



Curriculum Vitae (CV)

Jamal Dabbeek

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Summary:

I am an assistant professor and currently the coordinator of Earth Sciences and Seismic Engineering unit at An-Najah University in Palestine. I earned my Masters and PhD in Risk and Emergency Management from IUSS University in Italy. Previously, I worked with the Global Earthquake Model Foundation (GEM), where I focused on developing the seismic risk model for the Middle East region as part of the global seismic hazard and risk model development. After that, I joined the European Research Center in Earthquake Engineering (Eucentre) and contributed to various applied research projects in Europe, including the development of the first European seismic risk model (ESRM20) and operational early damage/loss assessment services. My research focuses on multi-hazard risk assessment, forecasting future risk for urban development, rapid post-disaster damage assessment, modeling the built environment using earth observation, and developing strategies for disaster risk reduction, including structural rehabilitation and disaster insurance. I have led several local projects focusing on building resilience by enhancing the understanding of natural hazards and associated risks.

1. Language Skills:

Language	Reading	Speaking	Writing
Arabic	Native		
Romanian	Native		
English	Very Good		
Italian	Fair		

2. Education

Name of institution	Degrees	Date: from - to
IUSS university, Pavia, Italy	PhD (Multi-hazard risk assessment and mitigation for the Middle East)	2016- 2019
IUSS university, Pavia, Italy	Master of Science (MSc) in Risk and Emergency Management	2015 - 2016
An-Najah National University, Nablus, Palestine	Bachelor of Science (BSc) Building Engineering	2010 - 2015

3. Employment

Ref. No.	Period	Employing organization	Country	Summary of activities
1.	2025-ongoing	Coordinator of Earth Sciences and Seismic Engineering Unit, An-Najah National University <hr/>	Palestine	-Coordinating local research studies and international projects -Lecturer, Engineering Faculty, Geomatics and Surveying Department (see section 8 for more details)
2.	2025-ongoing	Arab States Regional Coordinator, Global Earthquake Model Foundation (collaborator)	Italy	-Strengthening collaborations in the Arab region - Capacity strengthening for seismic hazard and risk knowledge
3.	2022- 2024	Lecturer, An-Najah National University	Palestine	-Lecturer, Engineering Faculty, Geomatics department -Leading several research projects
4.	2019- 2023	Seismic Risk researcher, European Centre for Training and Research in Earthquake Engineering (EUCENTRE) For references: barbara.borzi@eucentre.it ; Dr. Barbara Borzi, Head Department Risk Scenarios	Italy	Projects: ARISTOTLE, SERA, TURNKey, RISE - Testing and co-development of the European rapid earthquake impact assessment service (ARISTOTLE project) -Responsible for the implementation and validation of the European Seismic Risk Model 2020 (ESRM20) -Developing a dynamic exposure database for Europe for population, residential, commercial, and industrial assets - Map development for risk viewer web platform, drafting risk posters and technical reports (see section 8 for more details)
5.	2016-2019	Multi-hazard risk modeler, Global Earthquake Model Foundation (GEM) For references: vitor.silva@globalquakemodel.org ; Dr. Vitor Silva, Risk team coordinator	Italy	Projects: GRM18, GFDRR-DFID Challenge Funds (see section 5 for more details) -Responsible for developing the Middle East earthquake and flood risk model -Developing classification systems for multi-hazard exposure databases - Developing exposure and risk maps, drafting reports and publications - Involved in training workshops on OpenQuake software (see section 8 for more about each

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4. Publications and Conferences (*Google scholar h-index=14*)

Google Scholar profile: https://scholar.google.com/citations?user=P8_UCXAAAAAJ&hl=en

