

Maria Antonia Brovelli: CV

Family name	Given name	Title
Brovelli	Maria Antonia	Ph.D.
Academic and professional qualifications		
Full Professor of Cartography, GIS at the Politecnico di Milano (2010 - present)		
Vice Rector of Politecnico di Milano for the Como Campus (2010-2016)		
Lecturer of GIS 3 at ETH Zurich (2006-2011)		
Associate Professor at the Politecnico di Milano (1998-2010)		
Assistant Professor at the Politecnico di Milano (1994-1998)		
Researcher with the Istituto Nazionale di Geofisica e Vulcanologia (National Institute of Geophysics and Volcanology) (1992-1994)		
Ph.D. degree in Geodesy and Surveying Engineering (1991)		
M.S. degree in Physics with honours (1986)		
Other significant training and skills		
Chair of ISPRS WG IV/4 “Collaborative crowdsourced cloud mapping (C3M)”		
Chair of OSGeo (Open Source Geospatial Foundation) UN Committee		
Member of the European Space Agency Advisory Committee for Earth Observation (ACEO)		
Chair of the “Capacity Building WG” of the UN Open GIS Initiative		
Deputy-Chair of the UN-GGIM Academic Network.		
Other significant elements		
Research areas: her research interests have been various, starting from geodesy, radar-altimetry and moving later to GIS, webGIS, Citizen Science and Global Land Cover Inter-comparison and Validation. She is participating and leading research on these topics within the frameworks of both national and international projects and scientific networks. One of her main interest is in Open Source GIS, where she is playing a worldwide leading role.		
Honors and Awards		
<ul style="list-style-type: none">• Sol Katz Award 2015 by OSGeo (Open Source Geospatial Foundation).		
Funded Research Projects (last 10 years)		
<ul style="list-style-type: none">• Swiss – Italian Interreg SIMILE (Project Principal Investigator) 2019-2022• Swiss – Italian Interreg InsubriParks (Project Unit Coordinator) 2019-2022• Swiss – Italian Interreg GIOCONDA (Member) 2019-2022• Climate Change Initiative Extension (CCI+) Phase 1 - New Essential Climate Variables (NEW ECVS) - High Resolution Land Cover ECV, ESA project (Subcontractor) [2018-2021]• ISPRS Capacity Building Initiative, ISPRS (Project Principal Investigator) [2018]• GEOmatics for Bulk Information Generation, Data Assessment and Technology Awareness (URBAN GEO BIG DATA), Project of National Interest (PRIN) – id. 20159CNLW8 – Italian Ministry of Education, University and Research (Project Coordinator) [2017-2020]• GEO4D (Geodesy and Geoinformatics for Sustainable Development in Jordan), Erasmus + project, European Union (Member) [2017-2020].• giCASES (Creating a University-Enterprise Alliance for a Spatially Enabled Society), Erasmus + project, European Union (Unit Coordinator) [2016 -2018]• GEO team on Data Validation of Global Land Cover Datasets. GEO SB-02-02: Global Land Cover and User Engagement (Co-Investigator) [2016-2017]• The Paths of Regina - Cross-border paths linked to Via Regina, INTERREG project Italy-Switzerland, Regione Lombardia (Project Coordinator) [2013-2015]• On the exploitation and validation of COSMO-SkyMed interferometric SAR data for digital terrain modelling and surface deformation analysis in extensive urban areas, Agreement n. I/044/09/0 Italian Space Agency and Institute for Electromagnetic Sensing of the Environment (IREA) (Co-Investigator)		

[2012]

- HeliDEM (Helvetia Italy Digital Elevation Model), INTERREG project Italy-Switzerland, Regione Lombardia (**Co-Investigator**) [2010-2012]
- Free and open source geoservices as interoperable tools for sharing geographic data through the internet, Project of National Interest (PRIN) – Italian Ministry of Education, University and Research (**Unit project leader**) [2008-2010]
- ArcheoMedSat: planning and testing of satellite remote sensing and web GIS for the improvement of archaeological sites and monuments of the Mediterranean area, between East and West, Fund for investment in basic research (FIRB) – Italian Ministry of Education, University and Research (**Unit project leader**) [2008-2010]

