

## CURRICULUM VITAE of DAVIDE LUCIANO DE LUCA

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## 0. General Information

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Nationality	Italian
Date of Birth	13/12/1977
Place of Birth	Cetraro (CS) - ITALY
Current Position	<b><u>Assistant Professor in SSD ICAR/02 (Hydrology and Hydraulics Structures)</u></b> , c/o University of Calabria (Italy), Department of Informatics, Modeling, Electronics and System Engineering, from From 28/12/2012 to date; <b><u>National Scientific Qualification for Associate Professor</u></b> – from 09/04/2018 and valid until 09/04/2027 ( <a href="https://asn16.cineca.it/pubblico/miur/esito-abilitato/08%252FA1/2/4">https://asn16.cineca.it/pubblico/miur/esito-abilitato/08%252FA1/2/4</a> )

## 1. Education and Training

- June 1996: Scientific High School Degree, score 60/60, c/o Scientific High School of Cetraro (CS) – ITALY.
- December 2001: Master Degree in Environmental Engineering, score 110/110 with Laude, c/o University of Calabria, Rende (CS) - ITALY. Master thesis title: “Analysis of Extreme Rainfall Fields in Calabria” (in Italian). Supervisor: Prof. Pasquale Versace.
- February 2006: Ph.D. in Hydraulic and Environmental Engineering, XVII cycle, c/o University of Calabria, Department of Soil Conservation “V. Marone”, Rende (CS) – ITALY. Ph.D. thesis title: “Nowcasting of Rainfall Fields” (in Italian). Supervisors: Prof. Pasquale Versace and Prof. Beniamino Sirangelo.

## 2. Training in Foreign Universities or Institutes

- From 1<sup>st</sup> October 2008 to 28<sup>th</sup> November 2008: Stage in “Scaling stochastic models of rainfall fields”, c/o Institute of Environmental Engineering, ETH Zurich. Supervisor: Prof. Paolo Burlando.
- From 12<sup>th</sup> January 2012 to 15<sup>th</sup> December 2012: Stage in “Development of an integrated modeling to forecast rainfall fields and triggering mechanism of landslides”, c/o International Centre of Geohazard (ICG), Norwegian Geotechnical Institute (NGI), Oslo, Norway. Supervisor: Jose Mauricio Cepeda, in which:
  - ✚ From 8<sup>th</sup> March 2012 to 16<sup>th</sup> March 2012: Course in “Natural Hazard Modelling and Risk Assessment, University of Twente (Netherlands), ITC (Faculty of Geo-Information Science and Earth Observation), founded by NGI - Oslo.

## 3. Awards for Research Activities

- 03/01/2011: Invitation, received by Editor Tommy S.W. Wong of Nova Publishers ([www.novapublishers.com](http://www.novapublishers.com)), for the realization of Volume “Rainfall Nowcasting Models for Early Warning Systems”, which is part of the editorial series “Hydrological Sciences and Engineering”.
- 2009: Winner of the financing related to the Project for Young Researchers (DR of 07/10/2009)- University of Calabria, Department of Soil Conservation “V. Marone”, Rende (CS) – ITALY. Title of the research project: “Downscaling modeling of rainfall heights aimed at the evaluation of hydrogeological risk”.

- 2008: Winner of a voucher funded by Calabria Regional Administration for Training of Young Researchers (POR Calabria 2000/2006, Misura 3.7 "Formazione superiore universitaria" - Azione 3.7B "Incentivi alle persone", POR FSE Calabria 2007/2013, Asse 4 "Capitale umano", Obiettivo operativo M.2)

