CURRICULUM VITAE
IVAN MARCHESINI

INFORMAZIONI PERSONALI

Nome, Cognome	**Ivan Marchesini**
Indirizzo	**Via S. Agostino, 3b/2, 06073, Corciano (PG), Italia**
Telefono	**+39 338.7918465**
E-mail	**Ivan.marchesini@irpi.cnr.it**
Website	**http://www.irpi.cnr.it/en/staff-details/?ids=192**
Nazionalità	**Italiana**
Luogo e data di nascita	**Città della Pieve (PG), Italia, 16/03/1973**

ESPERIENZA LAVORATIVA

Luglio 2011 - attuale	
Nome e indirizzo del datore di lavoro	Istituto di Ricerca per la Protezione Idrogeologica (IRPI), Consiglio Nazionale delle Ricerche (Research Institute for Geo-Hydrological Protection, National Resarch Council). Via della Madonna Alta 126, 06128 Perugia (PG) Italia
Settore	Ricerca
Posizione	Tecnologo (fino al 2012) e Ricercatore (dal 2013)
Principali attività e responsabilità	Analisi geospaziale con GIS (Geograpic Information System) Open Source Gestione e pubblicazione di dati territoriali in accordo agli standard OGC Collaborazione allo sviluppo e gestione del Sistema di Allerta Nazionale per la previsione di Frane indotte dalla pioggia in Italia nell'ambito di un accordo con il Dipartimento della Protezione Civile Sviluppo e applicazione di modelli fisicamente basati per l'analisi della stabilità dei pendii a scala regionale Elaborazione di mappa di suscettibilià, pericolosità e rischio da frana Elaborazione di mappe di suscettibilità all'inondazione con modelli statistici Rilievi sul campo
Dicembre 2010 - 2011	
Nome e indirizzo del datore di lavoro	T4E srl - Via Girolamo Tilli, 58 - 06127 Perugia
Settore	Spin-Off company dell'University of Perugia - Transfer knowledge and methods of mathematical modelling on the management of water resources
Posizione	Socio fondatore
Principali attività e responsabilità	Sviluppo di applicazioni GIS
Luglio 2009 – Giugno 2011	
Nome e indirizzo del datore di lavoro	Istituto di Ricerca per la Protezione Idrogeologica (IRPI), Consiglio Nazionale delle Ricerche (Research Institute for Geo-Hydrological Protection, National Resarch Council). Via della Madonna Alta 126, 06128 Perugia (PG) Italia
Settore	Ricerca
Posizione	Assegnista di ricerca
Principali attività e responsabilità	Analisi geospaziale e sviluppo di applicazioni WebGIS
2006 – 2011	
Nome e indirizzo del datore di lavoro	GfosServices S.A. - Via Girolamo Tilli, 58 - 06127 Perugia
Settore	Studio associato operativo nei settori del WebMapping, GIS, Geology and Engineering

Posizione	Socio fondatore
Principali attività e responsabilità	Geologia tecnica e applicata , sviluppo di applicazioni GIS
2006 – 2010	
Nome e indirizzo del datore di lavoro	Department of and Environmental and Cell Biology (Via Elce di sotto - I-06123 Perugia) - Civil and Engineering Department (Via G. Duranti 93, 06125 Perugia)
Settore	Sviluppo di applicazioni WebMapping, GIS
Posizione	Consulente Freelance
Principali attività e responsabilità	Sviluppo di applicazioni GIS
2002-2007	
Nome e indirizzo del datore di lavoro	University of Perugia - Department of Civil and Environmental Engineering - Via G. Duranti 93, 06125 Perugia, Italia.
Settore	Ricerca
Posizione	Assegnista di ricerca
Principali attività e responsabilità	Stailità dei versanti, Dinamica fluviale, Erosione dei suoli, Analisi impatto delle cave abbandonate

ISTRUZIONE E FORMAZIONE

Ottobre 1999 – Ottobre 2002	
Nome e tipo di organizzazione che eroga la formazione	Earth Science Department, University of Perugia
Materie principali	Fluvial Dynamics GIS DataBase Management Systems
Tipo di qualifica ottenuta	Dottorato di ricerca (PhD degree) in Applied Geology, Geomorphology, Hydrogeology
Ottobre 1992 – Luglio 1999	
Nome e tipo di organizzazione che eroga la formazione	Dipartimento di Scienze della Terra, Facoltà di Scienze Matematiche, Fisiche e Naturali dell'Università degli studi di Perugia (Department of Earth Sciences, University of Studies of Perugia). Piazza Università, 06123 Perugia, Italia.
Materie principali	Geology
Tipo di qualifica ottenuta	Laurea in Scienze Geologiche (Master degree in Earth Sciences)
Livello	110/110 cum laude

ALTRE LINGUE

Autovalutazione	Comprensione				Parlato				Scritto	
Livello europeo (*)	Ascolto		Lettura		Interazione orale		Produzione orale			
Inglese	B1	Livello intermedio	B2	Livello intermedio	B2	Livello intermedio	B2	Livello intermedio	B1	Livello intermedio
Francese	A2	Livello elementare	A2	Livello elementare	A2	Livello elementare	A2	Livello elementare	A2	Livello elementare

(*) Quadro comune europeo di riferimento per le lingue

Certificazioni lingue estere	Ha conseguito certificato di lingua inglese livello : Upper-Intermediate
Esperienze all'estero	Luglio – Agosto 2003: Visiting scientist presso il "Department of Geography of the University of Sheffield-UK"- Prof. R. Ferguson

ULTERIORI INFORMAZIONI

Attività seminariale svolta (più recente e significativa)

From 2017-03-30 to 2017-04-07 *Advanced use of GIS. An open Source approach to GIS: QGIS and GRASS. Theory of hydro-morphology: Geo-hydrological tools in open source GIS environment*. Lectures hold in the contest of DIPLOMAZIA2, a multi-sectoral training program created by a convention between the CNR and the Ministry of Foreign Affairs and International Cooperation with the aim of forming 30 young graduates and officials from some countries in North Africa, the Middle East and the Balkan Region not belonging to the European Union. (5 hours)

