

PAOLO TAROLLI



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SUMMARY

Paolo Tarolli is **Full Professor** in *Soil & Water Conservation and Agricultural Water Management* and **Board of Directors Member** of *Galilean School of Higher Education* at University of Padova (Italy). He is also **Visiting Professor** at Dalian University of Technology (China), and **Adjunct Professor** at University of Georgia (USA) and Alexandru Ioan Cuza University of Iasi (Romania). He is **Vice President** of Soil and Water Conservation Division of Italian Society of Agricultural Engineering (AIIA), and he was **Deputy President** of Natural Hazard division (EGU) from 2019 to 2022. He is **Editor** of 14 international journals.

He is expert in digital terrain analysis, earth surface processes analysis, hydro-geomorphology, remote sensing, GIS. New research directions focus on agricultural landscapes under climate change scenarios; sustainable agriculture to mitigate the impact of weather extremes and soil salinization; steep-slope agriculture and its heritage preservation. His research on the mitigation strategies of soil salinization in agriculture is cited in two official reports of European Commission in 2024.

He is author of 200 articles (indexed in Scopus) published in international peer-reviewed journals (including prestigious *Nature Food*, *Review of Geophysics*, *Science Bulletin*), with the following publication metrics: Google Scholar (**h-index 61**, tot. cit. 11916). He is ranked since 2020 (five consecutive years) as **world's top 2% most cited scientist (top 0.16%)** (source *Scopus* by Elsevier BV & *Stanford University*).

He has given **43 invited talks** in high-ranking international research institutions and foreign Academies (i.e. Princeton University, Nanyang Technological University, Ecole Polytechnique Fédérale de Lausanne, Beijing Normal University, Dalian University of Technology, Tongji University, AgroParisTech, Chinese Academy of Sciences), and at international meeting (EGU, American Society of Agronomy, IEEE, IGU, ISPRS, AOGS). He was appointed as Panel Member of FTC (Portugal), FWO (Belgium), NERC (UK), NCN (Poland); evaluator of EU Commission framework programme for PRIMA project; reviewer of MIUR, NWO, NSF, SNSF, NERC, Natural Sciences and Engineering Research Council of Canada, FWF Austrian Science Fund, EU Commission research projects. He is member of the European Geoscience Union, American Geophysical Union, Italian Association of Agricultural Engineering.

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EDUCATION

2006 **Ph.D.** Environmental watershed management and geomatics, University of Padova, Italy
 2001 **M.Sc.** Forest and Environmental Sciences, University of Padova, Italy

POSITIONS

Current positions

2022 – now **Full Professor.** Dept. of Land Environment Agriculture and Forestry, Univ. of Padova (Italy)
 2020 – now **Visiting Professor.** Dalian University of Technology (China)
 2018 – now **Adjunct Professor.** Alexandru Ioan Cuza University of Iași (Romania)
 2017 – now **Adjunct Professor.** University of Georgia (USA)

Previous positions

2017 **Visiting Professor.** Guangzhou University (China)
 2015 – 2022 **Associate Professor.** University of Padova (Italy)
 2013 – 2019 **Visiting Professor.** China University of Geosciences, Beijing (China).
 2011 – 2014 **Assistant Professor.** Department of Land, Environment, Agriculture and Forestry, University of Padova (Italy)
 2011 – 2013 **Visiting Professor.** Earth Sciences Department, National Cheng Kung University (Taiwan)
 2011 **Visiting Professor.** School of Architecture, Civil and Environmental Engineering, École Polytechnique Fédérale de Lausanne (EPFL)(Switzerland)
 2010 **Marie Curie Fellow** (Experienced Researcher). Institute of Inland Waters, Hellenic Centre for Marine Research (Greece)
 2009 – 2013 **Adjunct Professor.** Marche Polytechnic University (Italy)
 2008 **Visiting Scholar.** Civil Engineering Dept. and St. Anthony Falls Laboratory, University of Minnesota (USA)
 2006 – 2010 **Research Associate.** University of Padova (Italy)
 2005 **Visiting Scholar.** Civil and Environmental Engineering Dept., Utah State University (USA)
 2002 – 2006 **Graduate Research Assistant.** Department of Land and Agroforest Environments, University of Padova (Italy)

TEACHING ACTIVITIES

Actual teaching activities

- **Water Resources Management** | University of Padova ([48 hr, 6 CFU](#))
academic years (**9**): 16/17, 17/18, 18/19, 19/20, 20/21, 21/22, 22/23, 23/24, 24/25
- **Anthropocene, Landscape, Water, Soil** | University of Padova ([42 hr, 6 CFU](#))
academic years (**4**): 21/22, 22/23, 23/24, 24/25
- **Soil, Climate, Food Security** | University of Padova ([8 hr, 1 CFU](#))
academic years (**2**): 23/24, 24/25
- **Sustainable Management of Soil and Water in Viticulture** | University of Verona ([24 hr, 3 CFU](#))
academic years (**2**): 23/24, 24/25

Past teaching activities

2011 – 2024 *Integrated Watershed Management* | University of Padova ([48 hr, 6 CFU](#))
 2014 – 2021 *GIS applications in agriculture* | University of Padova ([32 hr, 4 CFU](#))
 2016 – 2019 *Digital Terrain Analysis* | China University of Geosciences in Beijing, China ([32 hr](#))
 2014 – 2016 *Soil and Water Resources Management* | University of Padova ([48 hr, 6 CFU](#))
 2017 *GIS analysis in lowland agricultural landscapes* | Guangzhou University, China ([16 hr](#))
 2013 – 2014 *Digital Geomorphology & Statistical Analysis* | China University of Geosciences in Beijing, China ([32 hr](#))

2013	<i>Rural Hydraulics</i> University of Padova (48 hr, 6 CFU)
2013	<i>Digital Terrain Analysis</i> National Cheng Kung University, Taiwan (50 hr)
2009 – 2013	<i>Soil and Water Conservation</i> Polytechnic University of Marche (54 hr, 6 CFU)
2009 – 2011	<i>Soil and Water Conservation</i> Polytechnic University of Marche (45 hr, 5 CFU)

SUPERVISION OF STUDENTS, POSTDOC AND/OR RESEARCH ASSISTANTS

Postdoctoral fellows (1 awarded)

Supervised (**tot 6**): **Aurora Ghirardelli** (2023-2025); **Wendi Wang** (2023-2026); **Sara Cucchiaro** (2019-2023) **Anton Pijl** (2020-2021); **Eugenio Straffelini** (2019-2021); **Giulia Sofia** (2021-2022; 2013-2018) **winner EGU Arne Richter Award 2019**

PhD students (5 awarded)

Supervised (**tot 13**): **Yujia Yang** (2024-2027) **Na Mulun** (2023-2026), **Massimiliano Lipa** (2023-2026), **Xue Chenli** (2023-2024) **honored PhD student**, **Eugenio Straffelini** (2021-2024) **winner Best Speaker Award 2021 IGU - International Geographical Union**, **Junliang Qiu** (2021-2024), **Wendi Wang** (2020-2023), **Luca Mauri** (2019-2022) **winner WASWAC Youth Outstanding Paper Award 2021**, **Zhang Qifei** (2018-2021), **Anton Pijl** (2017-2020), **Wenfang Cao** (2017-2019), **Giulia Roder** (2016-2018), **Massimo Prosdoci** (2014-2017)

Co-Supervised (**tot 11**): **Xiaoqi Li** (2023-2024) at Huazhong Agricultural University, **Siqi Yang** (2023-2024) Beijing Normal University, **Sijia Li** (2023-2024) International Research Center of Big Data for Sustainable Development Goals (CBAS), **Lin Chen** (2021-2022) at Northwest A&F University, **Alessia Giarola** (2021-2023) at University of Pavia, **Jian Luo** (2021-2022) at Sichuan Agricultural University, **Eros Borsato** (2017-2019) **winner EGU ECSTS award**, **Kamila Pawluszek** (2017-2019) at Wroclaw University of Environmental and Life Sciences **winner best national diploma thesis by Poland "Minister of Development, Labor and Technology"**, **Jie Xiang** (2015-2018) at China University of Geosciences in Beijing, **Jin Wang** (2014-2018) at Chinese Academy of Science, **Ke Li** (2013-2015) at China University of Geosciences in Beijing.