## 4. Research Activities

### 4.1. General description

- From 28<sup>th</sup> December 2012 to date: **Assistant Professor in SSD ICAR/02 (Hydrology and Hydraulics Structures)**, c/o University of Calabria (Italy), Department of Informatics, Modeling, Electronics and System Engineering
- From 1<sup>st</sup> September 2011 to 27<sup>th</sup> December 2012 (16 months): **Post Doc position in "Development of an integrated modeling to forecast rainfall fields and triggering mechanism of landslides" – POR Calabria FSE 2007/2013 - Asse IV Capitale Umano**. Post-Doc Project between University of Calabria, Department of Soil Conservation "V. Marone" and International Centre of Geohazard (ICG), Norwegian Geotechnical Institute (NGI), Oslo, Norway.
- From 1<sup>st</sup> March 2007 to 28<sup>th</sup> February 2011 (4 years): **Research Fellowship in "Stochastic modelling for rainfall fields"**, c/o University of Calabria, Department of Soil Conservation "V. Marone", Rende (CS) – ITALY.
- From 1<sup>st</sup> January 2003 to 31<sup>st</sup> December 2006 (4 years): **Research Fellowship in "Mathematical modeling for water balance"**, c/o University of Calabria, Department of Soil Conservation "V. Marone", Rende (CS) – ITALY.

The research activities can be divided into three main areas:

1. **Rainfall Fields modeling**
2. **Analysis of hydrological phenomena at slope scale**
3. **Uncertainty evaluation in Rainfall-Runoff modeling**

The scientific production, updated in March 2020, includes (the detailed list is shown in next step 9):

- No. 1 Book;
- No. 24 Papers in Journals which are indexed on Scopus and/or WoS databases;
- No. 45 other papers and Abstracts;
- No.1 Ph.D. thesis.

### 4.2. Doctoral Schools

1. from 01-11-2019 to date: Member of **Doctoral School in Civil and Industrial Engineering, University of Calabria (Italy), XXXV Cycle**, 3-year duration
2. from 01-11-2018 to date: Member of **Doctoral School in Civil and Industrial Engineering, University of Calabria (Italy), XXXIV Cycle**, 3-year duration
3. from 01-11-2017 to date: Member of **Doctoral School in Civil and Industrial Engineering, University of Calabria (Italy), XXXIII Cycle**, 3-year duration
4. 24/07/2017: Member of Examination Board for discussion of Ph.D. Thesis entitled "A novel approach to rainfall measuring: methodology, field test and business opportunity" – candidate: Alberto Croci. Doctoral Program in Environmental Engineering (29th cycle) – Polytechnic of Turin (Italy)
5. from 01-11-2016 to 31/10/2019: Member of **Doctoral School in Civil and Industrial Engineering, University of Calabria (Italy), XXXII Cycle**, 3-year duration
6. from 01-11-2015 to 31/10/2018: Member of **Doctoral School in Civil and Industrial Engineering, University of Calabria (Italy), XXXI Cycle**, 3-year duration.
7. from 01-11-2015 to 31/10/2018: Tutor of the Ph.D student Aldo Greco for the research entitled: **Mathematical Models for simulation of space-time variability of heavy rainfall events**. Doctoral School in Civil and Industrial Engineering, University of Calabria (Italy), XXXI Cycle

8. from 01-11-2014 to 31-10-2017: Member of **Doctoral School in Civil and Industrial Engineering, University of Calabria (Italy), XXX Cycle**, 3-year duration.

#### 4.3. Patents

1. Co-Author for the Patent entitled "**System and method for evaluation of hydraulic and geological risk**" – ID code 102016000073319 (UA2016A005165). Approved by University of Calabria in 8/06/2015. Sent to Italian Patent and Trademark Office in 13/07/2016.

#### 4.4. International Research Projects

1. from 21-11-2016 to date: Collaborator for the Project entitled *FloodNet of NSERC (Natural Sciences and Engineering Research Council) Canadian Strategic Network, Project 3-4-“Development of the Canadian Adaptive Flood Forecasting and Early Warning System (CAFFEWS)”*. Scientific Manager: Prof. P. Coulibaly, Mc Master University, Hamilton, Canada.

2. 2010: Member of working group for *SafeLand Project (Living with landslide risk in Europe: Assessment, effects of global change, and risk management strategies)*. Coordinator Institute: Norwegian Geotechnical Institute (NGI), Oslo - NORWAY

##### Type of activities

Realization of the following sections for the report D1.5 “Statistical and empirical models for prediction of precipitation-induced landslides” (download from [http://www.safeland-fp7.eu/results/Documents/D1.5\\_revised.pdf](http://www.safeland-fp7.eu/results/Documents/D1.5_revised.pdf)):

- Evaluation criteria: FLAIR model (Section 3.3), edited by Versace P. and De Luca D.L.
- FLAIR application to Barcelonnette (Section 5.2) , edited by Versace P. and De Luca D.L.
- FLAIR application to AMRA dataset (Section 5.4) , edited by Versace P. and De Luca D.L.

