

PAOLO TAROLLI



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Google Scholar: <https://scholar.google.com/citations?user=Ryfb3D8AAAAJ&hl=en>

web-page: <http://www.tesaf.unipd.it/en/paolo-tarolli>

SUMMARY

Paolo Tarolli is **Full Professor** in *Integrated Watershed Management, Water Resources Management and Anthropocene Landscape Water and Soil*, and Principal Investigator of *Earth Surface Processes and Society research group* at University of Padova (Italy). He is also **Visiting Professor** at Dalian University of Technology (P.R. China), and **Adjunct Professor** at University of Georgia (USA) and Alexandru Ioan Cuza University of Iași (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 expert in digital terrain analysis, earth surface processes analysis, natural hazards, geomorphology, hydro-geomorphology, lidar, structure-from-motion photogrammetry; new research directions include the analysis of topographic signatures and impact of human activities, focusing on agricultural landscapes & land degradation. Tarolli is **Chief Executive Editor** of Natural Hazards and Earth System Sciences, and **Associate Editor** of International Soil and Water Conservation Research, Land Degradation & Development, Remote Sensing, in addition to editorial board membership of other 7 journals. He is author of 152 papers (indexed in Scopus) published in international peer reviewed journals and books, with the following publication metrics: Google Scholar (**h-index 47**, total citations 7409, number of articles with 100+ citations 19, with 200+ citations 8, with 300+ citations 4, with 400+ citations 1), Scopus (h-index 40, tot. citations 5407). He is ranked in the list of **100,000 top world's most cited scientists** (source *Scopus by Elsevier BV*).

He has given **36 invited talks** in high-ranking international research institutions and foreign Academies (i.e. Princeton University, Ecole Polytechnique Fédérale de Lausanne, Beijing Normal University, Dalian University of Technology, Tongji University, AgroParisTech, Massey University, Chinese Academy of Sciences), and at international meeting (IGC, AAG, ISPRS, RGS-IBG, AOGS, Soil Science Society of China). He was appointed as Panel Member of FTC (Portugal), FWO (Belgium), NERC (UK), NCN (Poland); reviewer of MIUR, Netherlands Organization for Scientific Research (NWO), U.S. National Science Foundation (NSF), International Swiss National Science Foundation (SNSF), Natural Environment Research Council (NERC), National Science Centre (NCN) of Poland, Natural Sciences and Engineering Research Council of Canada, FWF Austrian Science Fund, EU Commission research projects. He is member of the European Geoscience Union, British Society for Geomorphology, 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, University of Padova (Italy)
 2020 – now **Visiting Professor.** Dalian University of Technology (P.R. 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 (P.R. China)
 2015 – 2022 **Associate Professor.** University of Padova (Italy)
 2013 – 2019 **Visiting Professor.** China University of Geosciences, Beijing (P.R. 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

- **Anthropocene, Landscape, Water, Soil** | University of Padova ([42 hr, 6 CFU](#))
academic years (**1**): 21/22
- **Water Resources Management** | University of Padova ([48 hr, 6 CFU](#))
academic years (**6**): 16/17, 17/18, 18/19, 19/20, 20/21, 21/22
- **Integrated Watershed Management** | University of Padova ([48 hr, 6 CFU](#))
academic years (**11**): 11/12, 12/13, 13/14, 14/15, 15/16, 16/17, 17/18, 18/19, 19/20, 20/21, 21/22

Past teaching activities

2014 – 2021 *GIS applications in agriculture* | University of Padova ([32 hr, 4 CFU](#))
 2016 – 2019 *Digital Terrain Analysis* | China University of Geosciences in Beijing, P.R. 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, P.R. China ([16 hr](#))
 2013 – 2014 *Digital Geomorphology & Statistical Analysis* | China University of Geosciences in Beijing, P.R. China ([32 hr](#))
 2013 *Rural Hydraulics* | University of Padova ([48 hr, 6 CFU](#))
 2013 *Digital Terrain Analysis* | National Cheng Kung University, Taiwan ([50 hr](#))
 2011 – 2013 *Soil and Water Conservation* | Polytechnic University of Marche ([54 hr, 6 CFU](#))
 2009 – 2011 *Soil and Water Conservation* | Polytechnic University of Marche ([45 hr, 5 CFU](#))

