-resolution topography along fault scarps to investigate past earthquakes: a case study from southern Apennines (Italy)" **Geosphere,** https://doi.org/10.1130/GES02627.1

2023 Andrenacci C., **Bello S.***, Barbano M.S., de Nardis R., Pirrotta C., Pietrolungo F., Lavecchia G. "Reappraisal and analysis of macroseismic data for seismotectonic purposes: the strong earthquakes of southern Calabria (Italy)" **Geosciences**, 13, 212. https://doi.org/10.3390/geosciences13070212

2023 Falcone F., Di Valerio E., La Salvia V., Rosatelli G.*, Perna M. G., **Bello S.**, Francis R.E., Stoppa F. "Geo-archaeology, archaeometry, and history of a seismic-endangered historical site in central Apennines (Italy)" **Heritage Science**, 11:68. https://doi.org/10.1186/s40494-023-00906-7

2023 Rosatelli G.*, Castorina F., Consalvo A., Brozzetti F., Ciavardelli D., Perna M. G., Bell K., **Bello S.**, Stoppa F. "Elemental abundances and isotopic composition of Italian limestones: glimpses into the evolution of the Tethys" **Journal of Asian Earth Sciences: X**. https://doi.org/10.1016/j.jaesx.2023.100136

2022 de Nardis R.*, Pandolfi C., Cattaneo M., Monachesi G., Cirillo D., Ferrarini F., **Bello S.**, Brozzetti F., Lavecchia G. "Lithospheric double shear zone unveiled by microseismicity in a region of slow deformation" **Scientific Reports** 12, 21066. https://doi.org/10.1038/s41598-022-24903-1

2022 Cirillo D.*, Cerritelli F., Agostini S., **Bello S.**, Lavecchia G., Brozzetti F. "Post-Processing Kinematic (PPK)–Structure-from-Motion (SfM) with Unmanned Aerial Vehicle (UAV) Photogrammetry and Digital Field Mapping for Structural Geological Analysis" **ISPRS Int. J. Geo-Inf.** 11, 437. https://doi.org/10.3390/ijgi11080437

2022 **Bello S**.*, Lavecchia G., Andrenacci C., Ercoli M., Cirillo D., Carboni F., Barchi M. R., Brozzetti F. "Complex trans-ridge normal faults controlling large earthquakes" **Scientific Reports** 12, 10676 https://doi.org/10.1038/s41598-022-14406-4

2022 Lavecchia G., **Bello S**.*, Andrenacci C., Cirillo D., Ferrarini F., Vicentini N., de Nardis R., Roberts G., Brozzetti F. "QUaternary fault strain INdicators database - QUIN 1.0 - first release from the Apennines of central Italy," **Scientific Data** 9, 204. https://doi.org/10.1038/s41597-022-01311-8

2022 **Bello S**.*, Andrenacci C., Cirillo D., Scott C.P., Brozzetti F., Arrowsmith J R., Lavecchia G. "High-detail fault segmentation: Deep insight into the anatomy of the 1983 Borah Peak earthquake rupture zone (M_w 6.9, Idaho, USA)", **Lithosphere** 2022 (1): 8100224. https://doi.org/10.2113/2022/8100224

2022 Cirillo D.*, Totaro C., Lavecchia G., Orecchio B., de Nardis R., Presti D., Ferrarini F., **Bello S.**, Brozzetti F.* "Structural complexities and tectonic barriers controlling recent seismic activity in the Pollino area (Calabria-Lucania, southern Italy) - constraints from stress inversion and 3D fault model building", **Solid Earth**. Vol. 13, No. 1, 205 – 228. https://doi.org/10.5194/se-13-205-2022

2021 **Bello S**.*, Scott C.P., Ferrarini F., Brozzetti F., Scott T., Cirillo D. de Nardis R., Arrowsmith J R., Lavecchia G. "High-resolution surface faulting from the 1983 Idaho Lost River Fault Mw 6.9 earthquake and previous events", **Scientific Data** 8, 68. https://doi.org/10.1038/s41597-021-00838-6