MSc students (1 awarded)

Supervised (**tot 60**), Co-Supervised (**tot 5**)

RESEARCH PROJECTS

2025 – 2029	Eurosion – Horizon EU Project 12,000,000 € (Partner, PI monitoring soil erosion node in Italy)
2025 – 2028	Uliveto Smart (EU rural dev. grant – Veneto Region) 413,600 € (Scientific Coordinator; PI of WP1, WP2, WP3)
2025 – 2028	A.Q.U.A. (EU rural dev. grant – Veneto Region) 487,700 € (PI-WP3)
2025 – 2026	Seawater intrusion monitoring in Lazio region (Land Reclamation Authority of Litorale Nord) 43,000 € (PI)
2024 – 2028	Platform for Helping small and medium farmers to Incorporate digital Technology for equal Opportunities (PHITO) – Horizon EU Project 5,025,000 € (PI-WP3)
2024 – 2025	Seawater intrusion monitoring in Lazio region (Land Reclamation Authority of Litorale Nord) 35,000 € (PI)
2022 – 2026	Agritech - National Research Centre for Agricultural Technologies 320,000,000 € (co-PI-WP4.2, Smart climate agriculture and forestry: from sustainable products to the bioeconomy)
2021 – 2024	Sustainable management of water and soil in agriculture (Land Reclamation Authority of Lessinio Euganeo Berico) 25,000 € (PI)
2019 – 2022	SOILUTION SYSTEM - Innovative solutions for soil erosion risk mitigation and a better management of vineyards in hills and mountain landscapes (EU rural dev. grant – Veneto Region) 450,000 € (Scientific Coordinator, PI-WP1)
2019 – 2022	FITOCHE - From field to cheese (EU rural dev. grant – Veneto Region) 300,000 € (PI-WP4)
2018 – 2023	TerrACE - Terrace Archaeology and Culture in Europe (ERC-AdG) 2,600,000 € (PI-WP1)
2018 – 2021	ViTe - Vineyard Terraced landscapes: understanding the Environmental constraints to improve sustainable managements (University of Padova) 60,000€ (PI)

2015 – 2017 CPDR147412/14 - Artificial drainage networks evolution in a reclamation area of Veneto floodplain: evaluation of the NSI index (University of Padova) **46,666€ (PI)**

EDITORIAL ACTIVITY (INTERNATIONAL JOURNALS)

Member of the editorial board of **14** international journals indexed in Scopus and Web of Science, with the following editorial roles:

2024 – present	Editorial Board Member: Science of the Total Environment
2023 – present	Editorial Board Member: Cell Reports Sustainability
2023 – present	Editorial Board Member: Evolving Earth
2023 – present	Editorial Board Member: The Innovation Geoscience
2023 – present	Editorial Board Member: Pirineos (CSIC)
2022 – present	Editorial Board Member: Revista de la Facultad de Ciencias Agrarias
2022 – present	Associate Editor: Int. Soil and Water Conservation Research
2020 – present	Editorial Board Member: Geography and Sustainability
2018 – present	Executive Editor: Natural Hazards and Earth System Sciences
2018 – present	Associate Editor: Land Degradation & Development
2018 – present	Editorial Board Member: iScience
2017 – present	Associate Editor: Remote Sensing
2014 – present	Editorial Board Member: Earth Surface Processes and Landforms
2014 – present	Editorial Board Member: Journal of Mountain Science
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2021 – 2022	Editorial Board Member: Int. Soil and Water Conservation Res.
2019 – 2023	Editorial Board Member: Heliyon
2017 – 2022	Editorial Board Member: Quaternary
2015 – 2023	Editorial Board Member: Anthropocene
2014 – 2018	Editorial Board Member: Land Degradation & Development
2012 – 2018	Editorial Board Member: NHESS

PANEL MEMBER COMMITTEES, EVALUATOR, REVIEWER

Appointment as Panel Member of international research projects

2025	Fundação para a Ciência e a Tecnologia FTC (Portugal)
2024	Horizon EU PRIMA (<i>tot. 1 project evaluated</i>)
2021 – 2024	Fundação para a Ciência e a Tecnologia FTC (Portugal) (<i>tot. 46 projects evaluated</i>)
2021 – 2024	National Science Centre NCN (Poland) (<i>tot. 56 projects evaluated</i>)
2020 – 2021	Research Foundation Flanders FWO (Belgium) (<i>tot. 10 projects evaluated</i>)
2020 – 2021	Fundação para a Ciência e a Tecnologia FTC (Portugal) (<i>tot. 4 projects evaluated</i>)
2018	NERC: Newton Fund (United Kingdom) (<i>tot. 7 projects evaluated</i>)

Haward/Prize Committee

2024	Member Evaluation Panel of WASWAC Youth Paper Award 2021 (World Association of Soil and Water Conservation)
2021	Member Evaluation Panel of WASWAC Youth Paper Award 2021 (World Association of Soil and Water Conservation)
2019 – 2022	Member Evaluation Panel of ECS award EGU Natural Hazards Division (EGU)

Reviewer international & national research projects

2013 – now	EU commission, Italian Ministry of Education University and Research, US National Science Foundation, Netherlands Organization for Scientific Research (NWO), National Science Centre of Poland, Natural Sciences and Engineering Research Council of Canada, Swiss National Science Foundation, FWF Austrian Science Fund, Ministry of Education and Science (Rep. Kazakhstan)
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Panel member academic positions selection

2020 – now 7 post-doc research associate, 8 Assistant Professor, 4 tenures track Associate Professor, 1 tenure track Full Professor

AWARDS & RECOGNITION

International

2023 **Distinguished Extensionist Award**, World Association of Soil and Water Conservation
 2022 **Top Cited Article Award**, journal *Geography and Sustainability* (Elsevier)
 2021/22 **Best Editor Award**, journal *Geography and Sustainability* (Elsevier)
 2020 – now **World top 2% most cited scientists** (top 0.16% in the category geological & geomatics engineering excluding self-citations) (*Elsevier*, by *Scopus*)
 2017 **Outstanding Editor** *Journal of Mountain Science* (Chinese Academy of Sciences)
 2014 **Top Cited Article Award**, journal *Anthropocene* (Elsevier)
 2011 **Editors' Citation** for Excellence in Refereeing for WRR given by AGU
 2010 **Outstanding Reviewer** for the *Journal of Hydrologic Engineering*, ASCE