SUPERVISION OF STUDENTS, POSTDOC AND/OR RESEARCH ASSISTANTS

Postdoctoral fellows

Supervised (**tot 4**): **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

Supervised (**tot 9**): **Eugenio Straffelini** (2021-2024), **Junliang Qiu** (2021-2024) [winner China Scholarship Council award](#), **Wendi Wang** (2020-2023) [winner China Scholarship Council award](#), **Luca Mauri** (2019-2022) [winner WASWAC Youth Outstanding Paper Award 2021](#), **Zhang Qifei** (2018-2021), **Anton Pijl** (2017-2020), **Wenfang Cao** (2017-2019) [winner EGU ECSTS award & winner China Scholarship Council award](#), **Giulia Roder** (2016-2018) [winner EGU travel award CNDS/EGU Summer School](#), **Massimo Prosdocimi** (2014-2017)

Co-Supervised (**tot 8**): **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

Supervised (**tot 39**): Giacomo Pavanello (2022), Irene Dell'Olio (2022), Lia Becvar (2022), Davide Gomiero (2021), Burcu Berk (2021), Hiba Mohammad (2021), Andrea Totti (2021), Elia Bortoletti (2020), Sofia Michieli (2020), Luigi Mancin (2020), Lorenzo Arcari (2020), Giacomo Nalin (2019), Eugenio Straffelini (2018), Edoardo Quarella (2018), Gaetano Imperatore (2018), Luca Mauri (2018), Michele Tosoni (2017), Loris Torresani (2017), Simone Toffanin (2017), Francesca Breda (2017), Elena Feo (2017), Manuel Stefani (2017), Andrea Gazzin (2017), Jessica de Marco (2016), Federica Varisco (2016), Davide Todeschini (2016), Marco Cecchin (2016), Giulia Lo Re (2016), Federica Basso (2016), Nicoletta Pradetto Sordo (2016), Gianluca Favaro (2015), Alberto Bollettin (2015), Arianna Lorenzato (2015), Giulia Roder (2014), Valeria Contessa (2014), Francesca Savio (2013), Massimo Prosdocimi (2013), Manuela Mancini (2012), Francesca Brutti (2012)

Co-Supervised (**tot 5**): Aurora Ghirardelli (2019) at Univ. Padova; Tim Janssen (2022), Roxane Bradaczek (2021), Esmee Goudriaan (2020), Anton Pijl (2017) at Wageningen Univ. and Res.

RESEARCH PROJECTS

- 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, co-PI, PI-WP1)
- 2019 – 2022 *FITOCHE* - From field to cheese (EU rural dev. grant – Veneto Region) **300,000 €** (PI of WP4)
- 2018 – 2023 *TerrACE* - Terrace Archaeology and Culture in Europe (ERC-AdG) **2,600,000 €** (PI of WP1)
- 2018 – 2021 *ViTe* - Vineyard Terraced landscapes: understanding the Environmental constraints to improve sustainable managements (University of Padova) **60,000€** (PI)
- 2016 – 2018 *HighLandDEM* - High-resolution Digital Elevation Models (DEM) in rainfed Mediterranean cultivated Landscapes for long-term monitoring of artificial features with hydrological impact (ENVIMED French cooperation initiative) **18,000€** (PI of WP2)
- 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)
- 2014 – 2020 New industrial plan for dairy sector (POR FESR – Veneto Region) **608,024€** (team member)
- 2012 – 2013 CPDR122903/12 - Use of high resolution topography for the automatic definition of geometric elements of the hydrographic network (University of Padova) **22,946€** (PI)

EDITORIAL ACTIVITY (INTERNATIONAL JOURNALS)