2016-06-15 Introduzione all'uso di GRASS GIS e al trattamento di dati spazio-temporali. Workshop during the 11° convegno Nazionale del Gruppo di Geologia Informatica (GIT). (3 hours)

2015-12-15/16/17 *Strumenti e Metodi per la Gestione e l'Analisi di Informazioni Geografiche e Territoriali*. CNR IRPI, via della Madonna Alta 126, 06128, Perugia (4 hours)

2014-09-09: Milano. GRASS GIS. Workshop during the '87° Congresso della Società Geologica Italiana. (4 hours)

2014-06-18 : Montefalco (PG) *OpenGIS: QGIS e GRASS GIS*. Workshop during the 9° convegno Nazionale del Gruppo di Geologia Informatica (GIT). (2 hours)

2014-12-04 - University of Losanna (UNIL - Switzerland) - Géopolis UNIL - Mouline - 1620 - "*Open Source GIS applied to landslide susceptibility and slope stability analysis.*" (1 hour)- Seminar in Computational GISscience

2013-05-27 - University of Losanna (UNIL - Switzerland) -Faculté des géosciences et de l'environnement - Institute of Geomatics and Risk Analysis. "*Open Source software applied to landslide forecast, slope stability modeling and WPS services*" (1 hours). Seminar in Computational GISscience"

2013-06-19: Chiavenna (SO) *OpenGIS: QGIS e GRASS*. Workshop during the 8° convegno Nazionale del Gruppo di Geologia Informatica (GIT). (4 ore)

19-20, 26-27 May 2011 CNR-IRPI Perugia - "*Methods for the Remote sensing and management of geologic data*" (5 hours). Lecture for PhD students in earth science - Perugia University

2009-09-30/2009-10/01 - University of Losanna (UNIL - Switzerland) -Faculté des géosciences et de l'environnement - Institute of Geomatics and Risk Analysis. "*GIS Open Source*" (8 hours). Lecture for students of the courses "Geovisualisation and Data Analysis" e "GIS and remotesensing"

2009-03-10/11 University of Losanna (UNIL - Switzerland) -Faculté des géosciences et de l'environnement - Institute of Geomatics and Risk Analysis (8 hours). "*Introduction to GRASS GIS*"

2008 Universidad National de Salta (ARGENTINA) - Conference on "*GIS Open Source Aplicado a la Dinàmica Fluvial y Producciòn de Sedimentos*"

2008 CERI - Valmontone (Roma, Italy). Centro di Ricerca "Previsione, prevenzione e controllo dei Rischi Geologici - Research Center "Forecast, prevention and control of Geologic Risks") - Lectures on "*Elements of fluvial hydraulic*" for the student of the Master "Mitigazione del Richio Idrogeologico - Mitigation of the Geologic Risk "

2007 University of Perugia- MS in Management and tecnique of the landscape. Lecture on "*Lecture on use of GIS for slope stability analysis and quarries management*"

2003 and 2004 University of Perugia- MS in Earth Science. Lecture on "*GRASS GIS for scientific and professional applications*".

ULTERIORI INFORMAZIONI

Conoscenze informatiche

Open Source Software (Operative Systems, text editors, spreadsheet, DBMS, Web Services). Can use proprietary systems.

Operative systems: GNU-Linux (distributions: Debian, CentOS, Fedora, Ubuntu etc.)

Office suites: OpenOffice and LibreOffice, Latex, Gimp, PostgresSQL, SQLite, Mozilla Firefox, Mozilla Thunderbird, etc.

Scientific software: R, GRASS GIS, QGIS, PostGIS, GDAL,Hec-Ras

Programming: Shell (Bash), R, Python, Javascript, SQL

CMS: Drupal, Joomla. WordPress

Web and WebGIS development: Django, Apache, Apache-Tomcat, MapServer, GeoServer, GeoNetwork, OpenLayers,ExtJS, GeoExt, PMapper, PyWPS

Lettera di encomio

Ha ricevuto, da parte del DIRETTORE CNR IRPI, una lettera di encomio e ringraziamento per l'attività svolta nell'ambito dell'**emergenza sismica** che ha colpito l'Italia centrale a partire dal 24 agosto 2016.

Capacità di comunicazione

Buone capacità di comunicazione acquisite attraverso esperienza come insegnante in lingua italiana e inglese su argomenti relativi a GIS, dinamicha fluviale, gestione di database. Esperienza come relatore durante congressi scientifici (in italiano e inglese).

Comitati scientifici a congressi

IV Open Source Geospatial Research and Education Symposium (OGRS2016) – Perugia (IT), 12-14 October 2016

III Open Source Geospatial Research and Education Symposium (OGRS2014) – Helsinki (FI), 10-13 June 2014

XVI Meeting of the Italian users of GRASS GIS and GFOSS, Palermo, 2014-02-12 to 2014-02-14

II Open Source Geospatial Research and Education Symposium (OGRS2012) – Yverdon les Bains (CH), 24-26 ottobre 2012

XIII Meeting GFOSS, Trieste 15-17 febbraio 2012

XII Meeting GFOSS, Trento 9-11 febbraio 2011

XI Meeting GFOSS, Lugano 11-12 febbraio 2010

X Meeting GFOSS, Cagliari 25-27 febbraio 2009

IX Meeting di GRASS e GFOSS, Perugia 20-22 febbraio 2008

Affiliazioni

Ordine dei Geologi della Regione Umbria

ULTERIORI INFORMAZIONI

Progetti a cui ha preso parte

"STRESS - Strategies, Tools and new data for REsilient Smart Societies"
National project funded by Cariplo Foundation.
Scientific director and coordinator of CNR IRPI activities.
Design, development and implementation of the processing chain for EO data analysis, their integration with data captured with VGI techniques, the production of landslide susceptibility maps and the validation of flood hazard maps.
2017-ongoing

