

PERSONAL INFORMATION

Maria Antonia Brovelli



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Sex F | Date of birth 01/05/1961 | Nationality Italian

WORK EXPERIENCE

Since 2011 **Vice Rector for Como Campus - Politecnico di Milano**  
 Politecnico di Milano – Como Campus: via Natta 12/14 – 22100 – Como  
 Business or sector University

Since 2010 **Full Professor at the Politecnico di Milano (Dipartimento di Ingegneria Civile e Ambientale)**  
 Politecnico di Milano – Como Campus: via Natta 12/14 – 22100 – Como  
 ▪ I currently teach Cartography, Geographic Information Systems, WebGIS and Geoservices.  
 Courses I have also taught in the past: Cartography, Geodetic Measurements, Survey, Navigation and Internet GIS.  
 Business or sector University

From 1998 to 2010 **Associate Professor at the Politecnico di Milano (Dept. of Civil and Environmental Engineering)**  
 Politecnico di Milano: Piazza Leonardo Da Vinci, 32 – 20133 – Milano  
 Business or sector University

From 1994 to 1998 **Researcher at the Politecnico di Milano (Department of Hydraulic, Environmental and Surveying Engineering - DIAR)**  
 Politecnico di Milano: Piazza Leonardo Da Vinci, 32 – 20133 – Milano  
 Business or sector University

From 1992 to 1994 **Researcher for the National Institute of Geophysics – IGeS (International Geoid Service)**  
 National Institute of Geophysics  
 Business or sector Research

From 10/02/1992 to 31/05/1994 **Temporary teacher of Physics at the State Vocational Institute for Industry and small Business “L. Settembrini”**  
 Physics at the State Vocational Institute for Industry and small Business “L. Settembrini”: via Grazia Deledda, 11 – Milano  
 Business or sector Instruction

1990 **Consultancy “Problema integrale dell’altimetria-gravimetria del Mediterraneo: preprocessamento dei dati”(Integral Problem of the Almetry-Gravimetry in the Mediterranean Sea: Data Preprocessing) – Politecnico di Milano**  
 Politecnico di Milano: Piazza Leonardo Da Vinci, 32 – 20133 – Milano  
 Business or sector University

- 1989 **Consultancy “Programma per la risoluzione del Problema dell’altimetria-gravimetria” (Software for the Solution of the Altimetry-Gravimetry Problem) – Politecnico di Milano**  
 Politecnico di Milano: Piazza Leonardo Da Vinci, 32 – 20133 – Milano  
 Business or sector University
- 1988 **Consultancy “Studio di fattibilità per l’adattamento del programma CALGE (CALcolo GENERale) in ambito cartesiano locale rigoroso” (Feasibility Study for the Adaptation of the CALGE Software CALGE to a Rigorous Local Cartesian Field – Politecnico di Milano**  
 Politecnico di Milano: Piazza Leonardo Da Vinci, 32 – 20133 – Milano  
 Business or sector University
- 1987 **Consultancy “Inquinamento atmosferico e piogge acide” (Atmospheric Pollution and Acid Rain) – Università degli Studi di Milano – Institute of Applied General Physic**  
 Università degli Studi di Milano – Institute of Applied General Physic  
 Business or sector University
- 1986 **Consultancy “Avviamento della Banca Dati sulle analisi eseguite sulle acque di falda della Provincia di Milano” (Startup of the Database for the Analyses Performed on the Groundwater of the Province of Milan) – Provincia di Milano – Ecology Department**  
 Provincia di Milano – Ecology Department  
 Business or sector Public Administration
- 1986 **Consultancy “Rete di rilevamento della qualità dell’aria” (Air Quality Survey Network) – Philips I&E Monza (Milano)**  
 Philips I&E Monza (Milano)  
 Business or sector Private
- 1983 **Temporary teacher of Mathematics at the State Vocational Institute for Industry and Small Business of Cusano Milanino (MI)**  
 State Vocational Institute for Industry and Small Business of Cusano Milanino (MI)  
 Business or sector Instruction