Member of the editorial board of **11** international journals indexed in Scopus and Web of Science, with the following editorial roles:

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| 2022 – present | Associate Editor: Int. Soil and Water Conservation Res. (Elsevier) <i>IF6.027 Q1</i> |
| 2020 – present | Chief Executive Editor: NHESS (Copernicus) <i>IF4.345 Q1</i> |
| 2020 – present | Editorial Board Member: Geography and Sustainability (Elsevier) <i>indexed Scopus/WoS</i> |
| 2018 – present | Associate Editor: Land Degradation & Development (Wiley) <i>IF4.977 Q1</i> |
| 2019 – present | Editorial Board Member: Heliyon (Cell Press) <i>indexed WoS / Citescore 2.1 Q1</i> |
| 2018 – present | Editorial Board Member: iScience (Cell Press) <i>IF5.458 Q1</i> |
| 2017 – present | Associate Editor: Remote Sensing (MDPI) <i>IF4.848 Q1</i> |
| 2017 – present | Editorial Board Member: Quaternary (MDPI) <i>indexed Scopus/WoS</i> |
| 2015 – present | Editorial Board Member: Anthropocene (Elsevier) <i>IF3.964 Q2</i> |
| 2014 – present | Editorial Board Member: Earth Surface Processes and Landforms (Wiley) <i>IF4.133 Q1</i> |
| 2014 – present | Editorial Board Member: Journal of Mountain Science (Springer) <i>IF2.071 Q3</i> |
| 2021 – 2022 | Editorial Board Member: Int. Soil and Water Conservation Res. (Elsevier) |
| 2018 – 2020 | Executive Editor: NHESS (Copernicus) |
| 2014 – 2018 | Editorial Board Member: Land Degradation & Development (Wiley) |
| 2012 – 2018 | Editorial Board Member: NHESS (Copernicus) |

PANEL MEMBER COMMITTEES, EVALUATOR, REVIEWER

Appointment as Panel Member or external assessor of international research projects

| | |
|-------------|---|
| 2021 – 2022 | Panel member CEECInd 4th Ed Earth and Environmental Sciences Panel, Fundação para a Ciência e a Tecnologia FTC (Portugal) (<i>tot. 44 projects evaluated</i>) |
| 2021 – 2022 | Earth sciences (ST10) Expert Panel , National Science Centre NCN (Poland) (<i>tot. 13 projects evaluated</i>) |
| 2021 | WT 8 Fellowship Panel on Sciences of the Earth and Space – Research Foundation Flanders FWO (Belgium) (<i>tot. 10 projects evaluated</i>) |
| 2020 – 2021 | Co-Chair Panel of the Complaint Analysis (Natural Science) in the R&D Units Evaluation 2017-18 - Fundação para a Ciência e a Tecnologia FTC (Portugal) (<i>tot. 4 projects evaluated</i>) |
| 2020 – now | Member Review College Research Foundation Flanders FWO (Belgium) |
| 2018 | Panel Member NERC: Newton Fund (United Kingdom) (<i>tot. 7 projects evaluated</i>) |

Haward/Prize Committee

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

Reviewer international & national research projects

| | |
|------------|---|
| 2013 – now | Italian Ministry of Education University and Research, Ministry of Education and Science (Rep. Kazakhstan), 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 (<i>tot 18 projects revised</i>) |
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Reviewer international journals

tot. 482 papers reviewed, <https://publons.com/researcher/1191792/paolo-tarolli/>) including Science, Nature