International peer-reviewed journals	Dabbeek, J. , Crowley, H., Silva, V., & Ozcebe, S. (2025). Impact of population spatiotemporal patterns on earthquake human losses. <i>International Journal of Disaster Risk Reduction</i> , 122, 105455. https://doi.org/10.1016/J.IJDRR.2025.105455
	Watson, C. S., Creed, M., Gyawali, J., Shadeed, S., Dabbeek, J. , Subedi, D. L., and Haiju, R. (2024): Earth observation informed modelling of flash floods, <i>EGUsphere</i> [preprint], https://doi.org/10.5194/egusphere-2024-2722
	Dallo I, Marti M, Valenzuela N, Crowley H, Dabbeek J , et al. (2024) The Communication Strategy for the Release of the First European Seismic Risk Model and the Updated European Seismic Hazard Model. <i>Natural Hazards and Earth System Sciences</i> 24 (1): 291–307. https://doi.org/10.5194/NHESS-24-291-2024 .
	Yepes-Estrada C, Calderon A, Costa C, Crowley H, Dabbeek J , et al (2023). Global Building Exposure Model for Earthquake Risk Assessment. https://doi.org/10.1177/87552930231194048
	Crowley H, Dabbeek J , Despotaki V, Rodrigues D, Martins L, Silva V, Romão X, Pereira N, et al (2022) European Seismic Risk Model – Insights and Emerging Research Topics. 161–178. https://doi.org/10.1007/978-3-031-15104-0_10
	Dabbeek J , Crowley H, Silva V, Weatherill G, Paul N, Nievas CI (2021) Impact of exposure spatial resolution on seismic loss estimates in regional portfolios. <i>Bull Earthq Eng</i> 2021 1–23. https://doi.org/10.1007/S10518-021-01194-X
	Silva V, Brzev S, Scawthorn C, Yepes C, Dabbeek J , Crowley H (2022). A Building Classification System for Multi-hazard Risk Assessment. <i>Int J Disaster Risk Sci</i> . https://doi.org/10.1007/s13753-022-00400-x
	Crowley H, Despotaki V, Silva V, Dabbeek J , et al (2021) Model of seismic design lateral force levels for the existing reinforced concrete European building stock. <i>Bull Earthq Eng</i> 19:2839–2865. https://doi.org/10.1007/s10518-021-01083-3
	Silva V, Amo-Oduro D, Calderon A, Costa C, Dabbeek J , Despotaki V, Martins L, Pagani M, et al (2020) Development of a global seismic risk model. <i>Earthquake Spectra</i> . https://doi.org/10.1177/8755293019899953
	2020 Outstanding Paper Award , Earthquake Engineering Research Institute (EERI)
	Dabbeek J, Silva V, Galasso C & Smith A (2020). Probabilistic earthquake and flood loss assessment in the Middle East. <i>International Journal of Disaster Risk Reduction</i> , 49, 101662. https://doi.org/10.1016/j.ijdr.2020.101662
	Dabbeek J , Silva V (2019) Modeling the residential building stock in the Middle East for multi-hazard risk assessment. <i>Natural Hazards</i> . https://doi.org/10.1007/s11069-019-03842-7
Conference Proceedings	Murnane R, Allegri G, Bushi A, Dabbeek J , et al (2019) Data schemas for multiple hazards, exposure and vulnerability, <i>Disaster Prevention and Management: An International Journal</i> . https://doi.org/10.1108/DPM-09-2019-0293
	Dabbeek J , Crowley H, Silva V, Ozcebe S (2024). Enhancing Spatial and Temporal Resolution of European Exposure Models. 18th World Conference on Earthquake Engineering (WCEE2024). Milan, Italy.
	Dabbeek J , Crowley H, Dabbeek J (2024). Probabilistic Seismic Risk Assessment of Communities and Critical Infrastructure in Palestine. 18th World Conference on Earthquake Engineering (WCEE2024). Milan, Italy.
	Dabbeek J , Crowley H, Silva V, Weatherill G, Paul N, Nievas CI (2022) Impact of exposure spatial resolution on seismic loss estimates in regional portfolios. <i>The Third</i>

