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Decreto Rettore Università di Roma "La Sapienza" n **1174/2021** del **29.04.2021**

GERARDO GRELLE
Curriculum Vitae

Roma,
14/06/2021

Part I – General Information

Full Name	Gerardo Grelle
Date of Birth	
Place of Birth	
Citizenship	
Permanent Address	
Mobile Phone Number	
E-mail	
Spoken Languages	

Part II – Education

Type	Year	Institution	Notes (Degree, Experience,…)
University graduation	2002	University of Sannio-BN	Geological Science - Graduate with honoris
PhD	2003/06	University of Sannio-BN	Earth Science, Title: Stability analysis of large seismo-induced earth-flow in a sector of Sannite Apennine mountain-chain

Part III – Appointments

IIIA – Academic Appointments

Start	End	Institution	Position
02/05/2018	01/05/2021	Department of Civil Building and Environmental Engineering Sapienza University of Rome	RTDA (l. 240/2010)
01/02/2015	31/01/2017	Department of Civil Building and Environmental Engineering Sapienza University of Rome	Research fellow (l. 240/2010)
31/01/2014	12/01/2015	Department of Sciences and Technologies - University of Sannio - BN	Research fellow (l. 240/2010)
15/12/2012	15/12/2013	Department for Biology, Geology and Environment - University of Sannio - BN	Research fellow (l. 240/2010)

16/12/2011	15/12/2012	Department of Geological and Environmental Studies - University of Sannio-BN	Research fellow (l. 240/2010)
04/02/2008	04/02/2010	Department of Geological and Environmental Studies - TEDASS - University of Sannio - BN	Research fellow
01/11/2007	31/01/2008	Department of Geological and Environmental Studies - University of Sannio - BN	Research fellow
01/08/2006	31/08/2007	Department of Geological and Environmental Studies - University of Sannio - BN	Research fellow

IIIB – Other Appointments

Start	End	Institution	Position
11/09/2012	04/12/2012	University of Bristol - Bristol	Honorary academic status of Visiting Fellow

Part IV – Teaching experience

Year	Institution	Lecture/Course
2021	Sapienza University of Rome	Geomateriali per l'ambiente: 6cfu
2020	Sapienza University of Rome	Geomateriali per l'ambiente: 6cfu
2020	Sapienza University of Rome	Geologia dell'ambiente e delle risorse: 6cfu
2019	Sapienza University of Rome	Geologia Applicata: 9cfu
2018	University of Sannio - BN	Laboratorio di Geologia Tecnica: 6cfu
2017	University of Sannio - BN	Elementi di Geotecnica ed Idraulica: 6cfu
2016	University of Sannio - BN	Elementi di Geotecnica ed Idraulica: 6cfu
2015	University of Sannio - BN	Elementi di Geotecnica ed Idraulica: 6cfu
2014	University of Sannio - BN	Elementi di Geotecnica ed Idraulica: 6cfu
2013	University of Sannio - BN	Elementi di Geotecnica ed Idraulica: 6cfu
2012	University of Sannio - BN	Elementi di Geotecnica ed Idraulica: 6cfu
2011	University of Sannio - BN	Geotecnica: 5 cfu

Part V - Society memberberships, Awards and Honors

Year	Title
2012	Department Of Civil Engineering - University of Bristol (UK) - Research in: modelling of trigger conditions in unsaturated covered soil with root-system.
	Supervisor: Prof. M.G. Anderson

Part VI - Funding Information [grants as PI-principal investigator or I-investigator]

Year	Title	Program	Grant value
2019	Integration of the SiSeRHMap methodology for triggering susceptibility analysis of seismo-induced rock-landslides (PI-principal investigator)	SKLGP-2019 open fund project (China)	80,000 yuan
2020	Innovative methodologies for maintenance management of cultural heritage sites" – Prot. 2020H8EKK5 (I-investigator U.O)	PRIN 2020 (Principal Investigator: BARONE Fabrizio, University of Salerno (UNISA)	Under evaluation

Part VII - Patents

Year	Title	Type	Number code
2011	Di Santo G, Florio I, Florio S, Grelle G, Guadagno FM, Luongo G, Revellino P, Rubino M, Zarro D (2011): Sistema per il monitoraggio di terreni a rischio di frane causate dalla pioggia.	Italian	RM2011A000682
2016	Diodato N, Fiorillo F, Grelle G, Guadagno F M, Guerriero L, Revellino P, Soriano M (2014): metodo per la gestione di un sistema di allertamento idroclimatico condiviso con funzioni predittive	Italian	BN2014A000014
2018	Bonito L, Grelle G, Guadagno Fm, Guerriero L, Lampasi A, Revellino P, Sappa G (2016). Titolo: sistema ibrido di mappatura di risposta sismica. UA2016A003177	Italian	UA2016A003177