National

2012 **Best Poster Award** – XXXIII Italian Conference of Hydraulics and Hydraulic Constructions
 2010 **Best Poster Award** – XXXII Italian Conference of Hydraulics and Hydraulic Constructions

ORGANIZATION OF INTERNATIONAL CONFERENCES & SCIENTIFIC MEETINGS

Member of Scientific Committee (*tot. 16: 13 international, 3 national*)

2025 13th Italian Society of Agricultural Engineering (AIIA) Conference in Reggio Calabria
 2024 Institute of Mountain Science, CAS in Chendu (China)
 2024 Italian Society of Agricultural Engineering (AIIA) Mid-Term Conference in Padova
 2022 12th Italian Society of Agricultural Engineering (AIIA) Conference in Palermo
 2021 AOGS-EGU Joint Conference on New Dimensions for Natural Hazards in Asia
 2020 AOGS-EGU Joint Conference on New Dimensions for Natural Hazards in Asia
 2015/16/17/18/19/20 European Geosciences Union General Assembly – [Science Officer](#) Natural Hazard Division
 2016/17/18/19 European Geosciences Union General Assembly – [Committee Chair](#) Soil System Science Division SSS11

Organization meetings/workshops (*tot. 38: 37 international, 1 national*)

2021 **President Organizing Committee** – Int. Forum Land Degradation, Soil Conservation and Sust. Development (World Association of Soil and Water Conservation, Italian Society of Agricultural Engineering, Soil and Water Conservation Society in China, Univ. of Padova, Dalian Univ. of Tech.) (**500 participants**)
 2021 **Organization & moderator** – Cycle of **24 seminars**, for researchers and students, organizations, concerning "Agricultural Hydraulics and Hydraulic Systems in agro-environmental applications (1st section event of the Italian Agricultural Engineering Association co-organized with Dept. TESAF-UNIPD, University of Perugia, University of Basilicata) (average per seminar **50 participants** in Zoom)
 2020 **Chairman Organizing Committee** Int. Workshop on "Remote Sensing for land degradation analysis and sustainable management of agroforestry systems" (Italian Society of Agricultural Engineering)(more than **400 participants**)
 2017 **Workshop** for young geomorphologists: "Short course in geomorphometry: Getting the most out of DEMs of Difference", European Geosciences Union General Assembly 2017 (co-organized with Tobias Heckmann and Wolfgang Schwanghart)
 2016 **Workshop** for young geomorphologists: "Digital Terrain Analysis of Anthropogenic Landscapes", European Geosciences Union General Assembly 2016 (co-organized with Tobias Heckmann and Wolfgang Schwanghart)
 2015 **Workshop** for young geomorphologists: "Quantitative interrogation of high-resolution DTMs", European

Geosciences Union General Assembly (co-organized with Tobias Heckmann and Wolfgang Schwanghart)

- **European Geosciences Union** (*tot. 31 sessions organized as convened & chaired*)

EGU2023, SSS9.12 "Challenges in cooperative research between EU-China on sustainable use of soil and water resources in agricultural systems"

EGU2022, SSS11.11/GM8 "New challenges in measuring geomorphological dynamics and estimating erosion rates in badland areas"

EGU2021, NH6.7 "Application of remote sensing and Earth-observation data in natural hazard and risk studies"

EGU2021, SSS11.1/GI6.6 "Development of New Technologies in Soil Conservation and Eco Sustainability"

EGU2020, EBM7 "Editorial board meeting of Natural Hazards and Earth System Sciences (NHSS)"

EGU2020, NH6.1/GM2.24 "Application of remote sensing and Earth-observation data in natural hazard and risk studies"

EGU2020, SSS11.4 "Development of new technologies in soil conservation and eco sustainability"

EGU2019, NH6.1/GI3.20/HS11.38 "Application of remote sensing and Earth-observation data in natural hazard and risk studies"

EGU2019, SSS12.3 "New technologies in soil conservation and eco-sustainability: supporting decision making"

EGU2018, HS2.2.3 "Lowlands: A hydrologic challenge in the global environmental change era"

EGU2018, NH6.1/AS5.21/CR7.3/GI2.17/HS11.33/SM3.12/SSS13.54 "Application of remote sensing and Earth-observation data in natural hazard and risk studies"

EGU2018, NH9.4 "Natural hazard impacts on technological systems and infrastructures"

EGU2018, SSS2.3/GM6.11/NH11.2 "Agricultural terraces of the world. Their pedological, geomorphological and hydrological role"

EGU2017, GM13.1/SC1 "Short course in geomorphometry: Getting the most out of DEMs of Difference"

EGU2017, HS2.2.3 "Lowlands: A hydrologic challenge in the global environmental change era"

EGU2017, NH3.12 "Landslide and Landslide Susceptibility Interactions with Transport Lines"

EGU2017, SMP48 "Subdivision SSS12: Material and Methods in Soil Science (public)"

EGU2017, SSS2.16/GM7.7/HS11.50 "Agricultural terraces of the world. Their pedological, geomorphological and hydrological role"

EGU2017, SSS10.8/BG9.6/HS9.11 "Soil Erosion, hydrological processes and biological degradation in worldwide vineyards"

EGU2016, GM6.1/BG7.5/HS11.13/SSS2.22 "Human-Landscape interaction in the Anthropocene"

EGU2016, GM13.1/SC10/SSS12.25 "Digital Terrain Analysis of Anthropogenic Landscapes"

EGU2016, SSS2.10/GM6.8/HS11.29/NH3.19 "Agricultural terraces of the world. Their pedological, geomorphological and hydrological role"

EGU2015, GM4.1 "Human-Landscape interaction in the Anthropocene"

EGU2015, GM11.3/SC48 "Quantitative interrogation of high-resolution DTMs"

EGU2015, SSS2.5/GM6.6/HS12.3 "Agricultural terraces of the world. Their pedological, geomorphological and hydrological role"

EGU2014, GM2.1 "Digital Landscapes: Insights into geomorphological processes from quantitative interrogation and use"

EGU2014, GM4.1/HS9.12/SSS9.18 "Human-Earth interaction from the Pleistocene to the Anthropocene: state of the science and future direction (co-organized)"

EGU2013, GM2.1 "Digital Landscapes: Insights into geomorphological processes from high-resolution topography, quantitative interrogation and geomorphological mapping"

EGU2013, GM4.2/SSS6.12 "Landscape in the Anthropocene: state of the art and future directions"

EGU2012, GM2.2 "Digital Landscapes: Quantitative Interrogation and Use to Examine Geomorphic Processes"

EGU2011, GM2.2/NH10.3/PS10.2 "Digital Landscapes: From Laser Scanning and High-resolution Measurement Technologies to Quantitative Interrogation of Geomorphic Processes"

- **American Geophysical Union** (*tot. 4 sessions organized as convened & chaired*)

AGU2024, Nature Based Solutions to ensure food and water security in arid region

AGU2020, INV12 - Earth, Agriculture, and Society: Toward Sustainable Development in the Anthropocene

AGU2018, Fingerprinting the Anthropocene: Observing and Understanding Social Change Across Earth's Landscapes