	European Conference on Earthquake Engineering and Seismology. 4-9 September, Bucharest, Romania
	Silva V, Dabbeek J (2022) Earthquake Losses in the Middle East: Potential Strategies to Improve Insurance Affordability. The Third European Conference on Earthquake Engineering and Seismology. 4-9 September, Bucharest, Romania
	Dabbeek J , Silva V (2019). Modelling the residential building stock in the Middle-East for multi-hazard risk assessment. 2nd International Conference on Natural Hazards & Infrastructure (ICONHIC2019). 23-26 June, Chania, Greece.
	Dabbeek J , Silva V (2019). Implementing a probabilistic multi-hazard risk model: earthquakes and floods in the Middle East. 2nd International Conference on Natural Hazards & Infrastructure (ICONHIC2019). 23-26 June, Chania, Greece.
	Monteiro R, Ceresa P, Cerchiello V, Dabbeek J , Meo A, Borzi B, 2016. Towards integrated seismic risk assessment in Palestine – application to the city of Nablus. VII ECCOMAS Congress
	Grigoratos I, Dabbeek J , Barbara Borzi, Vania Cerchiello, Paola Ceresa, Ricardo Monteiro 2016. Development of a fragility and exposure model for Palestine – application to the city of Nablus. WMCAUS conference
Selected courses	<p>Attended courses on 1) Near real-time natural disaster loss estimation 2) Assessment and Retrofit Strategies for Reinforced Concrete Buildings 3) Drought analysis, forecasting and risk assessment 4) Flood Risk 5) Environmental Risk 6) Social Vulnerability and Disaster Resilience 7) Remote Sensing, Crowdsourcing and Telecommunications for Risk Management and Loss Estimation 8) Risk and Emergency Management Legislation 9) Weather Related Risks</p> <p><u>(IUSS university, Understanding and Managing Extremes (UME) School, Risk and Emergency management curriculum), Pavia, Italy</u></p>

5. Academic service

Reviewed several international journals on the topic of natural disasters:

- International Journal for Disaster Risk Reduction
- Bulletin of Earthquake Engineering
- Water
- Earthquake Spectra

6. Awards and other special accomplishments

- Panellist for the 6th UNDRR Arab Regional Platform. Title: Urban Lab: Innovative Solutions to Enhance Urban Resilience. 2025
- Panellist for the 12th World Urban Forum (WUF12). Title: Tomorrows Cities. 2024
- Invited presentation by the Technical Committee on Disaster Risk Management of the World Federation of Engineering Organizations (WFEO), International webinar (May 2024). Title: Creating and implementing a decision support environment for risk-sensitive, pro-poor urban planning and development of tomorrow's cities
- Received, as part of a research group, the 2020 Outstanding Paper Award from the Earthquake Engineering Research Institute (EERI)
- Invited presentation to the British Society for Earthquake and Civil Engineering Dynamics (SECED), Seminar (March 2021). Title: Seismic Risk Assessment: What Are We Missing?
- Panelist for the World Bank Understanding Risk Forum Conference (UR 2020). Title: The Risk Data Library Project: Developing an Open Standard for Risk Data

7. Computer skills

Over the past five years, my work has focused on conducting hazard and risk analyses. I have used Python in my projects for developing tools, post-processing big data, spatial analysis and data visualisation, together with GitHub/GitLab for co-development, version control and data sharing. This list includes the most important software I have worked with:

- Programming: Python, R
- Version control: GIT
- Seismic hazard and risk analysis: Open-Quake engine
- Spatial analysis and mapping: ArcGIS Pro, QGIS, Python, Generic Mapping Tools (GMT)
- Structural analysis and design: SAP, ETAB
- Environmental and Architectural analysis: Ecotect, DiaLux, Revit Architectural, AutoCAD, Adobe Photoshop
- Project management: Primavera

8. Detailed description of the projects and activities conducted

Number	Projects
1	<p>Name of assignment or project: Envisioning a safe, inclusive Gaza: embedding risk and climate adaptation considerations into post-conflict reconstruction plans</p> <p>Budget: 20K GBP</p> <p>Year: April-July/2025</p> <p>Location: Palestine</p> <p>Client: UCL Knowledge Exchange and Innovation Fund</p> <hr/> <p>This project aims to integrate risk reduction and climate adaptation into efforts to accelerate the reconstruction of Gaza and the rebuilding of livelihoods. The ongoing humanitarian crisis in Gaza is among the most dire in recent memory, displacing thousands and causing extensive damage to physical, social, and environmental infrastructure. As the world watches and waits for an end to hostilities, local and international institutions are already mobilising to gather data, update urban plans, and design financial strategies that can be rapidly deployed when reconstruction becomes feasible. Central to this initiative is the need to harness existing knowledge and incorporate local visions for a post-conflict future, where communities can rebuild and thrive, protected from natural hazards and climate change.</p> <p>Position held: Local lead (Palestine)</p> <p>For references: Thaisa.comelli@ucl.ac.uk ; Dr. Thaisa Comelli</p>
2	<p>Name of assignment or project: Tomorrow's Cities</p> <p>Budget: 150K GBP</p> <p>Year: 2023-2024</p> <p>Location: Global</p> <p>Client: UKRI</p> <hr/> <p>Main project features: The Tomorrow's Cities Decision Support Environment (TCDSE) is the</p>