Part VIII – Editorial Activities

Year	Journal	Impact Factor	Role
2016	International Journal of Geo-Information (IJGI)	2.239	In the Editorial Board
2020	International Journal of Geo-Information (IJGI)	2.239	Guest Editor
	Special Issue: GIS in Seismic Disaster Risk Assessment and Management		

Part IX – Research Activities

Keywords	**Engineering Geology**
Dynamic behavior of soils	Dynamic behavior of soils under large and small shear strains, applied to slope instability and site effects;
Field Surveys	Geological surveys, and Geotechnical and Geophysical prospecting. The latter by using active and passive techniques to acquiring noises and seismic signals. Implementations of seismic acquisition and processing techniques in landslide sites or sites prone to topographic seismic effects.
Genetic and evolutionary algorithms	Genetic and evolutionary algorithms implementation with the aim to use them as optimization techniques applied on adaptive functions used metamodeling processes of natural geo-phenomena
Landslide GIS-analysis	Shallow slope instability using distribution techniques and mapping raster analysis with calibration and geo-statistical treatment of the input/output parameters.
Landslide Hazard and Susceptibility analysis	Slope stability analysis techniques and estimation of probabilistic seismic and rainfall inducing events
Lithology and structures controlling landslides and map-processing	Introducing NADIA method "Non-continuous Azimuth Distribution Methodological Approach" to mapping the bedding and structural control on landslides (Earthflows)
Modeling/Metamodeling and computer programs	Computer algorithm and machine data driven learning in Python language code.
Rainfall-induced landslides	Studies of triggering and runout about debris flow events: water pore pressure regiment change and rheological property of the materials.
Regression and data driven analysis	Regression and data-driven analysis applied to earthquake-induced landslide with behavior like to the rigid or quasi-rigid body in triggering and slide-displacements conditions.
Seismic-induced landslide	Intruding a methodology for seismic and post-seismic stability assessment of natural clay slopes based on a viscoplastic behavior model in simplified dynamic analysis.
Seismic signal processing	Seismic signals analysis using techniques performing in the time and frequency domain. Analysis Single Degree-of-Freedom (SDOF);
SiSeRHMap model	Development of GIS-hybrid models based on physically based methods and meta-modeling capable of producing multispectral raster maps of seismic response;
Site Seismic Effects and microzonation: Numerical and Experimental analysis	Seismic site response with creation and development of computational models based on linear, equivalent linear and nonlinear methods. Experimental analysis based on Standard Spectral Ratio and Horizontal Vertical Spectral ratio; directional and polarization effects. Particular studies and modeling/metamodeling of Topographic Aggravation Factor (TAF)
Viscoplastic effects	The visco-plastic behavior and the shear stress involved by clayey soils during fast impulsive shearing involved during co-seismic landslides. Idealizing and developing the Annular Fast Impulsive Shearing device/equipment.

Keywords	**Hydrogeology**
Isotopic tracers	Investigation of the groundwater table by using seismic refraction techniques with tomography restitutions;
Spring flow rate	Forecast and estimate of the spring flow rates in karst aquifers;
Water table investigation	Characterization and investigation of the recharge area by using isotopic tracers;

Part X – Recent Participation in conferences

Year	Title	Event
2019	Computational and experimental study of seismic site effects on Amatrice hill Grelle G., Maresca R, Gargini E., Facciorusso J., Madiai C.	7th International Conference on Earthquake Geotechnical Engineering, 2019: Earthquake Geotechnical Engineering for Protection and Development of Environment and Constructions- Rome (IT)
2018	Topographic effects in Amatrice suggested from the SISERHMAP predictive model, seismic data and damage G Grelle, Bonito L., Maresca R, Maufroy E, Revellino P, Sappa G, Guadagno FM	16th European Conference on Earthquake Engineering, Thessaloniki (GR)
2016	Frequency-dependent topographic seismic amplification by a" gray box model" using GIS morphometric data Grelle G, Bonito L, Revellino P, Sappa G	X Convegno dei Giovani Ricercatori di Geologia Applicata 2016 -Bologna