AGU2007, H43E/H51L/H52E Remotely Sensed DTMs for Hydrogeomorphic Applications

INSTITUTIONAL RESPONSIBILITIES, ORGANIZATION, SERVICE

Actual

- 2022 – now **Board of Directors Member** of *Galilean School of Higher Education*, University of Padova
- 2022 – now **Head of the Commission** for the 'Third Mission' of Dept. of Land, Environment, Agriculture and Forestry, University of Padova
- 2017 – now **Scientific Coordinator** of the Memorandum of Understanding between China University of Geosciences and University of Padova
- 2012 – now **Board Member** PhD Program *Land, Environment, Resources and Health*, University of Padova

Past

- 2019 – 2022 **Head of the Commission** for the 'Third Mission' & Communication of Dept. of Land, Environment, Agriculture and Forestry, University of Padova
- 2019 – 2022 **Member** of the Teacher-Student Joint Commission for the School of Agriculture and Veterinary Medicine, University of Padova
- 2018 – 2023 **Promoter** of the Joint-PhD program between China University of Geosciences and University of Padova
- 2017 – 2022 **Scientific Coordinator** of the Memorandum of Understanding between Massey University (NZ), University of Lincoln (UK), and University of Padova
- 2015 **Member of the Technical Organizing Committee** of the Sustainable Agriculture Master's Degree course, University of Padova
- 2012 – 2019 **Member** of the Commission for the Internationalization, Dept. of Land, Environment, Agriculture and Forestry, University of Padova
- 2012 – 2015 **Member** of Research Quality Evaluation Committee. Dept. of Land, Environment, Agriculture and Forestry, University of Padova
- 2014 **PI & coordinator**: UNIPD-NCKU (Italy-Taiwan) Joint Summer School 2014 "*Natural Hazards in the Italian Alps*"
- 2013 **PI & coordinator**: EGU Summer School 2013 "*Understanding Earth-Surface Processes in the Alpine Environment from High Resolution Topography*"

Panel member PhD committee

- 2011 – 2019 (**tot. 5 committees**): Montpellier SupAgro - INRA (France); University of Trieste (Italy); Ecole Polytechnique Fédérale de Lausanne (Switzerland); University of Genova (Italy); Ecole Nationale Supérieure des Mines de Saint-Etienne, Alès (France)

Third mission activity for University of Padova

Public events (**tot.9**)

- 2024 **Organization & moderator**: Anthropocene event for student at secondary school (Museum della Natura e dell'Uomo, University of Padova)
(*tot. 50 participants, students*)
- 2024 **Organization & moderator**: Event on climate and water resources co-organized with Water Authority Consorzio Bacchiglione and University of Padova
(*tot. 60 participants, stakeholders, engineers, politicians, mayors*)
- 2023 **Organization & moderator**: Anthropocene event for student at secondary school (Museum della Natura e dell'Uomo, University of Padova)
(*tot. 80 participants, students*)
- 2023 **Organization & teacher**: drone course for Farmer Association Coldiretti (Coldiretti Padova & University of Padova)
(*tot. 40 participants, farmers*)
- 2023 **Organization & moderator**: climate change impact on olive groves sector (Consorzio Garda DOP & University of Padova)
(*tot. 40 participants, stakeholders & citizens*)
- 2021 **Organization & moderator**: "Biodiversity as keyword of sustainability", Sustainable Development Festival 2021 (University of Padova)
(*tot. 28 participant, 386 visualizations Facebook*)
- 2021 **Organization & moderator**: Seminar series of the Italian Society of Agricultural Engineering - AIIA (section "land and water use") co-organized by Dept. TESAF (Univ. of Padova)

- (24 seminars - average 50 participants per seminar in Zoom)
- 2020 **Organization & moderator:** "Climate change and forests: a challenge for sustainability", Sustainable Development Festival 2020 (University of Padova)
(tot. 151 participants, 1295 visualizations Facebook, 247 visualizations Youtube)
- 2020 **Organization:** public event "Active protection of Val d'Alpone", for the celebration of 2nd edition of Agricultural Product Expo of Val d'Alpone and Val Tramigna
(participation of 7 mayors, politicians, policy-makers, stakeholders, citizens)

Social media (**tot. 4** pages edited)

- 2019 – 2023 Administrator and Editor of the page of *Dept. of Land Environment Agriculture and Forestry* at Univ. of Padova

SERVICE ACTIVITY SCIENTIFIC SOCIETIES

- 2022 – now **Vice President** *Soil and Water Conservation division*, Italian Association of Agricultural Engineering (AIIA)
- 2019 – 2022 **Deputy President** *Natural Hazards division* of the European Geosciences Union (EGU)
- 2018 – 2021 **Vice President** 7th section (Information and Communication Technologies) of the Italian Association of Agricultural Engineering (AIIA)
- 2016 – 2019 **Committee Chair** of the European Geosciences Union SSS subdivision SSS12: *Material and Methods in Soil Science*
- 2015 – 2020 **Science Officer** of the European Geosciences Union NH subdivision NH6: *Remote Sensing & Hazards*

Membership | Italian Association of Agricultural Engineering AIIA (2012-), British Society for Geomorphology (2011-2023), European Geosciences Union (2006-), American Geophysical Union (2005-)

Social media (**tot. 5** pages edited)

- 2020 – now Administrator and co-Editor of the page of Italian Association of Agricultural Engineering (AIIA)
- 2019 – 2023 Administrator and co-Editor of the page of *EGU NH Division*
- 2018 – 2023 Co-Editor of the page of the journal *NHESS*

SCIENTIFIC NETWORK

Ciprian Margarint, *geomorphology and hazards*, Alexandru Ioan Cuza University of Iasi (Romania)

Edward Park, *seawater intrusion in river deltas*, Nanyang Technological University (Singapore)

Federico Preti, *soil and water conservation*, University of Florence (Italy)

Jean-Stéphane Bailly, *remote sensing analysis of agricultural landscapes*, AgroParisTech (France)

Jian Luo, *soil micromorphology & soil salinity*, Inner Mongolia University (China)

Marco Cavalli, *Earth surface processes analysis*, CNR Irpi Padova (Italy)

Nunzio Romano, *surface runoff in agriculture*, University of Naples Federico II (Italy)

Tony Brown, *agricultural terraces & cultural landscapes*, UiT The Arctic University of Norway (Norway)

Xiangzhou Xu, *soil and water conservation*, Dalian University of Technology (China)

Wei Zhao, *remote sensing climate change on vegetation*, China Academy of Sciences (China)

Wenwu Zhao, *geography and sustainability*, Beijing Normal University (China)

INVITED TALKS

International Meetings (tot.16, including 4 keynotes)