Selected publications in the recent years

- Brovelli, M.A., Zamboni, G. , “A New Method for the Assessment of Spatial Accuracy and Completeness of OpenStreetMap Building Footprints” *ISPRS International Journal of Geo-Information*, 7(8), 289, 2018
- Monti-Guarnieri, A.V, Brovelli, M.A., Manzoni, M., Mariotti d'Alessandro, M., Molinari M. E., Oxoli D. (2018) Coherent Change Detection for Multipass SAR. *IEEE Transactions on Geoscience and Remote Sensing*, 1-12
- Veenendaal, B., Brovelli, M. A., & Li, S. “Review of Web Mapping: Eras, Trends and Directions”, *ISPRS International Journal of Geo-Information*, 6(10), 317, 2017
- F. Pirotti, M.A. Brovelli, G. Prestifilippo, G. Zamboni, C.E. Kilsedar, M. Piragnolo, P. Hogan, “An open source virtual globe rendering engine for 3D applications: NASA World Wind”, *Open Geospatial Data, Software and Standards*, Vol. 2, No. 4, 2017
- M.A. Brovelli, M. Minghini, R. Moreno Sanchez, R. Oliveira, “Free an Open Source Software for Geospatial Applications (FOSS4G) to support Future Earth”, *International Journal of Digital Earth*, Vol. 10, No. 4, pp. 386-404, 2017
- Eom, K. S., Arias, R., Brovelli, M. A., Criloux, G., Kang, H. K., Li, K. J., “United nations open GIS initiative: The first year of activities”. *GEAM. GEOINGEGNERIA AMBIENTALE E MINERARIA*, vol. 151, p. 5-8, ISSN: 1121-9041, 2017
- C. Arias Muñoz, M.A. Brovelli, C.E. Kilsedar, R. Moreno-Sanchez, D. Oxoli, “Web mapping architectures based on open specifications and free and open source software in the water domain”, *ISPRS Annals of Photogrammetry, Remote Sensing & Spatial Information Sciences*, Vol. IV-2/W4, 2017
- C.C Fonte, J. Patriarca, M. Minghini, V. Antoniou, L. See, M.A. Brovelli, “Using OpenStreetMap to Create Land Use and Land Cover Maps: Development of an Application”. In: C. Campelo, M. Bertolotto, P. Corcoran, Volunteered Geographic Information and the Future of Geospatial Data. IGI Global, pp.113-137, 2017
- M.A. Brovelli., M. Minghini, M.E. Molinari, P. Mooney, “Towards an automated comparison of OpenStreetMap with authoritative roads datasets”, *Transactions in GIS*, Vol. 21, No.2, pp. 191-2016, 2017
- V. Antoniou, C.C. Fonte, L. See, J. Estima, J. Jokar Arsanjani, F. Lupia, M. Minghini, G. Foody, S. Fritz, “Investigating the feasibility of geo-tagged photographs as sources of land cover input data”, *ISPRS International Journal of Geo-Information*, Vol. 5, No. 5, 64, 2016
- M.A. Brovelli, M.E. Molinari, E. Hussein, J.Chen, R. Li, “The First Comprehensive Accuracy Assessment of GlobeLand30 at a National Level: Methodology and Results”, *Remote Sensing*, Vol., No. 4, pp. 4191-4212, 2015
- M. A. Brovelli, M. Minghini and G. Zamboni, “Public Participation GIS: a FOSS architecture enabling field-data collection”, *International Journal of Digital Earth*, p. 1-19, ISSN: 1753-8955, 2014.