Part XI – International partnership

Year	Referencing Researcher
2012-today	• Malcom Anderson (Full Professor): Faculty of Engineering, University of Bristol University of Bristol - Queens Road Bristol, BS8 1QU, UK
	• Andrea Diambra (Associate Professor): Geotechnical Engineerin Faculty of Engineering, University of Bristol University of Bristol -Queens Road Bristol, BS8 1QU, UK
	• Clinton Wood (Associate Professor): Department of Civil Engineering 4190 Bell Engineering Center - Fayetteville, ARIZONA 72701 (USA).
	• Luo Yonghong (Associate Professor). Laboratory of Geohazard Prevention and Geoenvironment Protection of the Chengdu University of Technology (China)
	• Emeline Maufroy (Associate Professor). ISTerre, IFSTTAR Université Grenoble Alpes, Grenoble

Part XII– Summary of Scientific Achievements

Product type	Number	Data Base	Start	End
Papers [international]	46	Web of Science	2009	2021
	47	Scopus		
	(28 in journal with IF)			

Total Impact factor referred to the publication year	**62.722** Journal Citation Reports- Clarivate
Average Impact factor per publication	**2.240** Journal Citation Reports- Clarivate
Total Citations	**446** Web of science**; 494** Scopus;
Average Citations per Product	**9.70** Web of science (n.46)**; 10.51** Scopus (n.47);
Hirsch (H) index	**12** Web of science**; 13** Scopus;
Normalized H index* (**11 years from 2009**)	**1.09** Web of Science**; 1.18** Scopus;

*****H index divided by the academic seniority.

Part XIII– Selected Publications

List of the publications selected for the evaluation. For each publication report title, authors, reference data, journal IF (if applicable), citations, press/media release (if any).

ID	Title	Year	Source title	Authors	Cited by (Web of Science)	Cited by (Scopus)	Cited by (G. Scholar)	IF on publ. year
1	Topographic effects observed at Amatrice hill during the 2016-2017 Central Italy seismic sequence	2021	Earthquake Engineering and Engineering Vibration	**Grelle G.**, Bonito L, Rosalba M, Iacurto S., Madiai C, Revellino P., Sappa G	1	1	1	1.642
2	Seismic site effects in the Red Zone of Amatrice hill detected via the mutual sustainment of experimental and computational approaches	2020	Bulletin of Earthquake Engineering	**Grelle G.**, Gargini E, Facciorusso J., Maresca R, Madiai C.	3	5	5	2.602
3	Karst spring recharge areas and discharge relationship by oxygen-18 and deuterium isotopes analyses: A case study in southern latium region	2020	Applied Sciences (Switzerland)	Iacurto S., **Grelle G.**, De Filippi F.M., Sappa G.	2	3	5	2.474
4	Assessment of debris-flow erosion and deposit areas by morphometric analysis and a GIS-based simplified procedure: A case study of Paupisi in the southern apennines	2019	Sustainability (Switzerland)	**Grelle G.**, Rossi A, Revellino P., Guerriero L., Guadagno F.M., Sappa G.	3	3	6	2.576
5	A reliable computerized litho-morphometric model for development of 3D maps of Topographic Aggravation Factor (TAF): the cases of East Mountain (Utah, USA) and Port au Prince (Haiti)	2018	Bulletin of Earthquake Engineering	**Grelle G.**, Wood C, Bonito L., Sappa G., Revellino P., Rahimi S., Guadagno F.M	3	6	8	2.406
6	Brief Communication: A low-cost Arduino®-based wire extensometer for earth flow monitoring	2017	Natural Hazards and Earth System Science	Guerriero L, Guerriero G., **Grelle G.**, Guadagno F.M, Revellino P.	10	13	16	2.281
7	SiSeRHMap v1.0: A simulator for mapped seismic response using a hybrid model	2016	Geoscientific Model Development	**Grelle G.**, Bonito L, Lampasi A, Revellino P., Guerriero L, Sappa G., Guadagno F.M	8	8	7	3.458