- 2022 *Steep-Slope Agriculture: Threats under climate change scenarios*. [International Meeting of American Society of Agronomy, Crop Science Society of America, Soil Science Society of America 2022](#), Baltimore (USA)
- 2022 *Advanced remote sensing techniques to monitor steep-slope viticulture under climate change scenarios*. [2022 IEEE International Workshop on Metrology for Agriculture and Forestry](#), Perugia (Italy)
- 2022 *Steep-Slope Viticulture and Climate Change: Threats, Monitoring, Sustainable Management*. [International Workshop on Soil Erosion and Riverine Sediment in Mountainous Regions](#). Shaanxi (China)
- 2022 *Steep-Slope Viticulture and Climate Change: Threats, Monitoring, Sustainable Management*. [VII International Congress on Mountain and Steep Slope Viticulture, 2022](#) (Portugal) *Keynote talk*
- 2021 *Landslides in steep-slope agricultural landscapes*. [Fifth World Landslide Forum in Kyoto, 2020](#) (Japan)
- 2021 *Earth, Agriculture, and Society: towards sustainable development in the Anthropocene*. [International Forum on Land Degradation, Soil Conservation and Sustainable Development 2021 \(LASOSU2021\)](#), online, Dalian (China).
- 2021 *The Geomorphology of Life*. [EGU General Assembly 2021](#) (EGU21).
- 2021 *Advanced remote sensing techniques for monitoring anthropogenic landscapes*. [EGU General Assembly 2021](#) (EGU21).
- 2019 *High resolution geomorphologic characterization of conservation agriculture*. [General Assembly 2019 of the Soil Science Society of China](#), Dalian (China).
- 2018 *Observing and understanding the impact of socio-economic change on Earth and human health*. [Water and Planetary Health: A Catchment Systems Approach symposium](#) - University of Lincoln, Lincoln (UK).
- 2017 *The geomorphology of humanity*. [The 33rd Romanian Symposium of Geomorphology](#), Iasi (Romania). *Keynote talk*
- 2016 *Roads and agricultural terraces in the mountain areas of the world: their geomorphological and hydrological role*. [The 33rd International Geographical Congress](#), Beijing (China). *Keynote talk*
- 2016 *Hillslope Processes in Anthropogenic Landscapes*. [AAG 2016](#), San Francisco (USA).
- 2015 *High-resolution topography for understanding Earth surface processes: Opportunities and challenges*. [ISPRS Geospatial Week 2015](#), Montpellier (FR). *Keynote talk*
- 2015 *Geomorphology & Anthropocene*. [RGS-IBG Annual International Conference](#), Exeter (UK).
- 2012 *Opportunities and challenges from high-resolution topography for understanding earth surface processes*. [AOGS – AGU \(WPGM\) Joint Assembly 2012](#) (Singapore).

International Academies & Research Institutions (tot.27)

- 2024 *Steep-slope agriculture: environmental challenges, monitoring, sustainable management*. [Nanyang Technological University](#) (Singapore). (host: Edward Park, Earth Observatory of Singapore)
- 2024 *Nature Based Solutions for soil and water conservation under extremization of global warming*. [Institute of soil and water conservation \(ISWC\)](#) (Yangling, China).
- 2022 *Climate Change: is viticulture under threats? New perspectives*. [National University of Cuyo](#) (Argentina). (host: Facultad de Ciencias Agrarias)
- 2021 *Surface ponding in lowland landscapes – monitoring and management, towards sustainable agriculture*. [Beijing Normal University](#) (China). (host: College of Water Sciences)
- 2021 *Forest and agricultural roads – mass movements, drainage systems, monitoring and sustainable planning*. [Beijing Normal University](#) (China). (host: College of Water Sciences)
- 2021 *Steep-Slope Agricultural Landscapes: Threats, Monitoring, Sustainable Management*. [University of Twente](#) (NL). (host: Dept. of Earth Systems Analysis)
- 2021 *The Geomorphology of Life*. [University of Perugia](#) (Italy). (host: Dept. Physics and Geology)
- 2020 *Digital terrain analysis for soil and water conservation*. [Dalian University and Technology](#) (China). (host: Xiangzhou Xu)
- 2020 *Monitoring and sustainable management of steep-slope agricultural landscapes: the case study of Italy*. [Beijing Normal University](#) (China). (host: Chengzhong Pan)
- 2019 *Landscapes in the Anthropocene*. [Tongji University](#) (China). (host: Chen Kangli)
- 2019 *Humans and the Earth's Surface*. [Princeton University](#) (USA). (host: Amilcare Porporato)

- 2019 *High-resolution topography for understanding Earth surface processes: opportunities and challenges*. [Dalian University and Technology](#) (China). (host: Xiangzhou Xu)
- 2017 *The Topographic Signature of Humanity*. [Beijing Normal University](#) (China). (host: Wenwu Zhao)
- 2016 *Earth surface processes in anthropogenic landscapes*. [Guangzhou University](#) (China). (host: Wu Zhifeng)
- 2015 *High-resolution topography for understanding Earth surface processes: opportunities and challenges*. Innsbruck Summer School of Alpine Research 2015. (host: [University of Innsbruck](#), Faculty of Geo- and Atmospheric Sciences & International Society for Photogrammetry and Remote Sensing - ISPRS)
- 2015 *Anthropogenic Landscapes: critical issues and future challenges for Earth Science and Society*. [Massey University](#) (New Zealand). (host: Ian Fuller)
- 2014 *Anthropogenic Landscapes: critical issues and future challenges for Earth Science and Society*. Institute of Mountain Hazards and Environment, [Chinese Academy of Sciences](#), Chengdu. (host: Peng Cui)
- 2013 *High-resolution topography: the next chapter for the Earth science*. [China University of Geosciences](#), Beijing. (host: Chen Jianping)
- 2012 *Natural and Engineered Landscapes: new challenges from LiDAR for understanding Earth Surface Processes in the Anthropocene*. [National Cheng Kung University](#), Department of Earth Science, Tainan (Taiwan). (host: Ching-Weei Lin)
- 2011 *New opportunity and future challenges from high-resolution topography for the analysis of Earth Surface Processes*. [Central Geological Survey, Taipei](#) (Taiwan). (host: Chao-Tsiung Lin)
- 2011 *New opportunity and future challenges from high-resolution topography for the analysis of Earth Surface Processes*. [National Cheng Kung University](#), Department of Earth Science, Tainan (Taiwan). (host: Ching-Weei Lin)
- 2011 *New opportunity and future challenges from high-resolution topography for the analysis of Earth Surface Processes*. [AgroParisTech](#), Montpellier, France. (host: Jean-Stephane Bailly)
- 2011 *New opportunities but also challenges from high-resolution topography*. [École Polytechnique Fédérale de Lausanne EPFL](#), Switzerland. (host: Andrea Rinaldo)
- 2010 *High-resolution topography: new opportunities, issues and challenge in the Earth Science*. Institute of Inland Waters, [Hellenic Centre for Marine Research](#), Greece. (host: Emmanouil Anagnostou)
- 2010 *Semi-automatic methods for geomorphic features extraction: new opportunities from high-resolution topography*. [CNR-IRPI](#). Perugia, Italy. (host: Fausto Guzzetti)
- 2008 *High-resolution topography: new opportunities, issues, and future trends*. Civil Engineering Dept. and St. Anthony Falls Laboratory, [University of Minnesota](#), Minneapolis, USA. (host: Efi Foufoula-Georgiou)
- 2005 *Improving methods for mapping terrain stability with high resolution LIDAR-derived elevation data*. EES Dept., [New Mexico Tech](#), USA. (host: Enrique Vivoni)

PUBLICATION SUMMARY

Author of 200 papers indexed in Scopus (**75%** published with first or last name author as PI) published in international peer-reviewed journals, proceedings, and books with the following publication metrics (5 January 2025): [Google Scholar](#) (**h-index 61**, total citations **11916**). The papers on the mitigation strategies of soil salinization in agriculture is cited in 2024 in two official reports of EU Commission.