"ITALGAS - Experimental assessments and comparative evaluations useful for checking the compliance of the gas distribution network in selected sections / sections of Italian territory".
National project: Agreement between ITALGAS (SNAM S.p.A.) and the Department of Earth System Sciences and Technology for the Environment (DTA), of the Italian National Research Council (CNR).
Coordination of the activities at the headquarters in Perugia Institute.
In charge of: training the technical personnel responsible for the execution of the tests on samples of soil from the excavations; defining specific instructions about the procedures for the analyses, processing and compilation of the reports; working on the granulometric analyses using the procedures adopted, and processing and compiling reports; monitoring of the compliance, by the staff, of the procedures adopted ; checking the reports; transmitting the reports of the granulometric analyses.
2016-ongoing

"SARF SARDEGNA" (an acronym for Regional Warning System for Rainfall-Induced Landslides in Sardinia)
Regional Project: Agreement between the Sardinia Region and the Research Institute for Geo-Hydrological Protection (IRPI).
Responsible for validating the forecasting system.
Collaboration on the implementation of the early warning system for predicting the possible occurrence of landslides in Sardinia and for the optimization of the "machine learning" software for modeling landslide susceptibility.
2017-ongoing

"GENERALI - The economic assessment of natural disasters".
National project funded by Generali Foundation.
Responsible for optimizing "machine learning" software for modeling flood hazard on a morphometric basis for different return times and at various physiographic and national scales.
2015-ongoing

"BIOSSaNS – Biodiversity and ecosystem services in Sacred Natural Sites".
National project funded by Italian Government
Implementation of the Spatial Data Infrastructure (SDI); Geo-spatial data analysis in GIS environment; Geological, geotechnical, hydrological measurements in situ; Execution of geotechnical and hydrological tests in the laboratory
2017-ongoing

"PUGLIA - Integrated assessment of geo-hydrological disasters in theTerritory of the Apulia Region, interpretative models of phenomena and definition of rainfall thresholds for the possible occurrence of shallow landslides"
Regional project funded by the Apulia Region.
Participate in the development of:WP2 - Collection and organization of information on geo-hydrological events;WP3 - Upgrading empirical rainfall thresholds for the possible triggering rainfall in the Puglia region;WP4 - Implementation of the early warning system for predicting the possible occurrence of landslides in Puglia (SARF Puglia).
2017-ongoing

"LANDSLIP - Landslide Multi-Hazard Risk Assessment, Preparedness and Early Warning in South Asia: Integrating Meteorology, Landscape and Society "
NERC Project
Coordination of activities provided in Task 5.8. Research and technological development.
2017-ongoing

"SAFETY - Sentinel for Geohazards regional monitoring and Forecasting"
European Project
Collaboration for the following actions: Susceptibility and hazard maps; Validation of software tools and products. Dissemination activities involving Civil Protection entities.
2016-ongoing

"LAMPRE - LAndslide Modelling and tools for vulnerability assessment Preparedness and REcovery management"
European Project

Responsible of Task 7.3 “Deployment SW tools to CPAs”; Participating to WP2 “Users needs & specifications”, WP6 “Preparedeness / prevention / recovery / reconstruction”, and WP9 “Dissemination”.
Ended

“SANF” (an acronym for National Warning System for Rainfall-Induced Landslides) agreement between the Department for Civil Protection (DPC), an Office of the Prime Minister, and the Research Institute for Geo-Hydrological Protection (IRPI)
National Project funded by Department for Civil Protection (DPC), an Office of the Prime Minister
Development of the Spatial Data Infrastructure.
Ongoing

“DORIS – Advanced downstream service for the detection, mapping, monitoring and forecasting of ground deformations, including landslides and ground subsidence”
European Project
Partecipating to the development of the DORIS Spatial Data Infrastructure
Ended

“VIGOR - Valutazione del potenziale Geotermico delle regioni della Convergenza”
National Project, intesa operativa tra il Ministero dello Sviluppo Economico Dipartimento per l'Energia e il Consiglio Nazionale delle Ricerche
Developement of the infrastructure to the Data collection and management)
Ended (2011-2013)

“GIIDA - Gestione Integrata e Interoperativa di Dati Ambientali del CNR”
CNR Interdepartmental project.
National Project
Development of a Spatial Data Infrastructure
Ended

ULTERIORI INFORMAZIONI

Correlatore di tesi di laurea

2013: “*Suscettibilità da frana nell'area di Collazzone (umbria, italia centrale): applicazione di un modello distribuito fisicamente basato per scivolamenti profondi*”. Laureando: Letizia Baccarini
2008: “*Studio di carattere territoriale sull'attività estrattiva in Umbria*”. Laureando: Ilaria Core
2007: “*Metodo speditivo per a valutazione della distanza di propagazione dei fenomeni franosi: un'applicazione alla regione Umbria*”. Laureando: Roberto Pansanella
2007: “*Modellazione numerica delle colate detritiche mediante il metodo dei Volumi Finiti*”. Laureando: Francesco Damiani;
2007: “*Grass Gis e R applicati su scala regionale per la stima del volume di frana* ”. : Alessio Monni;
2006: “*Realizzazione di un database geografico delle aree in frana sul versante occidentale del colle pievese (Umbria Occidentale)*”. Laureando: Fabio Brunori;
2005: “*Ricostruzione, tramite GIS, dei rapporti tra assetto giaciturale delle formazioni geologiche e superficie topografica*”. Laureando: Annalisa Minelli;
2005: “*Il database geografico delle cave dismesse in Umbria*”. Laureando: Aurora Massoli;
2005: “*Analisi e confronti di modelli di erosione del suolo e trasporto di sedimenti tramite l'uso di sistemi G.I.S.*”. Laureando: Pierluigi de Rosa;
2004: “*Caratteri granulometrici di un alveo ghiaioso: il metodo fotografico*”. Laureando: Alessio Monni;
2004: “*Analisi storica plano-altimetrica delle variazioni morfologiche di un tratto del fiume PO*”. Laureando: Simona Serafini;
2002: “*Caratteri morfologici e dinamica evolutiva di un corso d'acqua minore dell'Italia centrale: Il torrente Virginio*”. Laureando Giacomo Schirò;
2000: “*Osservazioni geomorfologiche e analisi dei fenomeni di innesco di colate detritiche nel bacino del torrente Spina (Umbria)*”. Laureando: Riccardo Cardinali;

PUBBLICAZIONI (JOURNAL ARTICLES, BOOKS, PROCEEDINGS, PRE-PRINTS, ABSTRACTS)

Pubblicazioni su riviste internazionali indicizzate

Corrado Cencetti, Andrea Fredduzzi, Ivan Marchesini, Mara Naccini, and Paolo Tacconi. Some considerations about the simulation of breach channel erosion on landslide dams. *Computational Geosciences*, 10(2):201–219, 2006.