AWARDS & RECOGNITION

International

- 2020 Ranked in the list **100,000 top world's most cited scientists** (source *Elsevier/Scopus*)
- 2019 **Top Peer Review Award** *Cross-Field* (Clarivate Analytics - Web of Science)
- 2019 **Top Peer Review Award** *Geosciences* (Clarivate Analytics - Web of Science)
- 2018 **Top Peer Review Award** *Geosciences* (Clarivate Analytics - Web of Science)
- 2018 **Top Peer Review Award** *Environment/Ecology* (Clarivate Analytics - Web of Science)
- 2017 **Outstanding Editor** *Journal of Mountain Science* (Chinese Academy of Sciences)
- 2017 **Top Peer Review Award** *Environ. Science* (Clarivate Analytics - Web of Science)
- 2017 **Top Peer Review Award** in *Remote Sensing* (Clarivate Analytics - Web of Science)
- 2017 **Top Peer Review Award** in *Earth & Planet. Sci.* (Clarivate Analytics - Web of Science)
- 2014 **Most Cited Publication** "Tarolli et al. 2014", journal *Anthropocene* (awarded by 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

FELLOWSHIPS

- 2014 **Visiting Professor Appointment Agreement of Distinguished Scholars** at China University of Geosciences in Beijing (P.R. China)
- 2013 **Visiting Professor Appointment Agreement of Distinguished Scholars** at National Cheng Kung University (Taiwan)
- 2010 **Marie Curie Fellow** – Excellence Grant for Experienced Researcher within PreWEC project at the Hellenic Center for Marine Research (Greece)

ORGANIZATION OF INTERNATIONAL CONFERENCES & SCIENTIFIC MEETINGS

Member of Scientific Committee (*tot. 13: 12 international, 1 national*)

- 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. 29 sessions organized as convened & chaired)**

- 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. 3 sessions organized as convened & chaired)**

- 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

- 2020 – now **Scientific Coordinator** of the joint academic cooperation between Beijing Forestry University and Dept. of Land, Environment, Agriculture and Forestry, University of Padova
- 2019 – now **Head of the Commission** for the 'Third Mission' & Communication of Dept. of Land, Environment, Agriculture and Forestry, University of Padova
- 2019 – now **Member** of the Teacher-Student Joint Commission for the School of Agriculture and Veterinary Medicine, University of Padova
- 2018 – now **Promoter** of the Joint-PhD program between China University of Geosciences and University of Padova.
- 2017 – now **Scientific Coordinator** of the Memorandum of Understanding between Massey University (NZ), University of Lincoln (UK), and University of Padova.
- 2017 – now **Scientific Coordinator** of the Memorandum of Understanding between China University of Geosciences and University of Padova.
- 2015 **Member of the Technical Organizing Committee** of the Sustainable Agriculture Master's Degree course, University of Padova
- 2012 – now **Board Member** PhD Program Land, Environment, Resources and Health, 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.4**)

- 2021 **Organization & Moderator**: "Biodiversity as keyword of sustainability", Sustainable Development Festival 2021 (University of Padova)
(*tot. 28 partecipanti, 386 visualizzazioni 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 partecipanti, 1295 visualizzazioni Facebook, 247 visualizzazioni 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 – present Administrator and Editor of the page of *Dept. of Land Environment Agriculture and Forestry* at Univ. of Padova (followers: tot. 2731 Facebook, tot. 671 Instagram, tot. 107 Twitter, tot. 195 LinkedIn, + 200% in the last two years)

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-), 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) (tot. 585 followers Facebook and tot. 255 followers Youtube)
- 2019 – now Administrator and co-Editor of the page of *EGU NH Division* (tot. 932 followers on Facebook and tot. 1822 followers Twitter, + 15% and + 58% in the last two years)
- 2018 – now Co-Editor of the page of the journal *NHESS* (tot. 2583 followers Twitter, + 29% in the last two years)

PUBLIC ENGAGEMENT ACTIVITY

Public events

- 2019 **Organization with Coldiretti farmers' federation of Padova:** public event for citizens, at the municipal theater of Galzignano Terme, to disseminate the results of the research on the quantification and glocalizations of wild boar damages in the Euganean Hills Regional Park (Veneto, Italy)
(150 participants: Ministry of Agriculture of the Veneto Region, President and Director of the Padua Coldiretti farmers' Federation, association of hunters, technicians, environmentalists, director of the Euganean Hills Regional Park, citizens)

Social Media (tot.5 pages edited)