#### 4.5. Italian Research Projects

1. From 22-09-2017 to date: Member of working group for “PROGRAMME TO SUPPORT STRENGTHENING GOVERNANCE IN HYDROGEOLOGICAL AND HYDRAULIC RISK REDUCTION FOR CIVIL PROTECTION PURPOSES” - PON GOVERNANCE 2014-2020, ID code 6983365719. Partners : 1) CIMA Research Foundation; 2) Polytechnic of Milan; 3) Research Institute for Geo-Hydrological Protection; 4) University of Calabria; 5) Interuniversity Consortium for Hydrology.

2. 2013-2015: Member of working group for Project of University of Calabria entitled “*Integrated Systems of Laboratories for Environment*”

3. 2012-2015: Member of working group for Project of University of Calabria entitled “*An Integrated System for Hydrogeological Risk Monitoring, Early Warning and Mitigation along the main lifelines*”, University of Calabria and Autostrade Tech are the main partners of the project, Strago and TD Group are the other industrial partners, together with Universities of Firenze and Catania as research partners, and the Interuniversity Consortium for Hydrology as partner in the Master organization.

4. 2009-2010: Member of working group of “*Study and testing of methodologies and techniques for the mitigation of hydrogeological risk*”. Project ID 7 – Evaluation of Extreme Floods - POR Calabria 2000-2006 Coordinator Institute: University of Calabria, Department of Soil Conservation “V. Marone”, Rende (CS) – ITALY

##### Type of activities

Realization of the following reports:

- **Evaluation of Udometric Coefficient** (in Italian), edited by Versace P., De Luca D.L. and Cruscomagno F.
- **Lumped Rainfall-Runoff Models** (in Italian), edited by Versace P., Biondi D. and De

Luca D.L.

- **Object Oriented Rainfall-Runoff Models** (in Italian), edited by Versace P., Mendicino G., Biondi D. and De Luca D.L.
- **Definition of Design Rainfall Scenarios** (in Italian), edited by De Luca D.L., Biondi D. and Versace P.

Realization of the following maps:

- **Map of Udometric Coefficient for Calabria region, Return Period = 200 years and CN AMC II**, edited by Versace P., De Luca D.L. and Cruscomagno F.
- **Map of Udometric Coefficient for Calabria region, Return Period = 200 years and CN AMC III**, edited by Versace P., De Luca D.L. and Cruscomagno F.
- **Map of Udometric Coefficient for Calabria region, Return Period = 1000 years and CN AMC III**, edited by Versace P., De Luca D.L. and Cruscomagno F.

5. 7/10/2009 – 7/10/2010: Manager of *Project for Young Researchers (DR of 07/10/2009)*. Coordinator Institute: University of Calabria, Department of Soil Conservation “V. Marone”, Rende (CS) – ITALY

Type of activities

Realization of the following report:

- **Downscaling modeling of rainfall heights aimed at the evaluation of hydrogeological risk** (in Italian), edited by De Luca D.L.

6. 2006 – 2008: Member of Working Group for PRIN 2006: “Evaluation of Rainfall Thresholds for Civil Protection Activities”. Research Unit: “Mathematical Models for Landslides Induced by Rainfall”. Coordinator Institute: University of Calabria, Department of Soil Conservation “V. Marone”, Rende (CS) – ITALY

Type of activities

Collaboration for the realization of the following report:

- **Mathematical Models for Landslides Induced by Rainfall** (in Italian)

#### 4.6. University of Calabria Contact for Visiting Professor

1. Contact of University of Calabria to host as Visiting Professor Prof. Ramesh Teegavarapu of the Department of Civil, Environmental and Geomatics Department at Florida Atlantic University (FAU), Boca Raton, Florida (USA).