Ivan Marchesini, Corrado Cencetti, and Pierluigi De Rosa. A preliminary method for the evaluation of the landslides volume at a regional scale. *Geoinformatica*, 13(3):277–289, 2009.

Alessandro C Mondini, Ivan Marchesini, Mauro Rossi, Kang-Tsung Chang, Guido Pasquariello, and Fausto Guzzetti. Bayesian framework for mapping and classifying shallow landslides exploiting remote sensing and topographic data. *Geomorphology*, 201:135–147, 2013.

A Manconi, F Casu, F Ardizzone, M Bonano, M Cardinali, C De Luca, E Gueguen, I Marchesini, M Parise, C Vennari, R Lanari, F Guzzetti Brief communication: Rapid mapping of event landslides: The 3 december 2013 montescaglioso landslide (italy). *Nat. Hazards Earth Syst. Sci. Discuss*, 2:1465–1479, 2014.

I Marchesini, F Ardizzone, M Alvioli, M Rossi, and F Guzzetti. Non-susceptible landslide areas in italy and in the mediterranean region. *Natural Hazards and Earth System Sciences*, 14(8):2215–2231, 2014.

Martin Mergili, Ivan Marchesini, Markus Metz, Barbara Schneider-Muntau, Mauro Rossi, and Fausto Guzzetti. A strategy for gis-based 3d slope stability modelling over large areas. *Geoscientific Model Development.*, 7(6):2969–2982, 2014.

Martin Mergili, Ivan Marchesini, Mauro Rossi, Fausto Guzzetti, and Wolfgang Fellin. Spatially distributed three-dimensional slope stability modelling in a raster gis. *Geomorphology*, 206:178–195, 2014.

Annalisa Minelli, Ivan Marchesini, Faith E Taylor, Pierluigi De Rosa, Luca Casagrande, and Michele Cenci. An open source gis tool to quantify the visual impact of wind turbines and photovoltaic panels. *Environmental Impact Assessment Review*, 49:70–78, 2014.

P Salvati, C Bianchi, F Fiorucci, P Giostrella, I Marchesini, and F Guzzetti. Perception of flood and landslide risk in italy: a preliminary analysis. *Natural Hazards and Earth System Sciences*, 14(9):2589–2603, 2014.

Ivan Marchesini, Michele Santangelo, Fausto Guzzetti, Mauro Cardinali, and Francesco Bucci. Assessing the influence of morpho-structural setting on landslide abundance. *Georisk: Assessment and Management of Risk for Engineered Systems and Geohazards*, 9(4):261–271, 2015.

M Santangelo, I Marchesini, F Bucci, M Cardinali, F Fiorucci, and F Guzzetti. An approach to reduce mapping errors in the production of landslide inventory maps. *Nat. Hazards Earth Syst. Sci*, 15:2111–2126, 2015.

Michele Santangelo, Ivan Marchesini, Mauro Cardinali, Federica Fiorucci, Mauro Rossi, Francesco Bucci, and Fausto Guzzetti. A method for the assessment of the influence of bedding on landslide abundance and types. *Landslides*, 12(2):295–309, 2015.

Massimiliano Alvioli, Ivan Marchesini, Paola Reichenbach, Mauro Rossi, Francesca Ardizzone, Federica Fiorucci, and Fausto Guzzetti. Automatic delineation of geomorphological slope units with r. slopeunits v1. 0 and their optimization for landslide susceptibility modeling. *Geoscientific Model Development*, 9(11):3975–3991, 2016.

Marco Donnini, Francesco Frondini, Jean-Luc Probst, Anne Probst, Carlo Cardellini, Ivan Marchesini, and Fausto Guzzetti. Chemical weathering and consumption of atmospheric carbon dioxide in the alpine region. *Global and Planetary Change*, 136:65–81, 2016.

Paola Salvati, Umberto Pernice, Cinzia Bianchi, Ivan Marchesini, Federica Fiorucci, and Fausto Guzzetti. Communication strategies to address geohydrological risks: the polaris web initiative in italy. *Natural Hazards and Earth System Sciences*, 16(6):1487–1497, 2016.

Martinotti, M. E., Pisano, L., Marchesini, I., Rossi, M., Peruccacci, S., Brunetti, M. T., Melillo, M., Amoruso, G., Loiacono, P., Vennari, C., Vessia, G., Trabace, M., Parise, M., and Guzzetti, F.: Landslides, floods and sinkholes in a karst environment: the 1–6 September 2014 Gargano event, southern Italy, *Nat. Hazards Earth Syst. Sci.*, 17, 467-480, doi:10.5194/nhess-17-467-2017, 2017.

R. Schlögel, I. Marchesini, M. Alvioli, P. Reichenbach, M. Rossi, J.-P. Malet, Optimizing landslide susceptibility zonation: Effects of DEM spatial resolution and slope unit delineation on logistic regression models, *Geomorphology*, Volume 301, 2018, Pages 10-20, https://doi.org/10.1016/j.geomorph.2017.10.018.

M. Alvioli, A. C. Mondini, F. Fiorucci, M. Cardinali & I. Marchesini (2018) Topography-driven satellite imagery analysis for landslide mapping, *Geomatics, Natural Hazards and Risk*, 9:1, 544-567, DOI: 10.1080/19475705.2018.1458050

Elisabetta Napolitano, Ivan Marchesini, Paola Salvati, Marco Donnini, Cinzia Bianchi, Fausto Guzzetti, LAND-deFeND – An innovative database structure for landslides and floods and their consequences, *Journal of Environmental Management*, Volume 207, 2018, Pages 203-

218, https://doi.org/10.1016/j.jenvman.2017.11.022.