ID	Title	Year	Source title	Authors	Cited by (Web of Science)	Cited by (Scopus)	Cited by (G. Scholar)	IF on publ. year
8	Storminess and geo-hydrological events affecting small coastal basins in a terraced Mediterranean environment	2015	Science of the Total Environment	Cevasco A., Diodato N., Revellino P., Fiorillo F., **Grelle G**., Guadagno F.M.	41	37	42	3.976
9	A hybrid model for mapping simplified seismic response via a GIS-metamodel approach	2014	Natural Hazards and Earth System Sciences	**Grelle G**, Bonito L., Revellino P., Guerriero L., Guadagno FM	6	7	6	1.735
10	Influence of slip-surface geometry on earth-flow deformation, Montaguto earth flow, southern Italy	2014	Geomorphology	Guerriero L, Coel.A., Revellino P., **Grelle G**., Pinto F., Guadagno F.M.	39	38	46	2.785
11	Space-time prediction of rainfall-induced shallow landslides through a combined probabilistic/deterministic approach, optimized for initial water table conditions	2014	Bulletin of Engineering Geology and the Environment	**Grelle G**., Soriano M., Revellino P., Guerriero L, Anderson M.G., Diambra A., Fiorillo F., Esposito L, Diodato N., Guadagno F.M.	17	20	25	0.760
12	Initiation and propagation of the 2005 debris avalanche at Nocera Inferiore (Southern Italy)	2013	Italian Journal of Geosciences	Revellino P., Guerriero L, **Grelle G**., Hungr O., Fiorillo F., Esposito L, Guadagno F.M.	25	25	29	1.679
13	Regression analysis for seismic slope instability based on a double phase viscoplastic sliding model of the rigid block	2013	Landslides	**Grelle G**., Guadagno F.M.	8	10	12	2.814
14	Bedding control on landslides: A methodological approach for computer-aided mapping analysis	2011	Natural Hazards and Earth System Sciences	**Grelle G**., Revellino Donnarumma A., Guadagno F.M.	33	33	51	1.983
15	Methodology for seismic and post-seismic stability assessment of natural clay slopes based on a viscoplastic behaviour model in simplified dynamic analysis	2011	Soil Dynamics and Earthquake Engineering	**Grelle G.,** Revellino P., Guadagno F.M.	9	11	14	1.638

Part XIV– All impacted journal papers

1. **Grelle G**; Bonito, L; Maresca R; Iacurto S; Madiai C; Revellino P; Sappa G. (2021) *Topographic effects observed at Amatrice hill during the 2016–2017 Central Italy seismic sequence*. - Earthquake Engineering And Engineering Vibration. - ISSN 1671-3664. - 20:1, pp. 63-78.

2. De Filippi F.M., Iacurto S.; **Grelle G**; Sappa, G. (2021) *Magnesium as Environmental Tracer for Karst Spring Baseflow/Overflow Assessment—A Case Study of the Pertuso Karst Spring (Latium Region, Italy).* Water. - ISSN 2073-4441. - 13:1, p. 93.

3. **Grelle G**, Gargini E, Facciorusso J, Maresca R, Madiai C (2020) *Seismic site effects in the Red Zone of Amatrice hill detected via the mutual sustainment of experimental and computational approaches*. Bulletin of Earthquake Engineering. DOI: 10.1007/s10518-019-00777-z.

4. Iacurto, S., **Grelle, G**., Filippi, F.M.D., Sappa, G. (2020) *Karst spring recharge areas and discharge relationship by oxygen-18 and deuterium isotopes analyses: A case study in southern latium region, Italy*. Applied Sciences (Switzerland) 10(5), 1882

5. Sappa G., De Filippi F.M., Iacurto S., **Grelle G**. (2019) *Evaluation of minimum karst spring discharge using a simple rainfall-input model: The case study of Capodacqua di Spigno Spring (Central Italy)*, Water (Switzerland) 2019, 11(4), 807

6. **Grelle G**., Rossi A., Revellino P., Guerriero L., Guadagno F.M., Sappa G. (2019) *Assessment of debris-flow erosion and deposit areas by morphometric analysis and a GIS-based simplified procedure: A case study of Paupisi in the Southern Apennines*, Sustainability (Switzerland) 2019, 11(8), 2382

7. Ruzza, G., Guerriero, L., **Grelle, G.,** Guadagno, F.M., Revellino, P.(2019) *Multi-method tracking of monsoon floods using Sentinel-1 imagery*. Water (Switzerland) 11(11),2289

8. Revellino P., Guerriero L., Mascellaro N., Fiorillo F., **Grelle G.,** Ruzza G., Guadagno F.M. (2019) *Multiple effects of intense meteorological events in the Benevento province,* Water (Switzerland), 2019, 11(8), 1560

9. **Grelle G,** Wood C, Bonito L, Sappa G, Revellino P, Rahimi S, Guadagno FM (2018) *A reliable computerized litho-morphometric model for development of 3D maps of Topographic Aggravation Factor (TAF): the cases of East Mountain (Utah, USA) and Port au Prince (Haiti)*; Bulletin of Earthquake Engineering. Volume 16, Issue 5, pp 1725–1750

10. Guerriero L., Guerriero G., **Grelle G**., Guadagno F.M., Revellino P. (2017) *Brief Communication: A low-cost Arduino®-based wire extensometer for earth flow monitoring*. Natural Hazards and Earth System Sciences, 2017, 17(6), pp. 881–885

11. **Grelle G**, Bonito L., Lampasi L., Revellino P., Guerriero L., Sappa G., Guadagno FM. (2016) SiSeRHMap v1. 0: *A simulator for mapped seismic response using a hybrid model*. Geoscientific Model Development 9 (4), 1567-1596