#### 4.7. Scientific Agreements:

- Member of working group for 14 Scientific Agreements among University of Calabria and Italian National Department of Civil Protection, Multi Risks Center of Calabria region (southern Italy)
- Coordinator of Work Package group for 3 Scientific Agreements among University of Calabria and Italian National Department of Civil Protection

### 5. Teaching activities

#### 5.1. Master of II level in University of Calabria

1. 31/07/2014 (8 hours): Course of “**MITIGATION OF THE EFFECTS OF NATURAL HYDROGEOLOGICAL DISASTERS AND EMERGENCY MANAGEMENT**”, MODULE “**IDENTIFICATION OF FLOOD AREAS**”, MASTER ESTIA – “Expert in Innovative Technologies for the Environment”
2. 04/09/2013 (5 hours): Course of “**PRESENTATION OF THE SILA PROJECT – INTEGRATED LABORATORY SYSTEM FOR THE ENVIRONMENT, MODULE “PRESENTATION AND DEMO - CAMILAB LABORATORY”**”, Master RIM – “Research and Innovation Manager”
3. 14/06/2013 (5 hours): Course of “**SYSTEMS AND MODELS FOR EARLY WARNING**”, Master ESPRI – “Expert in Hydrogeological Risk Forecast/Prevention”

4. 06/05/2013 – 10/05/2013 (20 hours): Course of “**NUMERICAL ANALYSIS AND STATISTICS**”, Master ESPRI –“Expert in Hydrogeological Risk Forecast/Prevention”.
5. 09/04/2013 – 19/04/2013 (9 hours): Course of “**CIVIL PROTECTION**”, Master ESPRI –“Expert in Hydrogeological Risk Forecast/Prevention”
6. 15-09-2011: Course of “**MATHEMATICAL MODELS**”, Master “Prevention and Forecast of Hydrogeological Events”
7. 30-06-2011: Course of “**EMERGENCY MANAGEMENT**”, Master “Prevention and Forecast of Hydrogeological Events”

## 5.2. Adjunct Professor in University of Calabria for Bachelor and Master Degree Courses

1. from 2015 to date – Course of “**GEOGRAPHIC INFORMATION SYSTEMS FOR ENVIRONMENT**”, Master Degree Courses in Computer Engineering and Telecommunications Engineering.
2. from 2018 to date - Course of “**CALCULUS II**”, Bachelor Degree Course in Computer Engineering.
3. from 2018 to date – Course of “**BASIS OF MATHEMATICS AND LOGICS**”, Bachelor Degree Course in Electronic Engineering and Food Engineering.
4. 2009 – Course of “**HYDROLOGICAL PROCESSES**”, Bachelor Degree Course in Natural Risks Management.

## 5.3. Adjunct Professor in other Universities for Bachelor and Master Degree Courses

1. From 2009 to 2012 (n. 3 annualità) - Course of “**HYDROLOGY**”, Master Degree Course in Civil Engineering, University of Salento, Lecce (LE) – Italy.

## 5.4. Teaching Assistant in University of Calabria for Bachelor and Master Degree Courses

1. From 2010 to 2017 – Course of “**HYDROLOGY**”, Master Degree Course in Civil Engineering.
2. From 2006 to 2011 – Course of “**STATISTICS**”, Bachelor Degree Course in Environmental Engineering
3. From 2003 to 2009 – Course of “**NUMERICAL METHODS FOR ENVIRONMENTAL ENGINEERING**”, Bachelor Degree Course in Environmental Engineering
4. From 2004 to 2009 – Course of “**ADVANCES IN HYDROLOGY**”, Master Degree Course in Environmental Engineering
5. From 2005 to 2008 – Course of “**HYDRAULIC PROTECTION OF THE TERRITORY**”, Bachelor Degree Course in Natural Risks Management.
6. From 2004 to 2008 - Course of “**STATISTICS**”, Bachelor Degree Course in Natural Risks Management.
7. From 2003 to 2004 - Course of “**MODELING OF ENVIRONMENTAL PROCESSES**”, Bachelor Degree Course in Environmental Engineering.
8. 2004 – Course of “**SOIL CONSERVATION**”, Bachelor Degree Course in Environmental Engineering