Tanyas, H., Rossi, M., Alvioli, M., van Westen, C. J., & Marchesini, I. (2019). A global slope unit-based method for the near real-time prediction of earthquake-induced landslides. Geomorphology, 327, 126-146. DOI: 10.1016/j.geomorph.2018.10.022

Santangelo, Michele, Massimiliano Alvioli, Marco Baldo, Mauro Cardinali, Daniele Giordan, Fausto Guzzetti, Ivan Marchesini, and Paola Reichenbach. "Brief communication: Remotely piloted aircraft systems for rapid emergency response: road exposure to rockfall in Villanova di Accumoli (central Italy)." Natural Hazards and Earth System Sciences 19, no. 2 (2019): 325-335. DOI: 10.5194/nhess-19-325-2019

Bornaetxea, T., Rossi, M., Marchesini, I., & Alvioli, M. (2018). Effective surveyed area and its role in statistical landslide susceptibility assessments. Natural Hazards and Earth System Sciences, 18(9), 2455-2469. DOI: 10.5194/nhess-18-2455-2018

Atti di Convegni

C Cencetti, A Fredduzzi, and I Marchesini. Evoluzione e dinamica dell'alveo del torrente chiani (umbria): problemi di rischio geologico-idraulico e di conservazione dell'ambiente fisico. *Atti del Convegno Nazionale Conservazione dell'ambiente e rischio idrogeologico (Assisi, 11-12 dicembre 2002). CNR-GNDCI, Pubbl*, (2830):108–120, 2002.

C Cencetti, A Fredduzzi, and I Marchesini. Processi di erosione negli alvei ghiaiosi dell'italia centrale. il fiume paglia (bacino del tevere). In *Atti della 8a Conferenza ASITA GEOMATICA-Standardizzazione, interoperabilità e nuove tecnologie*, pages 731–6, 2004.

C Cencetti, P De Rosa, A Fredduzzi, and I Marchesini. Analisi di stabilità dei versanti con grass-gis: un metodo preliminare. In *Atti del IX Meeting Nazionale degli Utenti di GRASS-GFOSS*, 2009.

I Marchesini, V Balducci, G Tonelli, M Rossi, and F Guzzetti. Geospatial information on landslides and floods in italy. In *Proceedings of the international symposium on geo-information for disaster management (Gi4DM), Torino, Italy. Geomatics for Crisis Management. ISPRS. ISBN*, pages 978–88, 2010.

Ivan Marchesini, Michele Santangelo, Federica Fiorucci, Mauro Cardinali, Mauro Rossi, and Fausto Guzzetti. A gis method for obtaining geologic bedding attitude. In *Proceedings of the Second World Landslide Forum*, volume 3, page 7, 2011.

Mauro Rossi, Dino Torri, Elisa Santi, Giovanni Bacaro, and Ivan Marchesini. Bio_sos modelling activities: Modelling runoff-sediment connectivity. GI_Forum 2013: Creating the GISociety – Conference ProceedingsAt: Wichmann-Verlag, Berlin, 2013.

C Cencetti, A Duranti, A Fredduzzi, and I Marchesini. Narrowing and bed incision of a cobble bed river in central italy. In *Geophysical research abstracts*, volume 6, page 03792, 2004.

Alessandro Frigeri, Ivan Marchesini, and Francesco Mirabella. Modern geological mapping: Free software and satellite positioning system. In *32rd International Geological Congress (32IGC)*, 2004.

Paola Salvati, Ivan Marchesini, Vinicio Balducci, Cinzia Bianchi, and Fausto Guzzetti. Management and publication of a continuously updated catalogue of geo-hydrological events with consequences to the population in italy. In *Proceedings of the Second World Landslide Forum-Putting Science into Pracfice, Rome*, pages 3–9, 2011.

Ivan Marchesini, Mauro Rossi, Massimiliano Alvioli, Michele Santangelo, Mauro Cardinali, Paola Reichenbach, Francesca Ardizzone, Federica Fiorucci, Vinicio Balducci, A Mondini, et al. Wps tools to support geological and geomorphological mapping. In Ertz Joost Tonini (2012) OGRS 2012 Symposium Proceedings OGRS 2012, https://infoscience.epfl.ch/record/181865/files/Ertz%20Joost%20Tonini%20(2012)%20OGRS%202012%20Symposium%20Proceedings.pdf%20pag.%20280-287

M Rossi, S Peruccacci, MT Brunetti, I Marchesini, S Luciani, F Ardizzone, V Balducci, C Bianchi, M Cardinali, F Fiorucci, et al. Sanf: National warning system for rainfall-induced landslides in italy. *Landslides and engineered slopes: protecting society through improved understanding*, 2:1895–1899, 2012.

Michele Santangelo, Ivan Marchesini, Francesco Bucci, Federica Fiorucci, Mauro Cardinali, and Fausto Guzzetti. Landslide mapping: improving accuracy and efficiency. In *Proceedings of the 7th EUREGEO Congress*, pages 12–15, 2012.

Ivan Marchesini, Michele Santangelo, Federica Fiorucci, Mauro Cardinali, Mauro Rossi, and Fausto Guzzetti. A gis method for obtaining geologic bedding attitude. In *Landslide Science and Practice*, pages 243–247. Springer Berlin Heidelberg, 2013.

Paola Salvati, Ivan Marchesini, Vinicio Balducci, Cinzia Bianchi, and Fausto Guzzetti. A new digital catalogue of harmful landslides and floods in italy. In *Landslide Science and Practice*, pages 409–414. Springer Berlin Heidelberg, 2013.

Ivan Marchesini, Martin Mergili, Mauro Rossi, Michele Santangelo, Mauro Cardinali, Francesca Ardizzone, Federica Fiorucci, Barbara Schneider-Muntau, Wolfgang Fellin, and Fausto Guzzetti. A gis approach to analysis of deep-seated slope stability in complex geology. In

Landslide Science for a Safer Geoenvironment, pages 483–489. Springer International Publishing, 2014.