Ranked in the list of **world top 2% most cited scientists** since 2020: **top 0.16%** in the category [geological & geomatics engineering](#) (excluding self-citations), source *Elsevier BV & Stanford University*.

PUBLICATIONS

*corresponding author

Peer-reviewed journals

2025

1. Lippa, M.N., **Tarolli***, P., Straffelini, E. (2025). Climate change impacts and the reshaping of Canadian viticulture. *iScience*, 28(3), 111941, ISSN: 2589-0042, doi: 10.1016/j.isci.2025.111941.
2. Qiu*, J., Yang, X., Zheng, Z., **Tarolli***, P. (2025). High-resolution mapping of China's flooded croplands. *Science Bulletin*, doi:10.1016/j.scib.2025.01.053.
3. Ghirardelli, A., Straffelini, E., Park, E., D'Agostino, V., Masin, R., **Tarolli***, P. (2025). *Environmental Research Letters*, 20, 013005, ISSN: 1748-9326, doi:10.1088/1748-9326/ad9bcd.
4. Li, X., Zhu, J., Lyu, X., Sun, Y., Tan, C., Zhang, B., **Tarolli**, P., Yang*, Q. (2025). An integrative conservation and management strategy based on biological and cultural diversity assessment: A case study of Miaoling mountainous region, China. *Ecological Indicators*, 171, 113187, ISSN: 1470-160X, doi: 10.1016/j.ecolind.2025.113187.
5. Zheng, H., Miao*, C., Huntingford, C., **Tarolli**, P., Li, D., Panagos, P., et al. (2025). The impacts of erosion on the carbon cycle. *Reviews of Geophysics*, 63, e2023RG000829 ISSN: 1944-9208, doi: 10.1029/2023RG000829.
6. Verdonen*, M., Villoslada, M., Kolari T.H.M., Tahvanainen, T., Korpelainen, P., **Tarolli**, P., Kumpula, T. (2025). Spatial Distribution of Thaw Depth in Palsas Estimated From Optical Unoccupied Aerial Systems Data. *Permafrost and Periglacial Processes*, 36(1), 22-36, ISSN: 1045-6740, doi:10.1002/ppp.2252.
7. Sofia*, G., Sinatra, M., **Tarolli**, P., Zacccone, C. (2025). Upscaling drought resilience by coupling soil data and UAV-multispectral imageries. *Science of the Total Environment*, 958, 178007, ISSN: 0048-9697, doi: 10.1016/j.scitotenv.2024.178007.

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8. Xue, C., Ghirardelli, A., Chen, J., **Tarolli***, P. (2024). Investigating agricultural drought in Northern Italy through explainable Machine Learning: Insights from the 2022 drought. *Computers and Electronics in Agriculture*, 227, 109572. ISSN: 0168-1699, doi:10.1016/j.compag.2024.109572.
9. **Tarolli***, P., Luo, J., Park, E., Barcaccia, G., Masin, R. (2024). Soil salinization in agriculture: Mitigation and adaptation strategies combining nature-based solutions and bioengineering. *iScience*, 27, 108830. ISSN: 2589-0042, doi:10.1016/j.isci.2024.108830. ***EU Commission policy citation* *highly cited article***
10. Luo, J., Straffelini, E., Bozzolan, M., Zheng, Z., **Tarolli***, P. (2024). Saltwater intrusion in the Po River Delta (Italy) during drought conditions: Analyzing its Spatio-temporal evolution and potential impact on agriculture. *International Soil and Water Conservation Research*, 12, 714–23, ISSN: 2095-6339, doi: 10.1016/j.iswcr.2023.09.009.
11. Straffelini, E., Wang, W., **Tarolli***, P. (2024). European vineyards and their cultural landscapes exposed to record drought and heat. *Agricultural Systems*, 219, 104034, ISSN: 0308-521X, doi: 10.1016/j.agsy.2024.104034.
12. Straffelini, E., Luo*, J., **Tarolli***, P. (2024). Climate change is threatening mountain grasslands and their cultural ecosystem services. *Catena*, 237, 107802, ISSN: 0341-8162, doi: 10.1016/j.catena.2023.107802.
13. Sofia*, G., Zacccone, C., **Tarolli**, P. (2024). Agricultural drought severity in NE Italy: Variability, bias, and future scenarios. *International Soil and Water Conservation Research*, 12, 403-418. ISSN: 2095-6339, doi:10.1016/j.iswcr.2023.07.003.
14. Chen, L., Yang*, C., Wang, J., Meng, Q., **Tarolli**, P. (2024). Variation in preferential flow features induced by desiccation cracks in physical crusts. *Journal of Hydrology*, 634, 131118, ISSN: 0022-1694, doi: 10.1016/j.jhydrol.2024.131118.
15. Yang, Y., Zhao*, W., ... **Tarolli**, P. (2024). An Annual Temperature Cycle Feature Constrained Method for Generating MODIS Daytime All-Weather Land Surface Temperature. *IEEE Transactions on Geoscience and Remote Sensing*, 62, 1-14. ISSN:0196-2892, doi: 0.1109/TGRS.2024.3377670.
16. Yang, S., Jin*, Z., Hao, M., Jiang, C., Han, H., An, Z., **Tarolli**, P. (2024). Landscape and Soil Erosion Changes Along Different Types of Road Over the Past 30 Years in the Largest Loess Tableland of China. *Land Degradation and Developments*, 35(18) 5559-5560, ISSN: 1085-3278, doi:10.1002/ldr.5315.
17. Gao, L., Xu*, X., Zhao Y., Li, Y., **Tarolli**, P., Siyal, A.A., Xia, J., Li, Z. (2024). Assessing riverbank collapse with lateral displacement of shoreline for ecologically friendly erosion-resistant solutions. *Environmental Earth Sciences*, 83(9) 279, ISSN: 1866-6280, doi:10.1007/s12665-024-11547-9.
18. Giarola, A., Schoorl, J.M., Baartman, J.E.M., Bordini*, M., **Tarolli**, P., Zucca, F., Heckmann, T., Meisina, C. (2024). Exploiting the land use to predict shallow landslide susceptibility: A probabilistic implementation of LAPSUS-LS. *Catena*, 246, 108437, ISSN: 0341-8162, doi:10.1016/j.catena.2024.108437.