## 5.5. E-learning

1. 2017: Course of **GOOGLE EARTH** for Italian National Council of Engineers
2. 2013: Course of “**CIVIL Protection**”, Master ESPRI –“Expert in Hydrogeological Risk Forecast/Prevention”
3. 2011: Course of “**HYDRAULICS**”, Master Degree Course in Civil Engineering, Ecampus University

## 6. Supervisor of Theses

- From 2006 to date: co-supervisor of 20 Bachelor Theses (in Italian) and of 12 Master Theses (in Italian) in Environmental Engineering and Civil Engineering, University of Calabria (Italy)
- From 2005 to date: supervisor of 6 Final Project Works, regarding Master of Second Level in University of Calabria (Italy)

## **7. Other activities**

### **7.1. Scientific associations**

1. Member of the International Association of Hydrological Sciences (IAHS) - Statistics in Hydrology Working Group (STAHY-WG)
2. Member of Italian Society of Hydrology (ISH)
3. Member of Italian Group of Hydraulics (IGH)

### **7.2. Editor for Scientific Journals**

1. Landslides
2. Hydrology

### **7.3. Referee for Scientific Journal**

1. Applied Sciences
2. Atmosphere
3. Catena
4. Environmental Processes
5. Geosciences
6. Geoscientific Model Development
7. Hydrology
8. Hydrology and Earth System Sciences (HESS)
9. International Journal of Environmental Research and Public Health
10. Journal of Hydrologic Engineering
11. Journal of Hydrology
12. Landslides
13. Natural Hazards
14. Natural Hazards and Earth System Sciences (NHES)
15. Remote Sensing
16. Water

### **7.4. Organization of International and National Conferences**

1. Member of the Organizing Committee for the Conference "Geological and Hydraulic Safety along Motorways and Railways", – University of Calabria, Rende (CS) – Italy, 25 - 26 November 2014
2. Member of the Organizing Committee for "Mediterranean Meeting - Monitoring, modelling and early warning of extreme events triggered by heavy rainfalls" – University of Calabria, Rende (CS) – Italy, 26-28 June 2014
3. Member of the Organizing Committee for "International Meeting on Early Warning Systems and Landslides Modeling", Praia a Mare (CS) – Italy, 4 - 10 July 2013
4. Member of the Organizing Committee for "AMHY-FRIEND group 4rd International Workshop on Hydrological Extremes - From prediction to prevention of hydrological risk in Mediterranean countries" – University of Calabria, Rende (CS) – Italy, 15 - 17 September 2011.
5. Member of the Organizing Committee for "AMHY-FRIEND group 3rd International Workshop on Hydrological Extremes - Analyses and images of hydrological extremes in Mediterranean environments" – University of Calabria, Rende (CS) – Italy, 10 -12 July 2008.
6. Member of the Organizing Committee for "AMHY-FRIEND group 2nd International Workshop on Hydrological Extremes - Variability in space and time of extreme rainfalls, floods and droughts" – University of Calabria, Rende (CS) – Italy, 6 - 8 June 2007.
7. Member of the Organizing Committee for "AMHY-FRIEND group International Workshop on Hydrological Extremes - Observing and modelling exceptional floods and rainfalls" – University of Calabria, Rende (CS) - Italy, 3 - 4 May 2006.