Martin Mergili, Ivan Marchesini, Massimiliano Alvioli, Mauro Rossi, Michele Santangelo, Mauro Cardinali, Francesca Ardizzone, Federica Fiorucci, Barbara Schneider-Muntau, Wolfgang Fellin, et al. Gis-based deterministic analysis of deep-seated slope stability in a complex geological setting. In *Engineering Geology for Society and Territory*-Volume 2, pages 1437–1440. Springer International Publishing, 2015.

Mauro Rossi, Dino Torri, Elisa Santi, Giovanni Bacaro, Ivan Marchesini, Alessandro Cesare Mondini, and Giulia Felicioni. Slope dynamics and climatic change through indirect interactions. In *Engineering Geology for Society and Territory*-Volume 1, pages 551–555. Springer International Publishing, 2015.

Ivan Marchesini, Mauro Rossi, Paola Salvati, Marco Donnini, Simone Sterlacchini, Fausto Guzzetti (2018) Delineating flood prone areas using a statistical approach. In Marchesini I. & Pierleoni A. (Eds.) Proceedings of the *4th Open Source Geospatial Research and Education Symposium (OGRS2016)*. Perugia, 12-14 October 2016. https://doi.org/10.30437/ogrs2016_paper_28

Michele Santangelo, Ivan Marchesini, Francesco Mirabella, Francesco Bucci, Mauro Cardinali, Fausto Guzzetti (2018) From photo-geology to 3D geological models. An open source approach. In Marchesini I. & Pierleoni A. (Eds.) Proceedings of the *4th Open Source Geospatial Research and Education Symposium (OGRS2016)*. Perugia, 12-14 October 2016. https://doi.org/10.30437/ogrs2016_paper_14

Rossi M., Torri D., Santi E., Bacaro G., Marchesini I., Mondini A.C., and Felicioni G. (2015) Slope Dynamics and Climatic Change Through Indirect Interactions. In: Lollino G., Manconi A., Clague J., Shan W., Chiarle M. (eds) *Engineering Geology for Society and Territory* - Volume 1. Springer, Cham

Seccaroni, Simone; Santangelo, Michele; Marchesini, Ivan; Mondini, Alessandro C.; Cardinali, Mauro. 2018. "High Resolution Historical Topography: Getting More from Archival Aerial Photographs." Proceedings 2, no. 7: 347.S DOI : 10.3390/ecrs-2-05160

Libri e Capitoli di Libri

L Casagrande, P Cavallini, A Frigeri, A Furieri, I Marchesini, and M Neteler. Gis open source. grass gis, quantum gis e spatialite. *Dario Flaccovio Editore Srl, Palermo*, 2012.

Luca Casagrande, Corrado Cencetti, Pierluigi De Rosa, Andrea Fredduzzi, Ivan Marchesini, and Annalisa Minelli And. Progettazione di un sistema per la gestione, la catalogazione e la distribuzione di dati di tipo geografico per le Pubbliche Amministrazioni. FTI - Forum per la tecnologia dellínformazione. Franco Angeli, Milano, 2013.

Mauro Rossi, Ivan Marchesini, Gabriele Tonelli, Silvia Peruccacci, and Francesca Ardizzone, Vinicio Balducci, Cinzia Bianchi, Mauro Cardinali, Federica Fiorucci, Alessandro Cesare Mondini, Paola Reichenbach, Paola Salvati, Michele Santangelo, Fausto Guzzetti, Maria Teresa Brunetti,, Silvia Luciani. PPT-tool 2.039-1.1 Italian National Landslide Warning System, pages 358–358. 2013.

Marchesini I., Alvioli M., Rossi M. (2018) TXT-tool 3.039-1.1: Landslide-Related WPS Services. In: Sassa K., Tiwari B., Liu KF., McSaveney M., Strom A., Setiawan H. (eds) Landslide Dynamics: ISDR-ICL Landslide Interactive Teaching Tools. Springer, Cham

Mauro Rossi, Ivan Marchesini, Gabriele Tonelli, Silvia Peruccacci, Maria Teresa Brunetti, Silvia Luciani, Francesca Ardizzone, Vinicio Balducci, Cinzia Bianchi, Mauro Cardinali, Federica Fiorucci, Alessandro Cesare Mondini, Paola Reichenbach, Paola Salvati, Michele Santangelo, Fausto Guzzetti (2018) TXT-tool 2.039-1.1 Italian National Early Warning System. In: Sassa K. et al. (eds) Landslide Dynamics: ISDR-ICL Landslide Interactive Teaching Tools. Springer, Cham

Ivan Marchesini, Michele Santangelo, Federica Fiorucci, Mauro Cardinali, Mauro Rossi, Francesco Bucci, Fausto Guzzetti (2018) TXT-tool 1.039-1.2 Bedding Attitude Information Through the Interpretation of Stereoscopic Aerial Photographs and GIS Modeling. In: Sassa K. et al. (eds) Landslide Dynamics: ISDR-ICL Landslide Interactive Teaching Tools. Springer, Cham

Pubblicazioni non indicizzate

Corrado Cencetti, Pierluigi De Rosa, Andrea Fredduzzi, and Ivan Marchesini. Erosione dei suoli: applicazioni tramite il software grass gis. *Giornale di Geologia Applicata*, 2:196–202, 2005.

Corrado Cencetti, Andrea Fredduzzi, Ivan Marchesini, and Marco Seghetta. Definizione di scenari e analisi delle condizioni di rischio geologico-idraulico derivanti da una possibile occlusione d'alveo per frana nel t. reggia (bacino del tevere–umbria settentrionale). *Giornale di Geologia Applicata*, 3(2005):221–229, 2006.

Corrado Cencetti, Pierluigi De Rosa, Andrea Fredduzzi, and Ivan Marchesini. I processi di interpolazione spaziale nella ricostruzione della superficie piezometrica. un'applicazione all'acquifero alluvionale dell'alta valtiberina. *Giornale di Geologia Applicata*, 6:17–32, 2007.

Thomas Coulthard, Pierluigi De Rosa, and Ivan Marchesini. Caesar: un modello per la simulazione delle dinamiche d'alveo. *Il Quaternario*, 21(B):207–214, 2008.