12. Pinto F., Guerriero L., Revellino P., **Grelle G**., Senatore MR, Guadagno FM. (2016) *Structural and lithostratigraphic controls of earth-flow evolution, Montaguto earth flow, Southern Italy*. Journal of the Geological Society, jgs2015-081

13. Guerriero L, Revellino P, Luongo M., Focareta M., **Grelle G.,** Guadagno FM (2016) *The Mount Pizzuto earth flow: deformational pattern and recent thrusting evolution*. Journal of Maps, 1-8

14. Cevasco A., Diodato N., Revellino P., Fiorillo F., **Grelle G**., Guadagno FM. (2015) *Storminess and geo-hydrological events affecting small coastal basins in a terraced Mediterranean environment*. Science of The Total Environment 532, 208-219

15. Guerriero L, Diodato N., Fiorillo F., Revellino P., **Grelle G**., Guadagno FM. (2015) *Reconstruction of long-term earth-flow activity using a hydroclimatological model*. Natural Hazards 77 (1), 1-15

16. **Grelle G**., Bonito L., P. Revellino P., Guerriero L., and Guadagno F.M. (2014) *A hybrid model for mapping simplified seismic response via a GIS-metamodel approach*. Nat. Hazards Earth Syst. Sci. 963-997, 2014

17. Guerriero L., Coe J.A., Revellino P., **Grelle G**., Pinto F., Guadagno F.M. (2014) *Influence of slip-surface geometry on earth-flow deformation, Montaguto earth flow, southern Italy*. Geomorphology, 219, 285-305

18. **Grelle G.,** Soriano M., Revellino P., Guerriero L., Anderson M.G., Diambra A., Fiorillo F, Esposito L., Diodato N., Guadagno F.M. (2014) . *Space-time prediction of rainfall-induced shallow landslides through a combined probabilistic/deterministic approach, optimized for initial water table conditions*. Bulletin of Engineering Geology and the Environment.

19. Diodato, N., Guerriero, L., Fiorillo, F., Esposito, L., Revellino, P., **Grelle, G**., Guadagno, F.M. *Predicting Monthly Spring Discharges Using a Simple Statistical Model* (2014) Water Resources Management, pp. 1-10.

20. Fiorillo, F., Esposito, L., **Grelle, G**., Revellino, P., Guadagno, F.M. *Further hydrological analyses on landslide initiation in the sarno area (Italy)* (2013) Italian Journal of Geosciences, 132 (3), pp. 341-349.

21. Revellino, P., Guerriero, L., **Grelle, G**., Hungr, O., Fiorillo, F., Esposito, L., Guadagno, F.M. *Initiation and propagation of the 2005 debris avalanche at nocera inferiore* (Southern Italy) (2013) Italian Journal of Geosciences, 132 (3), pp. 366-379.

22. Guerriero L., Revellino P., Coe J.A., Focareta M., **Grelle G**., Albanese V., Corazza A., G. and Guadagno F.M. (2013) **.** *Multi-temporal maps of the Montaguto earth flow in Southern Italy from 1954 to 2010***.** Journal of maps DOI: 10.1007/s10346-012-0350-8

23. **Grelle G**. and Guadagno F.M. (2013). *Regression analysis for seismic slope instability based on Double Phase Viscoplastic sliding model of the rigid block.* Landslides, 10, 583–597 DOI 10.1007/s10346-012-0350-8

24. **Grelle G**., Revellino P., Donnarumma A., Guadagno F.M. (2011). *Bedding control on landslides: methodological approach for a computer-aided mapping analysis.* Natural Hazards and Earth System Sciences, 11, 1395-1409, 2011. DOI: 10.5194/nhess-11-1395-2011

25. **Grelle G**., Revellino P., Guadagno F.M. (2011). *Methodology for seismic and post-seismic stability assessing of natural clay slope based on a visco-plastic behavioural model in simplified dynamic analysis.* Soil Dynamics and Earthquake Engineering 31 12, 48, 1248-1260. DOI: 10.1016/j.soildyn.2011.05.005

26. Revellino P., **Grelle G**., Donnarumma A., Guadagno F.M. (2010). *Structurally-controlled earth flows of the Benevento Province (Southern Italy).* Bull. Eng. Geol. Env., 69 (3), pp. 487–500. DOI: 10.1007/s10064-010-0288-9

27. **Grelle G**. and Guadagno F.M. (2010). *Shear mechanisms and viscoplastic effects during impulsive shearing*. Géotechnique 60, No. 2, 91–103 [doi: 10.1680/geot.8.P.019] ISSN: 0016-8505.

