

CURRICULUM VITAE

ELISA ARNONE, PH.D

UPDATE: 26/05/2023



BIO

Name: Elisa Arnone
Year of Birth: 1982
Telephone no: +39 0432 558767
e-mail: elisa.arnone@uniud.it , elisa.arnone@gmail.com

researchgate: https://www.researchgate.net/profile/Elisa_Arnone
linkedin: <https://www.linkedin.com/in/elisa-arnone-90b7b011/>
twitter: <https://twitter.com/ElisaArnone>

CV SUMMARY

Since November 2022, I have been Associate Professor at University of Udine. I collaborate as a research affiliate with the Georgia Institute of Technology (USA). For almost 3 years, I worked for a SME company based in Rome specialized in climate risk assessment for insurance agencies. I graduated at University of Palermo. During my career, I have been carried out strong interdisciplinary researches which involves climate, hydrological and geomorphic fields. I have been involved in international projects (three NASA projects and four European projects). I authored 28 peer-reviewed ISI publications and more than 35 conference proceedings. I supervised students for their degree and Ph.D thesis. Please, see in the following my detailed resume.

CURRENT POSITION

November 2022 to present **Associate Professor** in Hydrology and Hydraulic Constructions (SSD ICAR/02), Polytechnic Department of Engineering and Architecture, Università degli Studi di Udine, Udine.

January 2023 to present **Long-Term Research Affiliate** at the School of Civil and Environmental Engineering, Georgia Institute of Technology (GATECH), Atlanta (GA), USA

CAREER SUMMARY

November 2019 to November 2022 **Assistant Professor** (Senior Researcher) in Hydrology and Hydraulic Constructions, Polytechnic Department of Engineering and Architecture, Università degli Studi di Udine, Udine.

May 2017 to October 2019 **Hydrological Scientist** at AMIGO s.r.l., SME specialized in providing climate services to large international organizations. She is responsible of management and analysis of data for the development of climate-hydrological services. Rome, Italy

October 2016 to March 2017 **Researcher** at Università degli Studi di Palermo, Polo Universitario di Trapani, for the activity on “Geostatistical and hydrodynamic analyses of data Calypso network”. Calypso project – Coordinator: Prof. Giuseppe Ciralo. Palermo, Italy

April 2016 to September 2016 **Researcher** at CINFAI for the activity on “Physically-based and distributed hydrological models to evaluate erosion processes using bathymetric measurements”. RITMARE project – Coordinator: Prof. Goffredo La Loggia - CINFAI - SP3 WP1 AZ2 – Palermo, Italy

February 2012 to February 2016 **Postdoctoral fellowship** - Research activity on “Interaction between climate change and geomorphological and eco-hydrological processes”. Supervisor Prof. G. La Loggia – Dipartimento di Ingegneria Civile, Ambientale, Aerospaziale, dei Materiali (DICAM), University of Palermo, Italy

EDUCATION AND TRAINING

- December, 2017* She passed the Italian Scientific National Exam “**Abilitazione Scientifica Nazionale**” to be Associate Professor in the Hydrological Scientific Sector (ICAR/02).
- Aprile 2011* She achieved the **PhD title** in Environmental and Hydraulic Engineering, at Department of Civil, Environmental and Aerospace Engineering (DICA), University of Palermo. Final Dissertation on “An integrated System for the Analysis of Rainfall-Triggered Landslides”. Supervisors: Prof. RL Bras, Dr. LV Noto.
- March 2008* She passed the Italian National Exam for the Admission to the **Practice of Engineering**, and she was admitted to the Engineers Register of Agrigento (Section A, Sector a, n° 1755).
- October 2007* She achieved the **Master’s degree in Environmental Engineering**, University of Palermo, with dissertation “Un approccio a base fisica e a dati distribuiti per la valutazione dei fenomeni erosivi a scala di bacino e di evento. Prime applicazioni”, full marks and honour (110/110 cum laude).
- April 2005* She achieved the **Bachelor’s degree in Environmental Engineering**, University of Palermo, with dissertation “Analisi dell’effetto della risoluzione di un TIN sulla risposta idrologica a scala di bacino. Applicazione al bacino del Torrente Maganoce”, full marks and honour (110/110 cum laude).
- July 2001* She achieved the **High School Diploma** at Liceo Scientifico “Leonardo”, Agrigento, with full marks (100/100)