## EDUCATION AND TRAINING

- 1991 **Ph.D. in Geodetic and Topographic Sciences – Interuniversity Consortium Milan – Turin - Pavia**  
 Thesis title: “La stima del geoide e della superficie topografica marina da misure radaraltimetriche” (Geoid and Marine Topographic Surface Estimation by Means of Radar Altimetric Measurements)  
 Politecnico di Milano- Supervising Professor: Prof. Fernando Sansò  
 • Fields of interest during doctoral studies: Geodesy, Radar-Altmetry, Gradiometry, Statistics
- 1991 (1 month) **Danish Research Academy Fellowship**  
 Development (in collaboration with Dr. Per Knudsen) of software for the elaboration of GEOSAT ERM (Exact Repeat Mission) observations  
 • Danish Cartographic Institute

From 1987 to 1991 **Doctoral Grant**  
MURST (Ministry of University and Scientific and Technological Research)

1986 **Degree in Physics at Università Statale di Milano**  
Thesis title: “Analisi dell’acidità delle piogge nell’area di Milano in relazione a parametric ambientali e meteorologici nel period 1984-1986” (Analysis of Rain Acidity in the Area of Milan in Relation to Environmental and Meteorological Parameters in the Period 1984-1986) –Achieved Grade: 110/110 with honours  
Università Statale di Milano

1980 **High school diploma**  
Classical studies orientation – Final grade: 60/60

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C 1/2	C 1/2	C 1/2	C 1/2	C 1/2
French	B 1/2	B 1/2	B 1/2	B 1/2	B 1/2

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user  
Common European Framework of Reference for Languages

**Organisational / managerial skills** I am Currently the Vice rector for Como Campus of the Politecnico di Milano. I am also Responsible for both Italian and European research projects. Member of the Scientific Committee of the Italian Photogrammetric Society (SIFET). Co-chair of ISPRS WG IV/5 “Web and Cloud Based Geospatial Services and Applications”. GeoForAll Initiative Advisory Board Member.

**Job-related skills** Responsible for both Italian and European research projects; Consultant Responsible for Mapping, Photogrammetry, Remote Sensing and GIS for the Politecnico di Milano.

**Computer skills** User of GIS applications and Internet GIS proprietary software, free and open source on Microsoft and Linux. Office and Open Office user.

**Driving licence** B

ADDITIONAL INFORMATION

**Participation to research projects** 2013-2015 Via Regina, INTERREG project IT-CH 2007-2013. Project: “I CAMMINI DELLA REGINA”, ID 33829732, Misura 3.1, P.O. Cooperazione Transfrontaliera – Project leader – <http://www.viaregina.eu/> - Project leader.

2011-2013 Green Move, Sustainable Mobility Project of the Politecnico di Milano for Regione Lombardia - Responsible for the Geomatics area.

2010-2012 HeliDEM, INTERREG project Italy-Switzerland, Project leader: Regione Lombardia – Co-manager of the Research Unit of Politecnico di Milano.

2010-2012 web C.A.R.T.E. – Como (web Catalogo e Archivio delle Rappresentazioni del Territorio e

delle sue Evoluzioni – Como: Catalogue Service for the Web and Archive of the Territory Representations and its Evolutions ) – Sponsored by Fondazione Provinciale della Comunità Comasca Onlus – Project leader.

2012-2012 “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) - National Coordinator Ing. Lanari – IREA).

2008-2010 PRIN: Free and open source geoservices as interoperable tools for sharing geographic data through the internet – National Coordinator prof. Zatelli.

2007-2008 Centro Interregionale di Coordinamento e Documentazione per le Informazioni Territoriali (Interregional Center for the Geographic Information) “Guidelines for production of orthoimagery and DTM” – National Coordinator prof. Dequal.

2007-2008 Centro Interregionale di Coordinamento e Documentazione per le Informazioni Territoriali (Interregional Center for the Geographic Information) “Developing of Technologies for the National Spatial Data Infrastructure” – National Coordinator prof. Villa.

2006-2007 FAR – Intelligent Logistics: EASyLOG: E-Adaptive Services for LOGistics.

2005-2008 FIRB: 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 – National Coordinator prof. Manzoni – Participation as local research unit manager.

2005-2007 PRIN: the GEOPIXEL, defined geometrically and radiometrically as an entity in the territory, seen in relation to multiple scales of investigation from multi-sensory data, and addressed experimentally in thematic applications – National Coordinator prof. Dequal.

2004-2006 PRIN: Web GIS: GeoDBase sharing and system interoperability for the distribution of services in an urban area – National Coordinator prof. Galetto.