28. **Grelle G**. and Guadagno F.M. (2009). *Seismic refraction methodology for groundwater level determination*. Journal of Applied Geophysics, Vol. 68 N. 3 pp. 301-320 ISSN: 0926-9851

Part XV–Proceedings and Books

Grelle G., Maresca R, Gargini E., Facciorusso J., Madiai C. (2019) *Computational and experimental study of seismic site effects on Amatrice hill* - 7th International Conference on Earthquake Geotechnical Engineering, 2019: Earthquake Geotechnical Engineering for Protection and Development of Environment and Constructions- Rome (IT)

Grelle G., Bonito L., Maresca R, Maufroy E, Revellino P, Sappa G, Guadagno FM (2018) *Topographic effects in Amatrice suggested from the SISERHMAP predictive model, seismic data and damage*, 16th European Conference on Earthquake Engineering, Thessaloniki (GR)

Maufroy E., Lacroix P., Chaljub E., Sira C., Grelle G., Bonito L., Causse M., Cruz-Atienza V. M., Hollender F., Cotton F, Bard PY (2018) *Towards rapid prediction of topographic amplification at small scales: contribution of the FSC proxy and Pleiades terrain models for the 2016 Amatrice earthquake (Italy, Mw 6.0)*, 16th European Conference on Earthquake Engineering, Thessaloniki (GR)

Grelle G, Bonito L., Revellino P., Sappa G. (2016) *Frequency-dependent topographic seismic amplification using by a "gray box model" by using GIS morphometric data*. Rendiconti Online della Società Geologica Italiana pp. 342-345

Grelle G., Revellino P., Guerriero L., Soriano M. ,Diodato N., Guadagno FM. (2015). *Prediction analysis of rainfall induced landslide in a Samnite Prone Area*. Engineering Geology for Society and Territory - Volume 2: Landslide Processes

Diodato N., Guerriero, L., Revellino P., Grelle G., Guadagno FM (2015) *Spatial pattern of hydrological predictability of landslide-prone areas Engineering Geology for Society and Territory* - Volume 2: Landslide Processes

Guerriero L., Revellino P., Diodato N., Grelle G., De Vito A., Guadagno F. M. (2015) *Morphological and Climatic Aspects of the Initiation of the San Mango Sul Calore Debris Avalanche in Southern Italy*. Engineering Geology for Society and Territory-Volume 2 pp 1397-1400

L Guerriero, P Revellino, A Mottola, G Grelle, G Sappa, FM Guadagno. (2015). *Multi-temporal mapping of the Caforchio earth flow, southern Italy*. Rendiconti Online Società Geologica Italiana 35, 166-169

L Parente, P Revellino, L Guerriero, G Grelle, FM Guadagno (2015) *Estimating cliff-recession rate from LiDAR data, East Sussex coastline, South East England*. Rendiconti Online Societa Geologica Italiana 35, 220-223

Pignone M, Bonito L, Grelle G (2014) *I GIS a supporto della risposta sismica locale-storymaps* Conference ESRI 2014

Guerriero L, Revellino P, De Vito A, Grelle G, Guadagno FM (2014). *Triggering Conditions and Runout Simulation of the San Mango sul Calore Debris Avalanche, Southern Italy*. Storminess and Environmental Change, 193-204

Grelle, G., Revellino, P., Guerriero, L., Soriano M., Donnarumma, A., Guadagno, F.M. (2013) *Water table detection with Water Seismic Index,* Rendiconti Online Societa Geologica Italiana, 2013, 24, pp. 172–174

Donnarumma, A., Revellino, P., Guerriero, L., Grelle, G., Guadagno, F.M. (2013) *Failure analysis of shallow landslides using a three parameter Weibull distribution of slope angle*, Rendiconti Online Societa Geologica Italiana, 2013, 24, pp. 110–112

Donnarumma A., Esposito L., Revellino P., Grelle G., Guerriero L., Guadagno F.M. (2012) *Multi-time analysis of the humane activity effects on the grondwater flow in the Ufita Graben*. EngHydroEnv Geology14 B, 102-103- doi 10.1474/EHEGeology.2012-14.B.98. ISSN 2038-0801.

Donnarumma A., Esposito L., Grelle G., Guerriero L., Revellino P., Guadagno F.M. (2012*) L'acquifero alluvionale della piana di Benevento: aspetti idrogeologici e analisi della vulnerabilità*. EngHydroEnv Geology14 B (2012), 100-101- doi 10.1474/EHEGeology.2012-14.B.97. ISSN 2038-0801.