Stefano Casadei, Michele Bellezza, Luca Casagrande, Arnaldo Pierleoni, and Ivan Marchesini. Tecnologie libere ed open source per la consultazione e l'elaborazione di dati territoriali ed idrometeorologici in applicazioni web-based. *GEOmedia*, 13(4), 2009.

Riassunti a convegni

A Minelli, Ivan Marchesini, P De Rosa, L Casagrande, M Cenci, and E Martini. Aerogeneratori: un semplice tool gfoss. 2009.

F Guzzetti, M Rossi, S Peruccacci, M Brunetti, I Marchesini, F Ardizzone, V Balducci, C Bianchi, M Cardinali, F Fiorucci, et al. A national early warning system for rainfall-induced landslides in italy. In *AGU Fall Meeting Abstracts*, volume 1, page 02, 2010.

Ivan Marchesini, Gabriele Tonelli, Vinicio Balducci, Mauro Rossi, and Fausto Guzzetti. A spatial data infrastructure for landslides and floods in italy. In *EGU General Assembly Conference Abstracts*, volume 12, page 5861, 2010.

S Raia, M Rossi, I Marchesini, RL Baum, JW Godt, and F Guzzetti. A gis framework for the stochastic distributed modelling of rainfall induced shallow landslides. In *AGU Fall Meeting Abstracts*, volume 1, page 1553, 2011.

F Guzzetti, AC Mondini, I Marchesini, M Rossi, K Chang, and G Pasquariello. A bayesian approach for mapping event landslides using optical remote sensing imagery and digital terrain data. In *AGU Fall Meeting Abstracts*, volume 1, page 1801, 2012.

M Mergili, I Marchesini, W Fellin, M Rossi, S Raia, and F Guzzetti. A three-dimensional slope stability model based on grass gis and its application to the collazzone area, central italy. In *EGU General Assembly Conference Abstracts*, volume 14, page 8057, 2012.

Alessandro C Mondini, Kang-tsung Chang, Mauro Rossi, Ivan Marchesini, and Fausto Guzzetti. Semi-automatic recognition and mapping of event-induced landslides by exploiting multispectral satellite images and dem in a bayesian framework. In *SPIE Asia-Pacific Remote Sensing*, pages 852415–852415. International Society for Optics and Photonics, 2012.

M Rossi, M Cardinali, F Fiorucci, I Marchesini, AC Mondini, M Santangelo, S Ghosh, DEL Riguer, T Lahousse, KT Chang, et al. A tool for the estimation of the distribution of landslide area in r. In *EGU General Assembly Conference Abstracts*, volume 14, page 9438, 2012.

M Santangelo, F Bucci, M Cardinali, I Marchesini, M Rossi, and F Guzzetti. Morpho-structural influences on landslide pattern and distribution: Grass gis tool application. *Geophys Res Abs*, 14, 2012.

Massimiliano Alvioli, Ivan Marchesini, Michele Santangelo, Mauro Rossi, Mauro Cardinali, Paola Reichenbach, Francesca Ardizzone, Federica Fiorucci, Vinicio Balducci, Alessandro C Mondini, et al. Parallel processing in wps services for geological and geomorphological mapping. *Change*, 56:101–110, 2013.8th IAG International Conference on Geomorphology

Marco Donnini, Jean-Luc Probst, Anne Probst, Francesco Frondini, Ivan Marchesini, and Fausto Guzzetti. The contribution of weathering of the main alpine rivers on the global carbon cycle. 2013. In Geophysical Research Abstracts EGU2013-7185-1, 2013. Proceeding of EGU General Assembly 2013, Vienna, Austria

Martin Mergili, Ivan Marchesini, Mauro Rossi, Fausto Guzzetti, and Wolfgang Fellin. A grass gis-based deterministic model for shallow and deep-seated landslide susceptibility analysis over large areas. In *EGU General Assembly Conference Abstracts*, volume 15, page 4272, 2013.

A Mondini, K Chang, M Rossi, I Marchesini, and F Guzzetti. Combining satellite and thematic data for improved mapping of event landslides. In *AGU Fall Meeting Abstracts*, volume 1, page 03, 2013.

M Rossi, D Torri, G Bacaro, A Mondini, P Reichenbach, F Fiorucci, and I Marchesini. Evaluating the impact of fires on slope instability processes: a case study in central italy. In *AGU Fall Meeting Abstracts*, volume 1, page 03, 2013.

Michele Santangelo, Ivan Marchesini, Francesco Bucci, Mauro Cardinali, Mauro Rossi, Faith Taylor, Bruce Malamud, and Fausto Guzzetti. A new approach to reduce the mapping error of landslide inventory maps. In *EGU General Assembly Conference Abstracts*, volume 15, page 7871, 2013.

Faith E Taylor, Michele Santangelo, Ivan Marchesini, and Bruce D Malamud. A grass gis semi-stochastic model for evaluating the probability of landslides impacting road networks in collazzone, central italy. In *EGU General Assembly Conference Abstracts*, volume 15, page 7624, 2013.

Carmela Vennari, Fausto Guzzetti, Ivan Marchesini, Mario Parise, and Paola Salvati. Analysis of the damage caused by natural and anthropogenic sinkholes in italy, on the basis of a nation-wide chronological catalogue. In *EGU General Assembly Conference Abstracts*, volume 15, page 355, 2013.

Massimiliano Alvioli, Francesca Ardizzone, Fausto Guzzetti, Ivan Marchesini, and Mauro Rossi. Non-susceptible landslide areas in italy and in the mediterranean region. In *EGU General Assembly Conference Abstracts*, volume 16, page 6846, 2014.

Massimiliano Alvioli, Ivan Marchesini, Federica Fiorucci, Francesca Ardizzone, Mauro Rossi, Paola Reichenbach, and Fausto Guzzetti. Automatic delineation of geomorphological slope units. In *EGU General Assembly Conference Abstracts*, volume 16, page 12697, 2014.