- 2017 – now Administrator and Editor of the page *Earth Surface Processes & Society* (tot. 15889 followers): Facebook (2621 followers), LinkedIn (11177 followers), WeChat (1366 followers), Twitter (513 followers), Instagram (212 followers)

KNOWLEDGE TRANSFER TO STAKEHOLDERS

- 2019 – 2021 **Soave Wine Consortium:** Innovative & low-cost solutions for soil erosion risk mitigation and a better management of vineyards in hills and mountain landscapes
- 2017 – 2018 **Coldiretti farmers' federation of Padova:** low cost approach for wild boar's damages 2D mapping
- 2016 – now **Instructor** of young agricultural entrepreneurs (8hr per year; Coldiretti, Italian farmers' federation)
- 2012 – 2015 **Start Up** Geomatica & Ambiente srl

MEDIA IMPACT OF THE RESEARCH ON NATIONAL NEWS

Soilution System Project (results of the project)

Gambero Rosso, VineNews, Qwine, l'Arena di Verona, Venezie Channel, Foodaffairs, Enocibario, Coldiretti Verona, Civiltà del bere, Veronaeconomia,

Legnaro (PD), August 1, 2022

Quantification and glocalizations of wild boar damages (paper published on *Earth Surf. Proc. Land.*)

Il Corriere della Sera, Il Gazzettino, Il Mattino, Padova Oggi, TG Padova, ANBI Veneto, Coldiretti magazine nazionale, La Dea della Caccia, BigHunter, Cacciando

Quantification and glocalizations of Nutria damages (paper published on *Earth Surf. Proc. Land.*)

Radio RAI due (Caterpillar), Il Corriere della Sera, Il Sole 24 Ore, Il Gazzettino, Il Mattino, Il Giornale di Vicenza, L'Arena di Verona, Oggi Treviso, ANBI Veneto, Qdpnews, Virgilio, TVIWEB, Il Bolive

Floods and insurance (paper published on *Int. J. Disaster Risk Reduction*)

Il Giornale di Vicenza

100yr of floods in the Veneto region (paper published on *Scientific Reports*)

Ansa, Il Giornale di Vicenza, Il Mattino, PadovaOggi, Vigonza, La Difesa del Popolo, L'Azione, Meteoweb, Il Bolive

SCIENTIFIC NETWORK

Ching-Weei Lin, *LIDAR & landslide detection in forest areas*, National Cheng Kung University (Taiwan)

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

Erle C. Ellis, *Anthropocene debate*, University of Maryland (USA)

Federico Preti, *agricultural terraces*, University of Florence (Italy)

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

Jianping Chen, *open-pit mining monitoring with UAV*, China University of Geosciences (P.R. China)

Mark Macklin, *floods & human health in anthropogenic landscapes*, University of Lincoln (UK)

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

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

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

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

Zhifeng Wu, *human-induced land-use change effect on the environment*, Guangzhou Univ. (P.R. China)

INVITED TALKS

International Meetings (**tot.12**, including 3 keyones)

- 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 (P.R. China).
- 2021 *The Geomorphology of Life*. [EGU General Assembly 2021](#) (vEGU21).
- 2021 *Advanced remote sensing techniques for monitoring anthropogenic landscapes*. [EGU General Assembly 2021](#) (vEGU21).
- 2019 *High resolution geomorphologic characterization of conservation agriculture*. [General Assembly 2019 of the Soil Science Society of China](#), Dalian (PR 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 (P.R. 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.24)