Donnarumma A., Revellino P., Grelle G., Guerriero L., Lupo G., Soriano M., Guadagno F.M. (2012*). Role of slope angle in landslide susceptibility*. EngHydroEnv Geology14 B (2012), 98-99- doi 10.1474/EHEGeology.2012-14.B.96. ISSN 2038-0801.

Soriano M., Grelle G., Revellino P., Fiorillo F., Esposito L., Donnarumma A., Guadagno F.M.. (2012). *Rainfall induced landslide: hazard analysis on large area.* EngHydroEnv Geology14 B (2012), 228-229 - doi 10.1474/EHEGeology.2012-14.B.16. ISSN 2038-0801.

Donnarumma A., Revellino P., Grelle G., Guadagno F. M. (2011). *Slope angle as indicator parameter of landslide susceptibility in a geologically complex area*. Putting Science into Practice, Rome, 3-7 October 2011. In: Proceedings of the Second World Landslide Forum. Springer

Donnarumma A., Revellino P., Grelle G., Guadagno F. M. (2011). *Statistical approach in landslide susceptibility assessment of slow-moving earth flow*. Geoitalia Fist – VIII° Forum italiano di Scienze della Terra, Torino, 19-23 Settembre 2011. ISSN 1972-1552.

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Guadagno F.M., Revellino P., Grelle G. (2011). *The 1998 Sarno landslides: conflicting interpretations of a natural event. 5th International Conference on Debris Flow Hazard Mitigation*. June 14-17, Padua, Italy.

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Grelle G., Revellino P., Donnarumma A., Guadagno F. M. (2010). *Litho-structural assect on landslide susceptibility in complex geological area by means a Gis application*. 5°Riunine Nazionale GIT " Geology and Information Technology Group" – Italian Geological Society, Grottaminarda (AV) 14-16 Giugno 2010.

Revellino P., Grelle G., Lupo. G., Donnarumma A., Guadagno F.M. (2009). *Structurally-controlled earth flows of the province of Benevento (Campania Apennines, Southern Italy*. Atti del 3° Congresso Nazionale AIGA – Centro di GeoTecnologie, San Giovanni Val d'Arno (AR), 25 – 27 Febbraio.

Ambrozic T., Fairbank H., Grelle G., Guadagno F.M., Logar J., Marsden P., Revellino P., Turk G. (2009). *Future risk assessment as a New European approach to landslide hazards – Guidelines & Relevant Reports*. Editori: Guadagno & Revellino. Stampa a cura di Tipografia Lengua http://www.e-frane.net/

Grelle G. and F.M. Guadagno (2009). *Viscoplastic strength mobility during seismic landslide displacements and their implication in the stability evaluation*; 7th Forum Italiano di Scienze della Terra. Rimini, settembre 2009

Revellino P., Grelle G., Lupo G., Donnarumma A., Guadagno F. M. (2009). *Control of the geo-structural setting on earth flow evolution of the Benevento province (souther Italy).* Geoitalia Fist – 7°Forum italiano di Scienze della Terra, Rimini, 9-11 settembre 2009

Guadagno F.M., Revellino P., Grelle G., Lupo G. (2008). *Structurally-controlled earth flows in Campania Apennines (Southern Italy)*. In: Landslides and Engineered Slopes. From the Past to the Future: Proceedings of the 10th International Symposium on Landslides and Engineered Slopes, 30 June - 4 July 2008, Xi'an, China.

Grelle G., Nardone L., Pasquale G., Bruno R., Guadagno F.M. *Seismic methodology for graund-water level determination in simple lithologycal sequences: preliminary results*. Sessione orale; 6th Forum Italiano di Scienze della Terra. Rimini, 12 -14 settembre 2007.

Part XVI– Participation in National/International Grants

Fondi di Ateneo per la Ricerca dell'Università degli Studi del Sannio (2003-2004-2005-2006)

1. "Studio dei meccanismi d'innesco di eventi di frana a cinematica lenta e veloce in aree dell'Appennino Meridionale". Responsabile Scientifico: Prof. F.M. Guadagno;
2. "Modellazione dei meccanismi d'innesco e di propagazione di eventi di flusso in aree dell'Appennino Campano". Responsabile Scientifico: Prof. F.M. Guadagno;
3. "Fenomeni di Frana a cinematica lenta e veloce dell'Appennino Campano". Responsabile Scientifico: Prof. F.M. Guadagno;
4. "Fenomeni di Frana a cinematica lenta e veloce nelle Province di Benevento e Avellino"

Responsabile Scientifico: Prof. F.M. Guadagno.