2000-2002 PRIN: Use and integrate the elaboration of data and models in a GIS 3D online environment with access to interactive navigation – National Coordinator prof. Monti.

1998-2000 PRIN: Georeferencing, integration and validation of laser scanner DSMs – National Coordinator prof. Galetto.

#### Responsibilities in Research and Consultancy Contracts

2014-2015 Comune di Como (The Municipality of Como): “Controllo di qualità in corso d’opera della realizzazione del nuovo database topografico del territorio comunale alle scale 1:1000 e 1:2000” (Quality Control Throughout the Development of a New Topographic Database of the Town Territory at 1:1000 and 1:2000 scales) - Responsible for the consulting agreement.

2014-2015 ERSAF: "Contract for the assignment of technical support to the construction of a new digital terrain model and the creation of orthophotos historical B/N of 1975 for the region" - jointly responsible for the contract with Pinto L. and Barzaghi R.

2011-2012 GAL of Lario: "Realization of the feasibility study of a technologically advanced platform, for providing innovative services designed for tourist use in open spaces" - Responsible for the consulting agreement.

2009-2010 Regione Autonoma della Sardegna Assessorato degli Enti Locali Finanze ed Urbanistica Direzione Generale della Pianificazione Urbanistica Territoriale e della Vigilanza Edilizia Servizio Informativo e Cartografico Regionale (Sardinia Autonomous Region; Finance and Urban Planning Local Authorities Council; Board of Urban Planning and Building Supervision; Regional Information and Cartographic Services): “Quality control of Orthophotos and DTM of the Sardinia Coasts”

2009 Società Villa Erba Spa: “Implementation of the geographic information system of the Villa Erba park” - Responsible for the consulting agreement.

2007-2009 Regione Autonoma della Sardegna Assessorato degli Enti Locali Finanze ed Urbanistica Direzione Generale della Pianificazione Urbanistica Territoriale e della Vigilanza Edilizia Servizio Informativo e Cartografico Regionale (Sardinia Autonomous Region; Finance and Urban Planning Local Authorities Council; Board of Urban Planning and Building Supervision; Regional Information

and Cartographic Services): “GPS Permanent Station Network project”

2006-2007 IREA-CNR (Institute for Electromagnetic Sensing of the Environment – National Research Council): Consultancy related to tests of Web Map Servers connection and harmonization in the project “Infrastructure de données spatiales entre universités et centres de recherche dans la Méditerranée occidentale ”(Interreg IIIB Medocc) - Responsible for the agreement.

2006-2008 Regione Autonoma della Sardegna Assessorato degli Enti Locali Finanze ed Urbanistica Direzione Generale della Pianificazione Urbanistica Territoriale e della Vigilanza Edilizia Servizio Informativo e Cartografico Regionale (Sardinia Autonomous Region; Finance and Urban Planning Local Authorities Council; Board of Urban Planning and Building Supervision; Regional Information and Cartographic Services): “Quality control of Orthophotos and DTM of the Sardinia Coasts” - Responsible for the agreement with Fraternali P. and Negri M.

2005-2006 Getronics: Technical-scientific Consultancy for the SITA [Information System for Environmental Conservation] Project: National Operating Program 2000 – 2006 “Security for the Development of the South of Italy”)

2005-2007 Comune di Como (the Municipality of Como): “Controllo di qualità in corso d’opera della realizzazione del nuovo database topografico del territorio comunale alle scale 1:1000 e 1:2000” (Quality Control Throughout the Development of a New Topographic Database of the Town Territory at 1:1000 and 1:2000 scales).

2004-2005 Ariadne s.r.l.: “Progettazione e realizzazione di un webGIS per la pubblicazione dei piani di bacino dell’Autorità di Bacino del Po” (Design and Realization of a Web GIS for the Publication of the Basin Plans of the Po River Basin Authority)

2004-2006 Provincia di Milano (the Province of Milan), Settore Trasporti e Viabilità (the Province of Milan, Transport Department): “Aggiornamento del web GIS – dati Concessioni Stradali; Interoperabilità per il trasferimento dati georeferiti” (WebGIS Upgrading – Road Grants Data; Interoperability for the Transfer of Georeferenced Data).

2003-2004 Provincia di Milano (the Province of Milan), Settore Trasporti e Viabilità (the Province of Milan, Transport Department): “Procedure per l’applicazione del GPS nel rilievo di dati e elaborazione di web GIS - dati Concessioni Stradali, linee di sottoservizi” (Procedures for GPS Application in Data Survey and Web GIS Development – Road Grants Data; Sub Services Lines).