	<p>Hub's flagship disaster risk reduction framework to support inclusive, multi-hazard, risk-informed planning and decision-making in expanding cities. Aimed at reducing risk in future urban developments, the TCDSE uses a collaborative and co-creation approach with the involvement of local stakeholders, giving voice not only to the planning authorities, municipalities, the government and the private sector, but also to the communities who will live in these future cities</p> <p>Position held: City lead (Nablus)</p> <p>Activities performed: Coordinating and leading work packages: Future visioning, Future scenarios, Computational models, Risk agreement</p> <p>For references: mark.pelling@kcl.ac.uk; Prof. Mark Pelling, Director of Tomorrow's Cities</p>
3	<p>Name of assignment or project: ARISTOTLE-eENHSP</p> <p>Year: 2022-2023</p> <p>Location: Europe/Global</p> <p>Client: European Emergency Response Coordination Centre (ERCC)</p> <hr/> <p>Main project features: long-term operational, research, and cooperation project financed by the Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO). ARISTOTLE-eENHSP aims to continue strengthening the monitoring and analysis functions of the Emergency Response Coordination Centre (ERCC) and its Situational Awareness Sector (SAS) by delivering unique multi-hazard advice service at global level and on a 24/7 operational basis.</p> <p>Position held: Earthquake hazard group member</p> <p>Activities performed:</p> <p>A) involved in the development of the 24/7 rapid earthquake impact assessment service B) Testing the European prototype service C) Providing exposure models to other hazard groups (Tsunami, Volcano, Flood, etc.) needed for impact assessment</p> <p>For references: barbara.borzi@eucentre.it; Dr. Barbara Borzi</p>
4	<p>Name of assignment or project: Integrating Resilience in Local Governance in West Bank and Gaza (WB&G)</p> <p>Budget: 370K euros</p> <p>Year: 2021-2023</p> <p>Location: West Bank and Gaza</p> <p>Client: Municipal Development and Lending Fund (MDLF), World Bank</p> <hr/> <p>Main project features: lay the foundation for integrating resilience in local governance through the production of technical knowledge, information, and guidelines and the conduct of the corresponding institutional capacity development</p> <p>Position held: Leading Palestine's national multi-hazard risk assessment</p> <p>Activities performed:</p> <p>A) Conduct a Multi-Hazard Risk Assessment and Mapping. B) Development of Guidelines on Local Resilience Planning. C) Formulation of Resilience Plans for Pilot Local Governments D) Capacity building of the National Disaster Risk Management Council (NDRMC)</p>

5	<p>Name of assignment or project: Seismology and Earthquake Engineering Research Infrastructure Alliance for Europe (SERA)</p> <p>Budget: 11 million euros</p> <p>Year: 2017 - 2021</p> <p>Location: Europe-wide</p> <p>Client: European Commission (Horizon 2020 Framework)</p> <hr/> <p>Main project features: Development of the 2020 Reference Seismic Hazard and Risk models for Europe</p> <p>Positions held: Seismic risk model developer</p> <p>Activities performed: i) co-development of exposure database for Europe. ii) Probabilistic seismic risk assessment using Open-Quake engine. iii) manage and maintain input models using GitHub iv) Design loss maps and prepare technical reports. v) Testing and validating model outputs</p> <p>For references: barbara.borzi@eucentre.it; Dr. Barbara Borzi</p>
6	<p>Name of assignment or project: RISE (Real-time earthquake risk reduction for a resilient Europe)</p> <p>Budget: 8 million euros</p> <p>Year: 2019 – 2021</p> <p>Location: Europe</p> <p>Client: European Commission (Horizon 2020 Framework)</p> <hr/> <p>Main project features: Advance real-time earthquake risk reduction capabilities for a resilient Europe</p> <p>Positions held: Seismic risk modeler</p> <p>Activities performed: i) develop high-resolution dynamic exposure models that account for population temporal and spatial variation, i.e., day/night and seasonal changes. ii) integrate dynamic exposure model in the European Earthquake operational forecast system</p> <p>For references: barbara.borzi@eucentre.it; Dr. Barbara Borzi, Head Department Risk Scenarios</p>
7	<p>Name of assignment or project: Towards more Earthquake-resilient Urban Societies through a Multi-sensor-based Information System enabling Earthquake Forecasting, Early Warning and Rapid Response actions (TURNkey)</p> <p>Budget: 8 million euros</p> <p>Year: 2019-2020</p> <p>Location: Europe-wide</p> <p>Client: European Commission (Horizon 2020 Framework)</p> <p>Main project features: Operational Earthquake Forecasting (OEF), also called time-dependent hazard assessment, as well as of Earthquake Early Warning (EEW), both in real-time (during an event) and in near real-time, when rapidly responding to earthquake impacts (RRE)</p> <p>Positions held: Exposure developer</p> <p>Activities performed: i) Developed high-resolution exposure models using satellite</p>