Other Relevant Activities

- Special Issue "State-of-the-Art in Spatial Information Science" Eds. S. Li, S. Zlatanova, M.A. Brovelli, M. Sester, *ISPRS International Journal of Geo-Information*, ongoing.
- Special Issue "Geospatial Big Data and Urban Studies", Eds. M.A. Brovelli, H. M. Abdulmuttalib, P. Mooney, C. Pettit, *ISPRS International Journal of Geo-Information*, ongoing.
- Special Issue on “Web/cloud based mapping and geoinformation”, Eds. B.Veenendaal, M.A. Brovelli, S. Coetzee, P. Mooney, *ISPRS International Journal of Geo-Information*.
- Proceedings “FOSS4G 2018 – Academic Track”, Eds. M. A. Brovelli, A.H. Namangaya, *ISPRS Archives*,

Volume XLII-4/W8, 2018, pp. 1-241

- Proceedings “FOSS4G-Europe 2017 – Academic Track”, Eds. M. A. Brovelli, D. Kotzinos, N. Paparoditis, and V. Raghavan, ISPRS Archives, Volume Volume XLII-4/W2, 2017, pp. 1-178
- Proceedings “XXIII ISPRS Congress”, Commission II, Eds. L. Halounova, S. Li, V. Šafář, M. Tomková, P. Rapant, K. Brázdil, W. (John) Shi, F. Anton, Y. Liu, A. Stein, T. Cheng, C. Pettit, Q.-Q. Li, M. Sester, M. A. Mostafavi, M. Madden, X. Tong, M. A. Brovelli, K. HaeKyong, H. Kawashima, and A. Coltekin, ISPRS Archives, Volume XLI-B2, 2016, pp. 1-760.
- Proceeding “XXIII ISPRS Congress”, Commission VII, Eds. L. Halounova, F. Sunar, M. Potůčková, L. Patková, M. Yoshimura, U. Soergel, E. Ben-Dor, J. Smit, G. Bareth, J. Zhang, S. Kaasalainen, U. Sörgel, B. Osmanoglu, M. Crespi, M. Crosetto, T. Blaschke, M. A. Brovelli, and B. Zagajewski, ISPRS Archives, Volume XLI-B7, 2016, pp. 1-1006.
- Proceedings Workshop WebMGS 2015, B. Veenendaal, M. A. Brovelli, and L. Wu, ISPRS Archives, Volume XL-4/W7, 2015, pp.1-45
- Special Issue “Towards Intelligent Geoprocessing on the Web”, Eds. S. Li, S. Dragicevic, B. Veenendaal, Maria Antonia Brovelli, ISPRS Journal of Photogrammetry and Remote Sensing, Vol. 83, September 2013, pp. 138-204
- Special Issue on “Mobile Mapping for Disaster Relief”, Eds. D. Alvarez, P. Boccoardo, M.A: Brovelli, M. Madden, PE&RS, October 2013, pp. 901-973.
- Proceedings Workshop “WebMGS 2010: 1st International Workshop on Pervasive Web Mapping, Geoprocessing and Services”, Eds. M.A. Brovelli, S. Dragicevic, S. Li, B. Veenendaal, ISPRS Archives – Volume XXXVIII-4/W13, 2010, pp. 1-258.

Scientific Networks

- 2016-2020 COST Action CA15212 | Citizen Science to promote creativity, scientific literacy, and innovation throughout Europe
- 2015-2019 COST Action TD1403 | Big Data Era in Sky and Earth Observation (BIG-SKY-EARTH)
- 2016-2017 GEO team on Data Validation of Global Land Cover Datasets (within GEO SB-02-02: Global Land Cover and User Engagement).
- 2012-2016 COST Action TD1202 | Mapping and the citizen sensor
- 2012-2016 COST Action C1203 | European Network Exploring Research into Geospatial Information Crowdsourcing: software and methodologies for harnessing geographic information from the crowd (ENERGIC)

Year of birth	Country of birth	Nationality/Nationalities	
1961	Italy	Italian	
European Community Languages spoken (best first)			
Italian	English	French	
Currently working for (organisation)			Since (yr.)
Department of Civil and Environmental Engineering, Politecnico di Milano			1994