Fondi MIUR

PRIN (COFIN) 2005: "Meccanismi di innesco di debris flows: inizio per frana e per coinvolgimento/trasporto di materiale nei suoli piroclastici dell'Appennino Campano". Coordinatore Scientifico: Prof. Rinaldo Genevois (Dipartimento di Geologia, Paleontologia e Geofisica – Università degli Studi di Padova). Responsabile Scientifico dell'Unità Operativa: Prof. F.M. Guadagno (Dipartimento di Studi Geologici ed Ambientali – Università del Sannio); Durata biennale;

Fondi Unione Europea

1. PROGRAMMA LEONARDO DA VINCI (2004): "OIKOS – Originating innovative methods to learn and teach knowledge in the field of earth and natural sciences derived from an original and combined use of applicative software" Soggetto proponente e capofila: Università degli Studi del Sannio. Responsabile Scientifico: Prof. F.M. Guadagno. Durata triennale;
2. COMMUNITY ACTION PROGRAMME IN THE FIELD OF CIVIL PROTECTION (2006): "TCLM - Training the trainers in Landslide Management". Soggetto proponente e capofila: Università degli Studi del Sannio. Responsabile Scientifico: Prof. F.M. Guadagno. Durata annuale.

Fondi Amministrazione Provinciale di Benevento (2004-2006)

"Redazione di cartografie delle frane della Provincia di Benevento" Responsabile Scientifico: Prof. F.M. Guadagno.

Fondi Commissariato di Governo per l'Emergenza Idrogeologica in Campania (2004)

"Analisi dei meccanismi e relativa modellazione di eventi di frana coinvolgenti depositi piroclastici in aree campione delle dorsali carbonatiche campane". Responsabile Prof. F.M. Guadagno.

Fondi Camera di Commercio di Benevento (2004-2006)

"Carta delle instabilità di versante e della suscettibilità a franare della Provincia di Benevento". Responsabile Prof. F.M. Guadagno.

Programma Comunitario (2004-2007)

OIKOS - Originating Innovative methods to learn and teach Knowledge in the field of earth and natural sciences derived from an Original and combined use of applicative Software

Programma Comunitario (2007)

Community action programme in the field of civil protection. Titolo del progetto:
FRANE - Formulating Risk management and Assessment strategies to support New civil protection approaches for dealing with landslide hazard in Europe.

Fondi CRAA Regione Campania (2009)

Monitoraggio e modellizzazione dei processi ideologici per la tutela dei sistemi agro-forestali in ambito collinare e montano cofinanziato dalla Regione Campania CRAA – Protocollo d'intesa approvato con D.G.R. n. 1521 del 24/04/2003.

Fondi Comunità europea- European Civil Protection (2013-2014)
RISK focuses on the challengers of preparing for natural disasters facing diverse areas of the EU.

Part XVII– Others skills

Program language:

Python 2.x and 3.x , Matlab, Visual basic for Excel

Development of computed model and software:

- SiSeRHMap 1.1. (Python code) Spatial Simulation of Seismic Response by means a Hybrid Model www.geosmartapp.it. Software per la definizione della risposta sismica locale mappata considerando l'effetto topografico tridimensionale fornito dal DEM. Published
- Quakeshape (Python code). Matching of the earthquake spectra. Software che permette di ottenere accelerogrammi naturali modificati nel dominio delle frequenze per ottenere la sovrapponibilità ad un assegnato spettro di risposta target. Unpublished
- SHAKER 1.3 beta (Python code and GUI). Seismic Tool Using Housner Intensity as Earthquake Selector. Selettore di forme d'onda equalizzate tutte alla stessa intensità di Housner a sua volta riferita ad un assegnato spettro target. Il codice esegue un'analisi di coerenza statistica dei segnali selezionati ed equalizzati rispetto a quelli naturali all'interno di ITACA-DB per un dato intervallo di hazard. Beta version: tried for submission
- Down-hole. Elaborazione di registrazioni di sismica in foro tipo down-hole con una applicazione di individuazione dei primi arrivi delle onde di taglio. Unpublished
- Verstab (VB for Excel). Slope stability analysis with Fellenius and Bishop methods;
- Seismic viscoplastic displacements Newmark modified approach (VB for Excel). Published
- FAD4 1D site transfer function in linear viscoplastic model.

Software ability:

- Underground flow: *Seep, Vadose*
- Slope stability*: Flac 2D, Geoslope, Slope, ClaraW, Georock, Rotomap32, Trigrs*.
- Flow-landslide: *DAN-2D - DAN-3D*;
- Seismic response: Shake, EERA, NERA(1D) and Quake, Quad4 (2D)
- GIS and remote sensing: *ArcGis , QGis, Surfer, ENVI*.
- Graphic: *AutoCad., Coral Draw., Illustrator, Photo Shop*;

Roma, 14/06/2021