19. Wang, W., Straffellini, E., **Tarolli*, P.** (2024). 44% of steep slope cropland in Europe vulnerable to drought. *Geography and Sustainability*, 5, 89-95. ISSN: 2096-7438, doi: 10.1016/j.geosus.2023.12.001.
 20. Pears*, B., Lang, A., Fallu, D., ... **Tarolli, P.** (2024). Lynchet-Type Terraces, Loess, and Agricultural Resilience on Chalk Landscapes in the UK and Belgium. *European Journal of Archaeology*, 27(3), 329-352, ISSN: 1461-9571, doi: 10.1017/eea.2024.6.
 21. Giarola*, A., Meisina, C., **Tarolli, P.** et al. (2024). A data-driven method for the estimation of shallow landslide runoff. *Catena*, 234, 107573. ISSN: 0341-8162, doi:10.1016/j.catena.2023.107573.
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22. Xue, C., Xue*, L., Chen, J., **Tarolli, P.** (2023). Understanding driving mechanisms behind the supply-demand pattern of ecosystem services for land-use administration: Insights from a spatially explicit analysis. *Journal of Cleaner Production*, 427, 139239. ISSN: 0959-6526, doi:10.1016/j.jclepro.2023.139239.
 23. Qiu, J., Zhao, W., Brocca, L., **Tarolli*, P.** (2023). Storm Daniel revealed the fragility of the Mediterranean region. *The Innovation Geoscience* 1(3), 100036, ISSN 2959-8753, doi:10.59717/j.xinn-geo.2023.100036.
 24. Mauri*, L., **Tarolli, P.** (2023). Modeling windthrow effects on water runoff and hillslope stability in a mountain catchment affected by the VAIA storm. *Science of the Total Environment*, 895, 164831, ISSN: 0048-9697, doi: 10.1016/j.scitotenv.2023.164831.
 25. Zhang, Q., Wu*, Z., ..., **Tarolli*, P.** (2023). How to develop site-specific waterlogging mitigation strategies? Understanding the spatial heterogeneous driving forces of urban waterlogging. *Journal of Cleaner Production*, 422, 138595. ISSN: 0959-6526, doi: 10.1016/j.jclepro.2023.138595.
 26. **Tarolli*, P.**, Wang, W., Pijl, A., Cucchiaro, S., & Straffellini, E. (2023). Heroic viticulture: Environmental and socioeconomic challenges of unique heritage landscapes. *iScience*. doi:10.1016/j.isci.2023.107125.
 27. **Tarolli*, P.**, Zhao, W. (2023). Drought in agriculture: Preservation, adaptation, migration. *The Innovation Geoscience*, 1(1), 100002, ISSN 2959-8753, doi:10.59717/j.xinn-geo.2023.100002.
 28. Wang, W., Straffellini, E., **Tarolli*, P.** (2023). Steep-slope viticulture: The effectiveness of micro-water storage in improving the resilience to weather extremes. *Agricultural Water Management*, 286, 108398, ISSN: 0378-3774, doi: 10.1016/j.agwat.2023.108398.
 29. Das, S., Sangode S.J., Kandekar, A.M., Meshram D.C., **Tarolli*, P.** (2023). Interrelation between factors controlling sediment yield in the largest catchment of Peninsular India. *Journal of Hydrology*, 622, part B, 129680, ISSN: 0022-1694, doi:10.1016/j.jhydrol.2023.129680.
 30. Zeybek*, M., Taşkaya, S., Elkhachy, I., **Tarolli, P.** (2023). Improving the Spatial Accuracy of UAV Platforms Using Direct Georeferencing Methods: An Application for Steep Slopes. *Remote Sensing* 15, 2700, ISSN: 2072-4292, doi: 10.3390/rs15102700.
 31. Straffellini*, E., **Tarolli, P.** (2023). Climate change-induced aridity is affecting agriculture in Northeast Italy. *Agricultural Systems*, 208, 103647, ISSN: 0308-521X, doi:10.1016/j.agsy.2023.103647.
 32. Straffellini*, E., ..., **Tarolli, P.** (2023). Viticulture in Argentina under extreme weather scenarios: Actual challenges, future perspectives. *Geography and Sustainability*, 4, 161–169, ISSN: 2096-7438, doi: 10.1016/j.geosus.2023.03.003.
 33. **Tarolli*, P.**, Luo, J., Straffellini, E., Liou, Y.-A., Nguyen, K.-A., Laurenti, R., Masin, R., D'Agostino, V. (2023) Saltwater intrusion and climate change impact on coastal agriculture. *PLOS Water*, 2(4), e0000121, ISSN: 2767-3219, doi:10.1371/journal.pwat.0000121. ***EU Commission policy citation***
 34. Luo*, J., Zheng, Z., Li, T., He, S., **Tarolli, P.** (2023). Impact of tillage-induced microtopography on hydrological-sediment connectivity and its hydrodynamic understanding. *Catena*, 228, 107168, ISSN: 0341-8162, doi:10.1016/j.catena.2023.107168.
 35. Zhao*, P., Fallu, D.J., Pears, B.R., ... **Tarolli, P.**, ... Six, J., Brown, A.G., van Masemael, B., Van Oost, K. (2023). Quantifying soil properties relevant to soil organic carbon biogeochemical cycles by infrared spectroscopy: The importance of compositional data analysis. *Soil and Tillage Research*, 231, 105718, ISSN: 0167-1987, doi: 10.1016/j.still.2023.105718.
 36. Cao*, W., Liu, J., Ceola, S., Mao, G., Macklin, M.G., Montanari, A., Pijl, C., Yao, Y., S., **Tarolli, P.** (2023). Landform-driven human reliance on rivers in imperial China. *Journal of Hydrology*, 620, 129353, ISSN: 0022-1694, doi: 10.1016/j.jhydrol.2023.129353.
 37. **Tarolli, P.**, Lucas-Borja, M.E., Yu, G., Xu*, X. (2023). New sciences & technologies in soil conservation and eco-sustainability. *International Soil and Water Conservation Research*, 11, 412–414, ISSN: 2095-6339, doi:10.1016/j.iswcr.2023.01.007.
 38. Brown*, A.G., ... **Tarolli, P.**, ... Waddington, C. (2023). Early to Middle Bronze Age agricultural terraces in north-east England: morphology, dating and cultural implications. *Antiquity*, 97, 348–366, ISSN: 0003-598X, doi: 10.15184/aqy.2023.1.
 39. Chen, L., Sofia G., Qiu, J., Wang, J., **Tarolli*, P.** (2023). Grassland ecosystems resilience to drought: The role of surface water ponds. *Land Degradation and Development*, 34, 1960–1972, ISSN: 1085-3278, doi:10.1002/ldr.4581.