- 2021 *Surface ponding in lowland landscapes – monitoring and management, towards sustainable agriculture.* [Beijing Normal University](#) (P.R. China). (host: College of Water Sciences)
- 2021 *Forest and agricultural roads – mass movements, drainage systems, monitoring and sustainable planning.* [Beijing Normal University](#) (P.R. 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](#) (P.R. China). (host: Xiangzhou Xu)
- 2020 *Monitoring and sustainable management of steep-slope agricultural landscapes: the case study of Italy.* [Beijing Normal University](#) (P.R. China). (host: Chengzhong Pan)
- 2019 *Landscapes in the Anthropocene.* [Tongji University](#) (P.R. 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](#) (P.R. China). (host: Xiangzhou Xu)
- 2017 *The Topographic Signature of Humanity.* [Beijing Normal University](#) (P.R. China). (host: Wenwu Zhao)
- 2016 *Earth surface processes in anthropogenic landscapes.* [Guangzhou University](#) (P.R. 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 more than 150 papers indexed in Scopus (> 75% published with first or last name author) published or in press in international peer reviewed journals, proceedings, and books with the following publication metrics (1 June 2022): **Google Scholar** (h-index 47, total citations 7409, number of articles with 100+ citations 19, with 200+ citations 8, with 300+ citations 4, with 400+ citations 1), **SCOPUS** (h-index 40, total citations 5407; average 8.8 papers/yr and 318 citations/yr, in the last 5 years 2017-2021 17 papers/yr and 749 citations/yr). He is also author of 11 papers in national magazines, 2 chapters in Encyclopaedia, 18 papers/chapters in books, 25 papers in conference proceedings, and 198 presentations (11 invited talks) at national/international meetings (63 orals, 20 virtual online, and 115 posters). He edited three books.

Ranked in the list of **100,000 top world's most cited scientists: rank no. 87939** for career in all disciplines (**top 0.65%** in the category *geological & geomatics engineering*); **rank no. 17402** in all disciplines for single year 2020 (**top 0.27%** in the category *geological & geomatics engineering* excluding self-citations), source *Elsevier BV & Stanford University*: <https://doi.org/10.17632/btchxktzyw.3>; <https://doi.org/10.17632/btchxktzyw.2>).

PUBLICATIONS

*corresponding author

Peer-reviewed journals

2022

1. 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***
2. Straffelini*, 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.
3. 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.
4. 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.
5. Mauri*, L., Straffelini, 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***
6. Pijl, A., Wang, W., Straffelini, 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.
7. 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.

2021

8. 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)
9. 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.
10. Mărgărint, M. C., Niculiță*, M., Roder, G., **Tarolli, P.** (2021). Risk perception of local stakeholders on natural hazards: implications for theory and practice. *Natural Hazards and Earth System Sciences*, 21(11), 3251–3283, ISSN: 1561-8633, doi:10.5194/nhess-2021-37.
11. 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.

12. Cucchiario*, S., Straffelini, 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.
13. Straffelini, 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.
14. Zhang, Q., Wu, Z., **Tarolli*, P.** (2021). Investigating the Role of Green Infrastructure on Urban Water Logging: Evidence from Metropolitan Coastal Cities. *Remote Sensing*, 13(12), 2341, ISSN: 2072-4292, doi: 10.3390/rs13122341.
15. 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.
16. Qiu, J., Cao, B., Park, E., Yang*, X., Zhang, W., **Tarolli, P.**, 2021. Flood Monitoring in Rural Areas of the Pearl River Basin (China) Using Sentinel-1 SAR. *Remote Sensing*, 13, 1384, ISSN: 2072-4292, doi:10.3390/rs13071384.
17. 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](#))
18. Brown*, T., Fallu, D., Walsh, K., Cucchiario, 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](#))
19. 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.
20. **Tarolli*, P.**, Pijl, A., Cucchiario, S., Wei, W. (2021). Slope instabilities in steep cultivation systems: process classification and opportunities from remote sensing. *Land Degradation & Development*, 32, 1368–1388, ISSN: 1085-3278, doi:10.1002/ldr.3798.
21. Mauri*, L., Straffelini, E., Cucchiario, S., **Tarolli, P.** (2021). UAV-SfM 4D mapping of landslides activated in a steep terraced agricultural area. *Journal of Agricultural Engineering*, volume LII:1130, eISSN 2239-6268, doi:10.4081/jae.2021.1130.
22. Zhang, Q., Wu, Z., Guo, G., Zhang, H., **Tarolli*, P.** (2021). Explicit the urban waterlogging spatial variation and its driving factors: The stepwise cluster analysis model and hierarchical partitioning analysis approach. *Science of The Total Environment*, 763, 143041, ISSN: 0048-9697, doi:10.1016/j.scitotenv.2020.143041.
23. Wu*, J., Li, M., Zhang, X., Fiedler, S., Gao, Q., Zhou, Y., Cao, W., Hassan, W., Märgärint, 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.
24. 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.