2002-2003 Provincia di Milano (the Province of Milan), Settore Trasporti e Viabilità (the Province of Milan, Transport Department): “Utilizzo di strumenti GPS per il rilievo di dati della rete stradale provinciale finalizzato alla formazione del Catasto Strade” (Use of GPS Devices for the Survey of the Provincial Road Network Data Aimed at the Creation of the Road Cadastre).

2001-2003 Leonardo s.r.l. “Analisi di massima per lo sviluppo di programma applicativo per la post elaborazione di misure GPS” (Preliminary Analysis for the Development of a Software for the Post-elaboration of GPS Measurements).

1998-2001 Comune di Modena (the Municipality of Modena): “Consulenza di geomatica e cartografia numerica per il progetto ISOLA (Information System for Orientation of Local Action)” – Consultancy on Geomatics and Numeric Cartography for the ISOLA (Information System for Orientation of Local Action in the frame of Agenda 21 sustainable development) Project.

#### Recent publications 2014

M. A. Brovelli, M. Minghini and G. Zamboni, 2014, Web-based Participatory GIS with data collection on the field: a prototype architecture, *OSGEO Journal*, Volume 13. Pag. 29-33

C. Arias, A. Oggioni and M. A. Brovelli, 2014, Geospatial web services for limnological data: a case study of sensor observation service for ecological observations, *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, p. 9-14. Suzhou, China, DOI: 10.5194/isprsannals-II-4-9-2014

M. A. Brovelli, M. Minghini and G. Zamboni, 2014, Public Participation GIS: a FOSS architecture enabling field-data collection, *International Journal of Digital Earth*, p. 1-19, ISSN: 1753-8955

M. A. Brovelli, M. Minghini and G. Zamboni, 2014, Web-based Participatory GIS with data collection on the field: a prototype architecture in two and three dimensions, *Rendiconti online della Società Geologica Italiana*, p. 12-15, ISSN: 2035-8008, DOI: 10.3301/ROL.2014.03

M. Arnaboldi, M. A. Brovelli and M. Minghini, 2014, FOSS4G in education: a multi-disciplinary case study for the promotion of slow tourism, Proceedings of FOSS4G Europe 2014, p. 1-5, Bremen, Germany.

M. A. Brovelli, G. Zamboni, C. Arias and A. Bonetti, 2014, Exploring twitter georeferenced data related to flood events: an initial approach, Huerta, Schade, Granell (Eds): Connecting a Digital Europe Through Location and Place, p. 147-150, Castellon, Spain, ISBN: 978-90-816960-4-3

M. Arnaboldi, M. A. Brovelli and M. Minghini, 2014, Open source software for tourism promotion: Lake Poli School (LaPS) education project, Proceedings of the 3rd Open Source Geospatial Research & Education Symposium, p. 27-33, Espoo, Finland.

C. Arias, M. A. Brovelli and M. Giuliani, 2014, A FOSS based web geo-service architecture for data management in complex water resources contexts, Proceedings 11th International Conference on Hydroinformatics HIC 2014, p. 1-8, New York, USA.

M. A. Brovelli, M. Minghini and G. Zamboni, 2014, Three Dimensional Volunteered Geographic Information: A Prototype of a Social Virtual Globe, International Journal of 3-D Information Modeling 3 (2), p. 19-34, DOI: 10.4018/ij3dim.2014040102

M. A. Brovelli, M. Minghini, G. Zamboni, 2014, Web-based Participatory GIS with data collection on the field: a prototype architecture in two and three dimensions, Rendiconti Online della Società Geologica Italiana, Volume 30, DOI: 10.3301/ROL.2014.03

G. Remetey Fullopp, M. A. Brovelli and P. Hogan, 2014, The NASA WWEC: inspiring use of Open Source Virtual Globe Technology, GeoSpatial Today, July 2014, p. 34-39

M. A. Brovelli and G. Zamboni, 2014, Environmental Space and Time Web Analyzer. GeoSpatial Today, July 2014, p. 34-39, Proceedings of the 2014 conference on Big Data from Space (BiDS'14), ESA Centre for Earth Observation (ESRIN), Frascati, 12th-14th November 2014, ISBN: 978-92-79-43252-1, ISSN: 1831-9424, DOI: 10.2788/1823