## 8. Speaker in International Conferences

1. **The 3rd International Conference and Summer School on Numerical Computations: Theory and Algorithms - NUMTA 2019**, Le Castella, Isola Capo Rizzuto (KR) – Italy, June 15-21, 2019. Oral presentation for:
  - *Modelling climate changes with stationary models: is it possible or is it a paradox?*
2. **Fourth World Landslide Forum (WLF4) “Landslide research and risk reduction for advancing culture of living with natural hazards”**, Ljubljana (Slovenia), May 29 – June 2, 2017. Oral presentation for
  - *Deterministic and probabilistic rainfall thresholds for landslide forecasting*
  - *Quantifying the performances of simplified physically based landslide susceptibility models: an application along the Salerno-Reggio Calabria highway*
3. **15<sup>th</sup> Plinius Conference on Mediterranean Risks**, Taormina 8-11 June 2016. Oral presentation for:
  - *Diversity of rainfall thresholds*
4. **Fourth Italian Workshop on Landslides**, Naples 23-25 November 2015. Oral presentation for:
  - *A general model for empirical prediction of landslides triggered by rainfall*
5. **Rome 2015 Science Symposium on Climate**, Rome 19-20 November 2015. Poster presentation for
  - *Frequency analysis of future landslide occurrences by using rainfall point processes and hydrological models*
6. **26<sup>th</sup> IUGG General Assembly 2015**, Prague 22 June -2 July 2015. Poster presentation for
  - *Process based design flood estimation under parameter uncertainty: a case study in southern Italy*
7. **EGU General Assembly 2015**, Vienna 12-17 April 2015. Poster presentation for:
  - *Model parameters conditioning on regional hydrologic signatures for process-based design flood estimation in ungauged basins*
  - *The Generalized FLAIR Model (GFM) for landslide forecasting*
8. **Mediterranean Meeting on “Monitoring, modelling and early warning of extreme events triggered by heavy rainfalls”**. PON 01\_01503 - MED-FRIEND project, University of Calabria, Cosenza (Italy), 26-28 June 2014. Oral presentation for
  - *Analysis of rainfall fields in a Mediterranean area*
9. **EGU General Assembly 2014**, Vienna 27 April – 2 May 2014. Poster presentation for
  - *Rainfall fields in southern Italy: spatial and temporal variability of scaling properties and correlation structure*
10. **Facet of Uncertainty: 5<sup>th</sup> EGU Leonardo Conference – Hydrofractals '13 – Statistical Hydrology STAHY 2013**, Kos Island 17-19 October 2013. Oral presentation for
  - *Performance assessment of a Bayesian Forecasting System (BFS) for real-time flood forecasting*
11. **86<sup>o</sup> Conference of Italian Geological Society**, Rende (CS) - Italy, 18-20 September 2012.
  - Oral presentation for *Models for landslides induced by precipitation in Norway*
  - Poster presentation for *Development of a hydrological landslide model at regional scale. Applications in the central part of Calabria region (southern Italy)*
12. **6<sup>th</sup> World FRIEND Conference**, Fez, Morocco, 25-29 October 2010. Oral presentation for
  - *Mathematical models for early warning systems.*
13. **11<sup>th</sup> Plinius Conference on Mediterranean Storms**, EGU Topical Conference Series, Barcellona 7 -11 September 2009. Oral presentation for
  - *Occurrence analysis of daily rainfalls by using non-homogeneous Poissonian processes*
14. **STAHY 2010 International Workshop on Advances in Statistical Hydrology**, Taormina, 23-25 May 2010. Oral presentation for
  - *Stochastic models for rainfall nowcasting*
15. **AMHY-FRIEND International Workshop on Hydrological Extremes**, Università della Calabria, 10-12 July 2008. Oral presentation for
  - *Influence of threshold values on storm occurrence process modelled with a non-homogeneous Poisson distribution*

16. **European Geosciences Union (EGU), General Assembly 2007**, Vienna, 15-20 April 2007. Poster presentation for
  - *Rainfall forecasting by coupling stochastic models and meteorological information*
17. **International Conference "Risk Analysis 2006"**, Malta, 19-21 June 2006. Oral presentation for
  - *A stochastic approach to rainfall forecasting in space-time domain: the PRAISEST model*

## 9. List of Publications

### 9.1 Books

1. De Luca D.L. (2013) **Rainfall Nowcasting Models for Early Warning Systems**. (Ed. T.W.S. Wong), Nova Publishers.  
([https://www.novapublishers.com/catalog/product\\_info.php?products\\_id=37699](https://www.novapublishers.com/catalog/product_info.php?products_id=37699))