	<p>information for pilot cities in Europe ii) development of tools to disaggregate exposure information to be used for post-earthquake early damage assessment</p> <p>For references: barbara.borzi@eucentre.it; Dr. Barbara Borzi, Head Department Risk Scenarios</p>
8	<p>Name of assignment or project: The Civil Protection Knowledge Network Partnership Platform – Middle East (Heureka)</p> <p>Budget: around 18,000 euros</p> <p>Year: 2020 - Present</p> <p>Location: Middle East</p> <p>Client: European Commission (DG ECHO)</p> <p>Positions held: Researcher in Multi-hazard risk (desk study)</p> <p>Activities performed: i) reviewed disaster risks in the Middle East, including climate change risks ii) identified vulnerabilities in the region ii) built multi-hazard risk profiles for Lebanon, Jordan and Palestine iii) contributed to the assessment of the current state of civil protection mechanism in the mentioned countries</p> <p>For references: rene.kastner@stmk.gv.at Rene Kastner, Project Management</p>
9	<p>Name of assignment or project: Global Earthquake Model (GRM18)</p> <p>Budget: Millions of euros (Global initiative funded by many governments, private and UN)</p> <p>Year: 2016 - 2019</p> <p>Location: Global</p> <p>Main project features: Development of the Global Earthquake risk model</p> <p>Positions held: Multi-hazard risk modeller for the Middle East region</p> <p>Activities performed: i) Developed exposure models using earth observation, crowdsourced and census information. ii) develop/select damage function for floods and earthquakes. iii) Estimate economic losses due to earthquakes, flash and river floods iv) provided support for several workshops and training courses on using OpenQuake software</p> <p>For references: vitor.silva@globalquakemodel.org</p> <p>Dr.Vitor Silva, Risk team coordinator</p>
10	<p>Name of assignment or project: GFDRR-DFID Challenge Funds</p> <p>Year: 2017-2018</p> <p>Location: Global</p> <p>Client: The Global Facility for Disaster Reduction and Recovery (GFDRR) and DFID</p> <p>Main project features: open exposure database for multi-hazard risk assessment</p> <p>Positions held: Multi-hazard exposure expert</p> <p>Activities performed: i) Developed a simplified multi-hazard taxonomy system for buildings, ii) Integrated multi-hazard requirements in the global exposure database standards for buildings, lifelines, crops, socio-economic data</p> <p>For references: vitor.silva@globalquakemodel.org , Dr.Vitor Silva, Risk team coordinator</p>
11	<p>Name of assignment or project: SASPARM 2.0 Project</p> <p>Year: 2015-2016</p> <p>Location: Palestine</p> <p>Client: European Union (FP7-Project)</p>

	<p>Main project features: Support Action for Strengthening Palestinian-administrated Areas capabilities for seismic Risk Mitigation</p> <p>Positions held: Researcher (voluntary)</p> <p>Activities performed: i) collect exposure information for Palestine ii) collect socio-economic data for West Bank and Gaza iii) performed social vulnerability assessment at the sub-national level</p> <p>For references: barbara.borzi@eucentre.it; Dr. Barbara Borzi</p>
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Jamal Dabbeek

03/05/2025