FOREIGN VISITING PERIODS

- April 2023 to June 2023* **Visiting** under the **Long-term Research Affiliate** position at the School of Civil and Environmental Engineering, Georgia Institute of Technology. GATECH, Atlanta (GA), USA
- January 2017 to February 2017* **Visiting** at the School of Civil and Geosciences at Newcastle University, Newcastle Upon Tyne, UK.
- February 2013 to February 2014* **Visiting Postdoctoral Researcher** (Fellowship) at the School of Civil and Environmental Engineering, Georgia Institute of Technology. GATECH, Atlanta (GA), USA.
- October 2009 to July 2010* **Visiting Scholar** at the Department of Civil and Environmental Engineering, University of California, Irvine, (CA), USA.
- January 2007 to July 2007* **SOCRATES/ERASMUS** project, semester “The Foundation of marine structure” the Department of Civil Engineering, Aalborg University, Aalborg, (Denmark).

RESEARCH ACTIVITY

- Research topics* Physically based and distributed eco-hydrological modeling applied to rainfall-induced geohazard assessment;
Hydrological modeling to support debris flow triggering analyses;
Hazard susceptibility mapping based on statistical and data-driven methods;
Rainfall extremes;
Climate change impacts on hydrological variables;
Global-scale gridded climate data for hydrological applications.

Activities and contributions

She contributed to the development of two components of the hydrological model tRIBS (*Triangulated Irregular Network Real-Time Integrated Basin Simulator*) (MIT development), for modeling geomorphological, erosion and landslide processes. She developed a topological model for the root system representation.

She has been carried out researches on the hydrological triggering of debris flows that characterize the Alpine areas of the north-eastern Italy.

She has been carried out researches on the impacts of climatic variations on the hydrological indicators, average and extreme runoff, in combination with other perturbing factors (e.g. land-use change).

She contributed to the development of a decision support system for the of water resources management based on seasonal forecast gridded-global data (Amigo s.r.l.)

PUBLICATION METRICS

No of publications

Authors of more than 80 publications, 28 on ISI international scientific journal ISI (please, see full list of publications).

Publication metrics up to 26/05/2023

	# products	# citations	h-index
Scopus	28	876	17
ReserachGate	60	1132	21
Scholar Google	>85	1212	20

ORCID: <https://orcid.org/0000-0002-0022-5643> Scopus ID: [54408049000](https://scopus.com/authid/detail.url?authorID=54408049000)

Reference thresholds (SOGLIA) for the scientific "ASN I Fascia"

Scientific Sector	SOGLIA products	SOGLIA citations	SOGLIA h-index
08/A1	12	197	7

REVIEWER AND EDITORIAL ACTIVITY

Reviewer activity

Catena, Earth Surface Processes and Landforms, Earth Surf. Dynam, ENVSOFT, International Journal of Climatology, Geomatics, Natural Hazards and Risk, Geophysical Research Letters, Hydrology and Earth System Sciences, Hydrological Processes, Journal of Geophysical Research, Journal of Hydrology, Natural Hazards and Earth System Sciences, STOTEN, Water, Water Resources Research.

Reviewer of 2 Ph.d theses, one of which for the *Griffith University*, Queensland, Australia.

Editorial activity

Member of the *Topical Advisory Panel* of Water.