### 9.2 Papers in Journals which are indexed on Scopus and/or WoS databases

1. De Luca, D.L.; Petroselli, A.; Galasso, L. (2020). **Modelling climate changes with stationary models: is it possible or is it a paradox?** In: Sergeyev Y., Kvasov D. (eds) *Numerical Computations: Theory and Algorithms*. NUMTA 2019. Lecture Notes in Computer Science, vol 11974. Springer, Cham. [https://link.springer.com/chapter/10.1007/978-3-030-40616-5\\_7](https://link.springer.com/chapter/10.1007/978-3-030-40616-5_7)
2. De Luca, D.L.; Galasso, L. (2019). **Calibration of NSRP models from extreme value distributions**. *Hydrology (Switzerland)*, 6, 89; <https://doi.org/10.3390/hydrology6040089>  
(<https://www.mdpi.com/2306-5338/6/4/89/htm>)
3. De Luca, D.L.; Galasso, L. (2018). **Stationary and Non-Stationary Frameworks for Extreme Rainfall Time Series in Southern Italy**. *Water (Switzerland)*, 10, 1477; <https://doi.org/10.3390/w10101477>.  
(<https://www.mdpi.com/2073-4441/10/10/1477>)
4. Versace, P., Capparelli, G., De Luca, D.L. (2018). **TXT-tool 2.039-4.1: Flair model (forecasting of landslides induced by rainfalls)**. *Landslide Dynamics: ISDR-ICL Landslide Interactive Teaching Tools: Volume 1: Fundamentals, Mapping and Monitoring*, pp. 381-389. DOI: 10.1007/978-3-319-57774-6\_28
5. Versace, P., Capparelli, G., De Luca, D.L. (2017). **TXT-tool 2.039-4.2 LEWIS Project: An Integrated System for Landslides Early Warning**. *Landslide Dynamics: ISDR-ICL Landslide Interactive Teaching Tools: Volume 1: Fundamentals, Mapping and Monitoring*, pp. 509-535. DOI: 10.1007/978-3-319-57774-6\_38
6. Versace P.; De Luca D.L. (2017). **Deterministic and Probabilistic Rainfall Thresholds for Landslide Forecasting**. In: *Advancing Culture of Living with Landslides*. Vol. 4, p. 169-176, Mikoš M., Casagli N., Yin Y., Sassa K., ISBN: 978-3-319-53484-8, DOI: 10.1007/978-3-319-53485-5\_18  
([https://link.springer.com/chapter/10.1007/978-3-319-53485-5\\_18](https://link.springer.com/chapter/10.1007/978-3-319-53485-5_18))
7. De Luca, D.L.; Biondi, D. (2017). **Bivariate return period for design hyetograph and relationship with T-year design flood peak**. *Water (Switzerland)*, 9 (9), art. no. 673. DOI: 10.3390/w9090673  
(<http://www.mdpi.com/2073-4441/9/9/673>)
8. Biondi D.; De Luca D.L. (2017). **Rainfall-runoff model parameter conditioning on regional hydrological signatures: application to ungauged basins in southern Italy**. *Hydrology Research*, 48(3): 714-725, ISSN: 1998-9563, DOI: 10.2166/nh.2016.097  
(<http://hr.iwaponline.com/content/early/2016/08/08/nh.2016.097>)
9. De Luca D.L.; Versace P. (2017). **Diversity of Rainfall Thresholds for early warning of hydro-geological disasters**. *Advances in Geosciences*, 44: 53-60, ISSN: 1680-7359, DOI: <https://doi.org/10.5194/adgeo-44-53-2017>  
(<http://www.adv-geosci.net/44/53/2017/>)
10. De Luca D.L.; Versace P. (2017). **A comprehensive framework for empirical modeling of landslides induced by rainfall: the Generalized FLAIR Model (GFM)**. *Landslides*, 14(3): 1009-1030, ISSN: 1612-5118, DOI: 10.1007/s10346-016-0768-5  
(<https://link.springer.com/article/10.1007/s10346-016-0768-5>)

11. De Luca D.L.; Versace P. (2016). **A general formulation to describe empirical rainfall thresholds for landslides.** *Procedia Earth And Planetary Science*, 16: 98-107, ISSN: 1878-5220, DOI: 10.1016/j.proeps.2016.10.011  
(<http://www.sciencedirect.com/science/article/pii/S187852201630011X>)
12. De Luca D.L.; Cepeda J.M. (2016). **A procedure to obtain analytical solutions of 1D Richards' equation for infiltration in two-layered soils.** *Journal of Hydrologic Engineering*, 21(7), Article number 04016018, DOI: 10.1061/(ASCE)HE.1943-5584.0001356  
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