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40. Straffellini*, E., **Tarolli, P.** (2022). Viticulture and Cultural Landscapes: remote sensing and Earth surface processes modelling to promote sustainable agricultural practices. *IEEE Workshop on Metrology for Agriculture and Forestry (MetroAgriFor)*, 292-297, doi: 10.1109/MetroAgriFor55389.2022.9964716.
 41. Wang, W., Straffellini, E., Pijl, A., **Tarolli*, P.** (2022). Sustainable water resource management in steep-slope agriculture. *Geography and Sustainability*, 3, 214–219, ISSN: 2096-7438, doi: 10.1016/j.geosus.2022.07.001.
 42. Mauri*, L., Cucchiario, S., Grigolato, S., Dalla Fontana, G., **Tarolli, P.** (2022). Evaluating the interaction between snowmelt runoff and road in the occurrence of hillslope instabilities affecting a landslide-prone mountain basin: A multi-modeling approach. *Journal of Hydrology*, 612, 128200, ISSN: 0022-1694, doi: 10.1016/j.jhydrol.2022.128200.
 43. Wei, F., Jinsong, C., Xiaoli, L., **Tarolli, P.**, Jin*, W (2022). Multitemporal impervious surface estimation via an optimized stable/change pixel detection approach. *GIScience and Remote Sensing*, 59, 1406 - 1425, ISSN: 1548-1603, doi:10.1080/15481603.2022.2118430.
 44. Wang, W., Pijl, A., **Tarolli*, P.** (2022). Future climate-zone shifts are threatening steep-slope agriculture. *Nature Food*, 3, 193–196, ISSN: 2662-1355, doi:10.1038/s43016-021-00454-y. ***media impact***
 45. Straffellini*, E., Pijl, A., Otto, S., Marchesini, E., Pitacco, A., **Tarolli, P.** (2022). A high-resolution physical modelling approach to assess runoff and soil erosion in vineyards under different soil managements. *Soil and Tillage Research*, 222, 105418, ISSN: 0167-1987, doi:10.1016/j.still.2022.105418.
 46. Luo, J., Wang, N., Zheng*, Z., Tingxuan, L., He, S., **Tarolli, P.** (2022). Tillage-induced microtopography alters time-dependent intrinsic correlation of runoff and sediment yield. *Soil and Tillage Research*, 221, 105423, ISSN: 0167-1987, doi:10.1016/j.still.2022.105423.
 47. Cucchiario*, S., Carretta, L., Nasta, P., Cazorzi, F., Masin, R., Romano, N., **Tarolli, P.** (2022). Multi-temporal geomorphometric analysis to assess soil erosion under different tillage practices: A methodological case study. *Journal of Agricultural Engineering*, 53, 1279, ISSN: 1974-7071, doi:10.4081/jae.2022.1279.
 48. Mauri*, L., Straffellini, E., **Tarolli, P.** (2022). Multi-temporal modeling of road-induced overland flow alterations in terraced landscape characterized by shallow landslides. *International Soil and Water Conservation Research*, 10, 240–253, ISSN: 2095-6339, doi:10.1016/j.iswcr.2021.07.004. ***outstanding paper award by WASWAC***
 49. Pijl, A., Wang, W., Straffellini, E., **Tarolli*, P.** (2022). Soil and water conservation in terraced and non-terraced cultivations: an extensive comparison of 50 vineyards. *Land Degradation & Development*, 33, 596–610, ISSN: 1085-3278, doi:10.1002/ldr.4170.
 50. Silvestri*, S., Capra, V., Cucchiario, S., Pivato, M., **Tarolli, P.** (2022). Tides, Topography, and Seagrass Cover Controls on the Spatial Distribution of *Pinna nobilis* on a Coastal Lagoon Tidal Flat. *Journal of Geophysical Research: Biogeosciences*, 127, e2021JG006667, ISSN: 2169-8953, doi:10.1029/2021JG006667.
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51. Rizzi*, J., Tarquis, A. M., Gobin, A., Semenov, M., Zhao, W., **Tarolli, P.** (2021). Preface: Remote sensing, modelling-based hazard and risk assessment, and management of agro-forested ecosystems. *Natural Hazards and Earth System Sciences*, 21, 3873–3877, ISSN: 1561-8633, doi:10.5194/nhess-21-3873-2021. **(Special Issue Editorial)**
 52. Zhao*, P., Fallu, D. J., Cucchiario, S., **Tarolli, P.**, Waddington, C., Cockcroft, D., Snape, L., Lang, A., Doetterl, S., Brown, A. G., Van Oost, K. (2021). Soil organic carbon stabilization mechanisms and temperature sensitivity in old terraced soils. *Biogeosciences*, 18, 6301–6312, ISSN: 1726-4170, doi:10.5194/bg-18-6301-2021.
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 54. Cucchiario*, S., Paliaga, G., Fallu, D.J., Pears, B., Walsh, K., Zhao, P., Van Oost, K., Snape, L., Lang, A., Brown, T., **Tarolli, P.** (2021). Volume estimation of soil stored in agricultural terrace systems: A geomorphometric approach. *Catena*, 207, 105687, ISSN:0341-8162, doi:10.1016/j.catena.2021.105687.
 55. Cucchiario*, S., Straffellini, E., Chang, K.J., **Tarolli, P.** (2021). Mapping vegetation-induced obstruction in agricultural ditches. *Agricultural Water Management*, 256, 107083, ISSN: 0378-3774, doi:10.1016/j.agwat.2021.107083.
 56. Straffellini, E., Cucchiario, S., **Tarolli*, P.** (2021). Mapping potential surface ponding in agriculture using UAV-SfM. *Earth Surf Process Landforms*, 46, 1926–1940, ISSN: 0197-9337, doi:10.1002/esp.5135.
 57. Zhang, Q., Wu, Z., **Tarolli*, P.** (2021). Investigating the Role of Green Infrastructure on Urban WaterLogging: Evidence from Metropolitan Coastal Cities. *Remote Sensing*, 13(12), 2341, ISSN: 2072-4292, doi: 10.3390/rs13122341.
 58. Wang, J., Chen, J., Wen*, Y., Fan, W., Liu, Q., **Tarolli P.** (2021). Monitoring the coastal wetlands dynamics in Northeast Italy from 1984 to 2016. *Ecological Indicators*, 107906, ISSN: 1470-160X, doi:10.1016/j.ecolind.2021.107906.

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60. Ghirardelli, A., **Tarolli***, P., Rajasekaran, M.K., Mudbhatkal, A., Macklin, M.G., Masin, R. (2021). Organic contaminants in Ganga basin: from the Green Revolution to the emerging concerns of modern India. *iScience*, 24, 102122, ISSN: 2589-0042, 10.1016/j.isci.2021.102122. ([Invited Review Article](#))
61. Brown*, T., Fallu, D., Walsh, K., Cucchiaro, S., **Tarolli, P.**, Zhao, P., Pears, B., van Oost, K., Snape, L., Lang, A., Albert, R.-M., G. Alsos, I.G., Waddington, C. (2021). Ending the Cinderella Status of Terraces and Lynchets in Europe: The Geomorphology of Agricultural Terraces and Implications for Ecosystem Services and Climate Adaptation. *Geomorphology*, 379, 107579, ISSN: 0169-555X, doi:10.1016/j.geomorph.2020.107579. ([Invited Review Article](#))
62. Pijl*, A., Quarella, E., Vogel, T.A., D'Agostino, V., **Tarolli, P.** (2021). Remote sensing vs. field-based monitoring of agricultural terrace degradation. *International Soil and Water Conservation Research*, 9, 1–10, ISSN: 2095-6339, doi:10.1016/j.iswcr.2020.09.001.
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66. Wu*, J., Li, M., Zhang, X., Fiedler, S., Gao, Q., Zhou, Y., Cao, W., Hassan, W., Mărgărint, M.C., **Tarolli, P.**, Tietjen, B. (2021). Disentangling climatic and anthropogenic contributions to nonlinear dynamics of alpine grassland productivity on the Qinghai-Tibetan Plateau. *Journal of Environmental Management*, 281, 111875, ISSN: 0301-4797, doi:10.1016/j.jenvman.2020.111875.
67. Carretta, L., **Tarolli***, P., Cardinali, A., Nasta, P., Romano, N., Masin, R. (2021). Evaluation of runoff and soil erosion under conventional tillage and no-till management: A case study in northeast Italy. *Catena*, 104972, ISSN: 0341-8162, doi:10.1016/j.catena.2020.104972.

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