2021 **Bello S.***, de Nardis R., Scarpa R., Brozzetti F., Cirillo D., Ferrarini F., di Lieto B., Arrowsmith J R., Lavecchia G. Fault Pattern and Seismotectonic Style of the Campania – Lucania 1980 Earthquake (Mw 6.9, Southern Italy): New Multidisciplinary Constraints. **Front. Earth Sci.** 8:608063. https://doi.org/10.3389/feart.2020.608063

2018 Villani F.*… **Bello S.**, et al. A database of the coseismic effects following the 30 October 2016 Norcia earthquake in Central Italy. **Scientific Data** 5:180049. https://doi.org/10.1038/sdata.2018.49

2018 Civico R.* … **Bello S.**, et al. Surface ruptures following the 30 October 2016 Mw 6.5 Norcia earthquake, central Italy. **Journal of Maps**, 14, 2, 151–160. https://doi.org/1010.1080/17445647.2018.1441756

14.2. Book Chapters

(*= corresponding author)

2021 Lavecchia G., de Nardis R.*, Ferrarini F., Cirillo D., **Bello S.**, Brozzetti F. "Regional seismotectonic zonation of hydrocarbon fields in active thrust belts: a case study from Italy" in Building knowledge for geohazard assessment and management in the Caucasus and other orogenic regions. Editors F. L. Bonali, F. Pasquaré Mariotto, N. Tsereteli (the Netherlands: Springer). https://doi.org/10.1007/978-94-024-2046-3

14.3. Data and Tools publications

(* = corresponding author)

2023 Lavecchia G., **Bello S.***, Cirillo D., Andrenacci C., Cirillo D., Pietrolungo F., Talone D., Ferrarini F., de Nardis R, Galli P., Faure Walker J., Sgambato C., Menichetti M., Monaco C., Gambino S., De Guidi G., Barreca G., Carnemolla F., Brighenti F., Giuffrida S., Carboni F., Ferranti L., Valoroso L., Toscani G., Barchi M. R., Roberts G. & Brozzetti F. (**2023**) *QUIN 2.0 - new release of the QUaternary fault strain INdicators database from the Southern Apennines of Italy.* Zenodo. https://doi.org/10.5281/zenodo.8414734

2023 Lavecchia G., **Bello S.***, Cirillo D., Pietrolungo F., Brozzetti F. (**2023**) *Quaternary-Host Faults Database 2.0 (Southern Italy).* Zenodo. https://doi.org/10.5281/zenodo.8414480

2021 Andrenacci C., **Bello S.***, de Nardis R., & Lavecchia G. (**2021**) *FAULT-STRIATION PAIR ANALYSIS (F-SPA) Tool.* Zenodo. https://doi.org/10.5281/zenodo.5603992

2021 Lavecchia G., **Bello, S.***, Andrenacci C., Cirillo D., Ferrarini F., Vicentini N., de Nardis R. & Brozzetti F. (**2021**). *Host Faults Database of central Italy [Data set].* Zenodo. https://doi.org/10.5281/zenodo.5603004

2021 Lavecchia G., **Bello, S.***, Andrenacci C., Cirillo D., Ferrarini F., Vicentini N., de Nardis R., Brozzetti F. (**2021**). *QUaternary fault strain INdicators database: QUIN 1.0 - first release from the Apennines of central Italy.* PANGAEA, https://doi.pangaea.de/10.1594/PANGAEA.934802

2020 Scott, C., **Bello, S.***, & Ferrarini, F. (**2020**): *Matlab algorithm for systematic vertical separation measurements of tectonic fault scarps.* Zenodo. http://doi.org/10.5281/zenodo.4247586

2020 **Bello, S.***, Scott, C. P., Ferrarini, F., Brozzetti, F., Scott, T., Cirillo, D., De Nardis, R., Arrowsmith, J R., Lavecchia, G. (**2020**): *Database of vertical separation measurements along the Lost River Fault (Idaho - USA) from 1983 Mw 6.9 earthquake ruptures and Quaternary fault scarps*. Pangaea https://doi.org/10.1594/PANGAEA.921027