MEMBER OF SCIENTIFIC ORGANIZATIONS

Member of groups/associations

Collaborator of the *Collaborative Center for Landslide Geohazards*, for the hydrological modeling (<https://landslides-geohazards.gatech.edu/>)

Member of Gruppo Italiano di Idraulica (GII): she is the referent for the University of Udine.

Member of Società Italiana di Idrologia (SII).

Member of *International Association of Hydrological Sciences* (IAHS).

Member of *European Water Resources Association* (EWRA).

Member of *American Geophysical Union* (AGU).

Member of *European Geosciences Union* (EGU).

RESEARCH PROJECTS AND COLLABORATIONS

Scientific Coordinator

Scientific Coordinator of the research unit (RU) of Università degli Studi di Udine and substituted PI of the project proposal submitted within the national competition *Progetti di Ricerca di Rilevante Interesse Nazionale* (PRIN); partners are Università degli Studi di Padova, Palermo and CNR (submitted 30/03/2022).

Collaboration in international projects

PI and scientific coordinator for the research unit (RU) of Università degli Studi di Udine of the project proposal submitted within the national competition *Progetti di Ricerca di Rilevante Interesse Nazionale* (PRIN); partners are Università degli Studi di Cagliari, Politecnico di Torino, Milano (submitted 30/11/2022).

Scientific Coordinator of the Memorandum of Understanding No. CQ23_003 between the DPIA, University of Udine and the DI, Georgia Institute of Technology (Atlanta, USA) for research, training and teaching activities in the hydrologic modeling field. 2023-2026.

Scientific Coordinator of the Memorandum of Understanding No. 964 - 2020-III / 14.5 between the DPIA, University of Udine and the DI, University of Palermo for research, training and teaching activities in the hydrology field. 2020-2023.

Project on Collaborative Center for Landslide Geohazards, NSF Centers for Innovation and Community Engagement in Solid Earth Geohazards (21-628). Participant as Collaborator (2023 – present)

Project SOON (*Station Observation Outlier Finder*). EUROPEAN DATA INCUBATOR, H2020, Grant agreement No 779790. Participant within the team of Amigo s.r.l.. 2018-2019

Project CrossClimate (*Climate services for medium-small water utilities*), H2020 NEPTUNE, Grant agreement 691554, subgrant NEP-PTP-31-AMIGO. Participant within the team of Amigo s.r.l.. 2017-2019.

Project XCF, Extreme Climate Facility, established by African Risk Capacity (ARC) agency. Participant within the team of Amigo s.r.l..2017-2018.

National Science Foundation (NSF) project “Luquillo Critical Zone Observatory (CZO): The role of hot spots and hot moments in tropical landscape evolution and functioning of the critical zone” EAR1331841. Participant within the Co-Investigator group of Prof. R.L. Bras. 2013-2018.

Project SESAMO, “SistEma informativo integrato per l’acquisizione, gestione e condivisione di dati Ambientali per il supporto alle decisioni”, PO FESR 2007/2013 - Protocollo n.112 – CUP G23F11000790004. Participant within the Principal-Investigator group of Prof. G. La Loggia. 2011-2014.

Project NASA on “Predicting Landslides Using Measurements of Precipitation from Space” NNX07AD29G. Participant within the Principal Investigator group of Prof. R.L. Bras. 2009-2011.

Projects MEDIWAT I and II on “Sustainable management of environmental issues related to water stress in Mediterranean islands”, 2G-MED09262. PROGRAMME MED (2007-2013), Priority-Objective 2-1, Axe 2, Objective 2. Participant within the group coordinated by Prof. LV. Noto. 2011-2014