Federica Fiorucci, Cinzia Bianchi, Ivan Marchesini, Paola Salvati, Federico Fugnoli, and Fausto Guzzetti. The social network and the geo-hydrological information: the cnr irpi facebook page as example of communication. In *EGU General Assembly Conference Abstracts*, volume 16, page 14416, 2014.

Ivan Marchesini, Martin Mergili, Massimiliano Alvioli, Markus Metz, Barbara Schneider-Muntau, Mauro Rossi, and Fausto Guzzetti. Parallel processing for efficient 3d slope stability modelling. In *EGU General Assembly Conference Abstracts*, volume 16, page 6377, 2014.

Martin Mergili, Ivan Marchesini, Barbara Schneider-Muntau, Mauro Cardinali, Federica Fiorucci, Daniela Valigi, Michele Santangelo, Francesco Bucci, and Fausto Guzzetti. Gis-based modelling of deep-seated slope stability in complex geology. In *EGU General Assembly Conference Abstracts*, volume 16, page 6457, 2014.

Mauro Rossi, Dino Torri, Elisa Santi, Giovanni Bacaro, and Ivan Marchesini. Landplaner (landscape, plants, landslide and erosion): a model to describe the dynamic response of slopes (or basins) under different changing scenarios. In *EGU General Assembly Conference Abstracts*, volume 16, page 8932, 2014.

Michele Santangelo, Federica Fiorucci, Francesco Bucci, Mauro Cardinali, Francesca Ardizzone, Ivan Marchesini, Alessandro Cesare Mondini, Paola Reichenbach, Mauro Rossi, and Fausto Guzzetti. A logical framework for ranking landslide inventory maps. In *EGU General Assembly Conference Abstracts*, volume 16, page 15026, 2014.

Faith E Taylor, Michele Santangelo, Ivan Marchesini, Bruce D Malamud, and Fausto Guzzetti. A tool for modelling the probability of landslides impacting road networks. In *EGU General Assembly Conference Abstracts*, volume 16, page 6663, 2014.

Ivan Marchesini, Martin Mergili, Barbara Schneider-Muntau, Massimiliano Alvioli, Mauro Rossi, and Fausto Guzzetti. Physically-based landslide susceptibility modelling: geotechnical testing and model evaluation issues. In *EGU General Assembly Conference Abstracts*, volume 17, page 3660, 2015.

Ivan Marchesini, Mauro Rossi, Vinicio Balducci, Paola Salvati, Fausto Guzzetti, Andrea Bianchini, Emanuell Grzeleswki, Andrea Canonico, Rita Coccia, Gianni Mario Fiorucci, et al. High-school software development project helps increasing students' awareness of geo-hydrological hazards and their risks. In *EGU General Assembly Conference Abstracts*, volume 17, page 6212, 2015.

Maria Elena Martinotti, Luca Pisano, Maria Trabace, Ivan Marchesini, Silvia Peruccacci, Mauro Rossi, Giuseppe Amoruso, Pierluigi Loiacono, Carmela Vennari, Giovanna Vessia, et al. Extreme rainfall events in karst environments: the case study of september 2014 in the gargano area (southern italy). In *EGU General Assembly Conference Abstracts*, volume 17, page 2683, 2015.

Paola Salvati, Umberto Pernice, Cinzia Bianchi, Federica Fiorucci, Ivan Marchesini, and Fausto Guzzetti. Approaches to communication in response to geo-hydrological risk: Polaris an italian web initiative. In *EGU General Assembly Conference Abstracts*, volume 17, page 14002, 2015.

Faith E Taylor, Bruce D Malamud, Michele Santangelo, Ivan Marchesini, and Fausto Guzzetti. Statistical patterns of triggered landslide events and their application to road networks. In *EGU General Assembly Conference Abstracts*, volume 17, page 9992, 2015.

Mauro Rossi, Ivan Marchesini, Paola Salvati, Marco Donnini, Fausto Guzzetti, Simone Sterlacchini, Marco Zazzeri, Alessandro Bonazzi, and Andrea Carlesi. A statistical approach to evaluate flood risk at the regional level: an application to italy. In *EGU General Assembly Conference Abstracts*, volume 18, page 14971, 2016.

Romy Schlögel, Ivan Marchesini, Massimiliano Alvioli, Paola Reichenbach, Mauro Rossi, and Jean-Philippe Malet. The role of method of production and resolution of the dem on slope-units delineation for landslide susceptibility assessment-ubaye valley, french alps case study. In *EGU General Assembly Conference Abstracts*, volume 18, page 15505, 2016.

Maggioni, V.; Massari, C.; Camici, S.; Brocca, L.; Marchesini, I. (2017) Assimilation of passive and active CCI soil moisture products into hydrological modelling: an intercomparison study in Europe. American Geophysical Union, Fall Meeting 2017, abstract #H51E-1327

Massimiliano Alvioli, Ivan Marchesini, Paola Reichenbach, Mauro Rossi, Francesca

Ardizzone, Federica Fiorucci, Fausto Guzzetti (2017) Large-area landslide susceptibility with optimized slope-units, EGU General Assembly Conference Abstracts, Volume 19, Pages 18970

Liesbet Jacobs, Matthieu Kervyn, Jean Poesen, Paola Reichenbach, Mauro Rossi, Ivan Marchesini, Massimiliano Alvioli, Olivier Dewitte (2017) Dealing with heterogeneous landslide information for landslide susceptibility assessment: comparing a pixel-based and slope unit-based approach EGU. General Assembly Conference Abstracts, Volume 19, Pages 6260

Maggioni, V., Massari, C., Camici, S., Brocca, L., & Marchesini, I. (2017, December). Assimilation of passive and active CCI soil moisture products into hydrological modelling: an intercomparison study in Europe. In AGU Fall Meeting Abstracts.

Esposito, Giuseppe, Alessandro Cesare Mondini, Ivan Marchesini, Paola Reichenbach, Paola Salvati, and Mauro Rossi. *An example of SAR-derived image segmentation for landslides detection*. No. e27212v1. PeerJ Preprints, 2018. DOI : 10.7287/peerj.preprints.27212v2

The Undersigned hereby authorises to utilize the personal sensitive data contained in the Curriculum Vitae

Perugia, 11/10/19