2013 M. A. Brovelli, S. Li, S. Dragicevic and B. Veenendaal, 2013, Introductory editorial: web-based sensors and geoprocessing services, Applied Geomatics, Volume 5, p. 1-2, ISSN: 1866-928X

D. Alvarez, P. Boccardo, M. A. Brovelli, F. G. Tonolo and M. Madden, 2013, Mobile Mapping for Disaster Relief, Photogrammetric Engineering and Remote Sensing, Volume 78, p. 901-903, ISSN: 0099-1112

M. A. Brovelli, S. Li, S. Dragicevic and B. Veenendaal, 2013, Theme session "Towards Intelligent Geoprocessing on the Web", ISPRS Journal of Photogrammetry and Remote Sensing, Volume 83, p. 138-139, ISSN: 0924-2716, DOI: 10.1007/s12518-013-0102-z

L. Biagi, A. M. Manzano, F. Sansò, M. Antonovic, P. Belotti, M. A. Brovelli, S. Caldera, A. Campi, S. Campus, M. Cannata, L. Carcano, M. Cetti, M. Credali, P. Dabove, H. Damaschi, M. De Agostino, M. Gilardoni, V. Guasco, A. Lucchese, M. Molinari, M. Negretti, M. Reguzzoni, D. Sampietro, G. B. Siletto, C. Taglioretti, D. Triglione and M. G. Visconti, 2013, HELI-DEM: integrazione dei dati di altezza transalpini fra Italia e Svizzera (HELI-DEM: integration of height transalpine data between Italy and Switzerland), SIFET Special Volume 2013, p. 11-22

M. A. Brovelli, M. Minghini and G. Zamboni, 2013, Participatory GIS: Experimentations for a 3D Social Virtual Globe, International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume XL-2/W2, pp. 13-18

M. A. Brovelli, P. Hogan, M. Minghini and G. Zamboni, 2013, The power of Virtual Globes for valorising cultural heritage and enabling sustainable tourism: NASA World Wind Applications. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume XL-4/W2, pp. 115-120



- P. Belotti, L. Biagi, M. A. Brovelli, S. Campus, M. Cannata, L. Carcano, M. Cetti, M. Credali, P. Dabove, H. Damaschi, M. De Agostino, V. Guasco, A.M. Manzano, F. Sanso', G. B. Siletto and C. Taglioretti, 2013, Descrizione dei dati disponibili (description of available data), Bollettino SIFET, p. 35-44, ISSN: 1721-971X
- L. Biagi, M. A. Brovelli, L. Carcano, P. Dabove, M. De Agostino, A. Lucchese, A. M. Manzano, M. Negretti, C. Taglioretti and M.G. Visconti, 2013, Cross-validazione e validazione esterna dei DTM (Cross-validation and external validation of the DTM), Bollettino SIFET, pag. 75-106, ISSN: 1721-971X
- M. Minghini, M. A. Brovelli and G. Zamboni, 2013, WebGIS partecipativi e raccolta dati sul campo: un prototipo di architettura in due e tre dimensioni (Web-based Participatory GIS with data collection on the field: a prototype architecture in two and three dimensions), Geologi e Territorio, Volume 2, number 2013, p. 17-20
- 2012 L. Valentini, M. A. Brovelli and G. Zamboni, 2012, Multi-frame and multi-dimensional historical digital cities: The Como example, International Journal of Digital Earth, Volume 7, Issue 4, 2014, p. 336-350, DOI: 10.1080/17538947.2012.739662
- M. A. Brovelli, X. Q. Truong and G. Fenoy, 2012, Managing Satellite Precipitation Data (PERSIANN) Through Web GeoServices: A Case Study in North Vietnam, in Intelligent Systems for Crisis Management (by S. Zlatanova, R. Peters, A. Dilo and H. Scholten), Lecture Notes in Geoinformation and Cartography 2013, p. 159-170, ISBN: 978-3-642-33217-3
- M. A. Brovelli and G. Zamboni 2012, Virtual globes for 4D environmental analysis, Applied Geomatics, 4, p. 163- 172, ISSN:1866-9298, DOI: 10.1007/s12518-012-0091-3
- M. A. Brovelli and S. Lucca, 2012, Comparison of GRASS-LiDAR modules TerraScan with respect to vegetation filtering, Applied Geomatics, 4 (2), p.123-134, ISSN: 1866-9298
- L. Biagi, M. A. Brovelli and G. Zamboni, 2012, A new multi-resolution algorithm to store and transmit compressed DTM, International Society for Photogrammetry and Remote Sensing (ISPRS), Melbourne, Australia, 25 August – 1 September, ISSN: 1682-1750, DOI: 10.5194/isprsarchives-XXXIX-B4-7-2012
- M. A. Brovelli and M. Minghini, 2012, Georeferencing old maps: a polynomial-based approach for Como historical cadastres, e-Perimetron 7 (3), p. 99-110
- M. A. Brovelli, M. Minghini and G. Zamboni, 2012, Valorisation of Como historical cadastral maps through modern web geoservices, ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume I-4, XXII ISPRS Congress, p. 287-292, Melbourne, Australia, 25 August - 1 September 2012
- S. Li, S. Dragicevic, B. Veenendaal and M.A. Brovelli, 2012, Analytical geospatial web services, Geomatica, 2012, 66 (1), p. 9-12, DOI: 10.5623/cig2012-004.
- M. A. Brovelli, M. Minghini, G. Giori and M. Beretta, 2012, Web Geoservices and Ancient Cadastral Maps: The Web C.A.R.T.E. Project, Transactions in GIS, 16 (2), p. 125-142, DOI: 10.1111/j.1467-9671.2012.01311.x
- M. A. Brovelli, H. Mitsova, M. Neteler and V. Raghavan, 2012, Free and open source desktop and Web GIS solutions, Applied Geomatics, 4 (2), p. 65-66, DOI: 10.1007/s12518-012-0082-4
- 2011 M. A. Brovelli and S. Lucca, 2011, Filtering LiDAR with GRASS: overview of the method and comparisons with Terrascan, Rivista Italiana di Telerilevamento, Volume 43 (2), p. 93-105, ISSN: 1129-8596, DOI: 10.5721/ItJRS20114327