TEACHING ACTIVITY AND INSTITUTIONAL RESPONSIBILITY

<i>From A.A. 2021/22</i>	Lecturer in “Hydrology” course for the Master's Degree in Civil Engineering and Engineering for the Environment, Territory and Civil Protection, University of Udine.
<i>From A.A. 2020/21</i>	Lecturer in “Hydraulic Construction” course for the Master's Degree in Civil Engineering and Engineering for the Environment, Territory and Civil Protection, University of Udine.
<i>2014</i>	e-Learning lecturer in “Physically-based modeling for the analysis and forecasting of rainfall-triggered landslides” course for the post-graduate degree “Expert in Hydrogeological Risk Forecast / Prevention”, DIMES, University of Calabria.
<i>2012</i>	Lecturer in “Laboratory of Geographical Information System: Spatial Analyst” course for the post-graduate degree “Expert in Monitoring, Analysis and Management of Environmental and Territorial Data”, University of Palermo.
<i>2008-2016</i>	TA of “Hydrology”, “GIS” and “Prediction and Prevention of Hydrogeological Risk” courses for the degrees in Environmental Engineering, University of Palermo. 2008-2016.

<i>Advisor activities</i>	<p>Co-advisor of a PhD thesis by Veronica Zoratti, University of Udine-University of Trieste, 2019-present</p> <p>Co-advisor of more than fourteen theses for master and bachelor degrees, University of Palermo, University of La Sapienza, University of Udine (2011-present)</p> <p>Internship advisor for the post-graduate degree “Expert in Monitoring, Analysis and Management of Environmental and Land Data”, University of Palermo. 2012</p>
<i>Commissions</i>	<p>Member of the inter-university PhD course Civil-Environmental Engineering and Architecture, University of Udine-University of Trieste.</p> <p>Member of the Quality Commission (CAQ) of the Master's Degree Course in Engineering for the Environment, Territory and Civil Protection, University of Udine, since 2019.</p>

INVITED SEMINARS/TALKS

- “Rainfall-induced landslides: the potential of the modeling tools”, Workshop of the Collaborative Center of Landslide Geohazards, Georgia Institute of Technology, June 2023.
- “Exploiting gridded climate data for hydrological applications: the example of seasonal forecasts”, PhD course in Civil-Environmental Engineering and Architecture, University of Udine-University of Trieste, July 2021.
- “New perspectives from hydrological science for a resilient water management and designing”. ESOF 2020, Trieste, ITALY, September 2020.
- “La modellazione idrologica distribuita: applicazioni”, for students of Civil Engineering and Engineering for the Environment, Territory and Civil Protection, University of Udine. December 2019.
- “A physically-based and distributed tool for modeling the hydrological and mechanical processes of shallow landslides”. AGU Fall Meeting, San Francisco, CA, December 2015.
- “Impacts of plant roots on improving slope stability: a methodology for estimating the additional root cohesion”. The Fourth Italian Workshop on Landslides, Naples, September 2015.

AWARDS AND FELLOWSHIP

<i>August 2018</i>	Award “ <i>Outstanding Contribution in Reviewing</i> ” da Journal of Hydrology “ <i>In recognition of the contributions made to the quality of the journal</i> ”.
<i>June 2018</i>	Award for Best Poster Presentation at Giornate dell’Idrologia 2018, Roma, 18-20 Giugno 2018, by SII.
<i>2017</i>	PhD-ITalents Fellowship, 3 years, at AMIGO SME, by MIUR, Confindustria, Fondazione Crui, February 2017.
<i>2012</i>	Best Poster” at the 3rd International Conference on Soil Bio- and Eco-Engineering the Use of Vegetation to Improve Slope Stability, by Scientific Committee, Vancouver, July 2012.

LANGUAGE AND INFORMATIC SKILLS

<i>English</i>	Trinity ISE III – Certificate in Advanced English (CAE) C1 level .
<i>Informatic</i>	Software GIS (<i>ArcGIS ESCRI, QGIS</i>) e CAD (<i>AutoCad</i>) Software <i>Matlab, R</i> Minimum level of <i>bash, Python, LyX-Latex</i> <i>Climate Data Operators</i> (CDO), linux

PUBLICATIONS

Please, see full List of Publications ([IRIS system](#))

May 26, 2023

Elisa Arnone