2020 **Bello, S.***, Scott, C. P., Ferrarini F., Brozzetti F., Scott T., Cirillo D., de Nardis R., Arrowsmith, J R., Lavecchia, G. (**2020**). *1983 coseismic ruptures and Quaternary fault scarps traces (shapefile) mapped from high-resolution topography and orthomosaics along key-areas of the Lost River Fault, Idaho, USA.* https://doi.org/10.1594/PANGAEA.921046

2020 **Bello, S.***, Scott, C. P., Ferrarini F., Brozzetti F., Scott T., Cirillo D., de Nardis R., Arrowsmith, J R., Lavecchia, G. (**2020**). *2053 vertical separation (VS) measurements and related parameters with location and geometric characteristics from the Lost River Fault, Idaho, USA.* https://doi.org/10.1594/PANGAEA.920953

2020 **Bello, S.***, Scott, C. P., Ferrarini F., Brozzetti F., Scott T., Cirillo D., de Nardis R., Arrowsmith, J R., Lavecchia, G. (**2020**). *757 traces of 1983 coseismic ruptures and Quaternary fault scarps from key-areas of the Lost River Fault (Idaho, USA) with location and geometric characteristics.* https://doi.org/10.1594/PANGAEA.920952

2020 **Bello, S.***, Scott, C. P., Ferrarini F., Brozzetti F., Scott T., Cirillo D., de Nardis R., Arrowsmith, J R., Lavecchia, G. (**2020**). *Topographic profile images from vertical separation analysis of key areas of the Lost River Fault, (Idaho, USA).* https://doi.org/10.1594/PANGAEA.921056

2020 **Bello, S.***, Scott, C. P., Ferrarini F., Brozzetti F., Scott T., Cirillo D., de Nardis R., Arrowsmith, J R., Lavecchia, G. (**2020**). *Topographic profiles (shapefile) from key areas of the Lost River Fault (Idaho, USA), used for vertical separation measurements.* https://doi.org/10.1594/PANGAEA.921054

2020 **Bello, S.***, Scott, C. P., Ferrarini F., Brozzetti F., Scott T., Cirillo D., de Nardis R., Arrowsmith, J R., Lavecchia, G. (**2020**). *Topography, rupture zone width, and cumulative vertical separation of 1983 coseismic ruptures (CoRs) and Quaternary fault scarps (Qfs) from key areas of the Lost River Fault, Idaho, USA.* https://doi.org/10.1594/PANGAEA.920949

2020 **Bello, S.***, Scott, C., Arrowsmith, R., Scott, T. (**2020**). *High-Resolution Topography along the Lost River Valley, Idaho 2019*. OpenTopography. https://doi.org/10.5069/G94M92Q1

2020 Scott, C.*, Scott, T., Arrowsmith, R., Brigham, C., **Bello, S.**, Xu, J., Ferrarini, F., Milliner, C., Donnellan, A. (**2020**). *Topography of Normal Faults in the Volcanic Tablelands, CALIFORNIA 2019*. OpenTopography. https://doi.org/10.5069/G97S7KXT

2017 Villani, F.*, Civico, R., Pizzimenti, L., Pucci, S., De Martini, P. M., Nappi, R., Open EMERGEO Working Group (**2017**): Coseismic surface geological effects following the 30 October 2016 M_w 6.5 earthquake, central Italy. PANGAEA. https://doi.org/10.1594/PANGAEA.879469

14.4. Other Contributions

2022 de Nardis R.*, Talone D., Bello S., Lavecchia G. (**2022**). Terremoto del 9 marzo 2022: Umbertide - proposta *geometria rete temporanea RAN area Valtiberina (Earthquake of 9 March 2022: Umbertide - proposed geometry of the temporary network RAN in the Valtiberina area).* Civil Protection Department (Presidency of the Council of Ministers) report.

2020 Pierce, I.*, Williams, A., Koehler, R. (**2020**). *2019 Ridgecrest, CA M6.4 Earthquake structure from motion data (off base)*. OpenTopography. https://doi.org/10.5069/G9KD1W2C (PI – Khoeler, R.; Field staff – Pierce, I., Williams, A., Chupik, C.; Additional team members – Bormann, J., Akciz, S., Scott, C., Carlson, G., **Bello, S.**).

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