L. Biagi, M. A. Brovelli, A. Campi, M. Cannata, L. Carcano, M. Credali, M. De Agostino, A. Manzano, F. Sansò and G. Siletto, 2011, Il progetto HELI-DEM (Helvetia-Italy Digital Elevation Model): scopi e stato di attuazione (HELI-DEM project (Helvetia-Italy Digital Elevation Model): purposes and status of implementation), Bollettino della Società Italiana di Fotogrammetria e Topografia, Volume 1/2011, p. 35-51, ISSN: 1721-971X

M. A. Brovelli, G. Giori, M. Mussin and M. Negretti, 2011, Improving the Monitoring of the Status of the Environment Through Web Geo-services: The Example of Large Structures Supervision, Transactions in GIS, Volume 15 (2), p. 173-188, ISSN: 1361-1682, DOI: 10.1111/j.1467-9671.2011.01249.x

L. Biagi, M. A. Brovelli and G. Zamboni, 2011, A DTM Multiresolution Compressed Model for Efficient Data Storage and Network Transfer, International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Vol. XXXVIII-4/W25, p. 7-13, Guilin, China, 20-21 October 2011, ISSN: 1682-1750, DOI: 10.5194/isprsarchives-XXXVIII-4-W25-7-2011

M. A. Brovelli, F. Migliaccio and L. Pinto, 2011, Esperienze di ricerca relative alla Cartografia Numerica e ai Sistemi Informativi Geografici al Politecnico di Milano nel SSD ICAR06 (Research experiences related to the Numerical Cartography and Geographic Information Systems at the Politecnico di Milano in SSD ICAR06), Geomatica: le radici del futuro, p. 67-76, Pavia, 10-11 February 2011

M. A. Brovelli, L. Valentini and G. Zamboni, 2011, Multidimensional and multiframe web visualization of historical maps, 2nd ISPRS Workshop on Pervasive Web Mapping, Geoprocessing and Services (WebMGIS), p. 1-7, Vancouver, 10-12 August 2011

M. A. Brovelli, M. Minghini and L. Valentini, 2011, Web Services and Historical Cadastral Maps: the first Step in the Implementation of the Web C.A.R.T.E. System, Anne Ruas, Advances in Cartography and GIScience, Volume 2, Selection from ICC 2011, Paris, Francia, p. 147-162, Springer, ISBN: 9783642191428