2020

25. Brown*, T., Walsh, K., Fallu, D., Cucchiario, S., **Tarolli, P.** (2021). European agricultural terraces and lynchets: from archaeological theory to heritage management. *World Archaeology*, 52(4), 566–588, ISSN: 0043-8243, doi:10.1080/00438243.2021.1891963.
26. Taylor*, F.E., **Tarolli, P.**, Malamud, B.D. (2020). Preface: Landslide–transport network interactions. *Nat. Hazards Earth Syst. Sci.*, 20, 2585–2590, ISSN: 1561-8633, doi:10.5194/nhess-20-2585-2020.
27. Gao*, X., Roder, G., Jiao, Y., Ding, Y., Liu, Z., **Tarolli, P.** (2020). Farmers' landslide risk perceptions and willingness for restoration and conservation of world heritage site of Honghe Hani Rice Terraces, China. *Landslides*, 17, 1915–1924, ISSN: 1612-510X, doi:10.1007/s10346-020-01389-4.
28. Zhang, Q., Wu, Z., Zhang, H., Dalla Fontana, G., **Tarolli*, P.** (2020). Identifying dominant factors of waterlogging events in metropolitan coastal cities: The case study of Guangzhou, China. *Journal of Environmental Management*, 271, 110951, ISSN: 0301-4797, doi:10.1016/j.jenvman.2020.110951.
29. Cucchiario*, S., Fallu, D.J., Zhang, H., Walsh, K., Van Oost, K., Brown, A.G., **Tarolli, P.** (2020). Multiplatform-SfM and TLS Data Fusion for Monitoring Agricultural Terraces in Complex Topographic and Landcover Conditions. *Remote Sensing*, 12, 1946, ISSN: 2072-4292, doi:10.3390/rs12121946.
30. Pijl*, A., Reuter, L.H.E., Quarella, E., Vogel, T.A., **Tarolli, P.** (2020). GIS-based soil erosion modelling under various steep-slope vineyard practices. *Catena*, 193, 104604, ISSN:0341-8162, doi:10.1016/j.catena.2020.104604.

31. **Tarolli***, P., Straffelini, E. (2020). Agriculture in Hilly and Mountainous Landscapes: Threats, Monitoring and Sustainable Management. *Geography and Sustainability*, 1, 70–76, ISSN: 2666-6839, doi:10.1016/j.geosus.2020.03.003. (Perspective Article)
 32. Wang, X., Wang, L., Chen*, J., Zhang, S., **Tarolli, P.** (2020). Assessment of the External Costs of Life Cycle of Coal: The Case Study of Southwestern China. *Energies*, 13, 4002, ISSN: 1996-1073, doi:10.3390/en13154002.
 33. Mauri*, L., Masin, R., **Tarolli, P.** (2020). Wildlife impact on cultivated lands: A multi-temporal spatial analysis. *Agricultural Systems*, 184, 102890, ISSN: 0308-521X, doi:10.1016/j.agry.2020.102890.
 34. Chen, D., Wei*, W., Daryanto, S., **Tarolli, P.** (2020). Does terracing enhance soil organic carbon sequestration? A national-scale data analysis in China. *Science of the Total Environment*, 721, 137751, ISSN: 0048-9697, doi: 10.1016/j.scitotenv.2020.137751.
 35. Cao*, W., Sofia, G., **Tarolli, P.** (2020). Geomorphometric characterization of natural and anthropogenic land cover. *Progress in Earth and Planetary Science*, 7, 2, ISSN: 2197-4284, doi:10.1186/s40645-019-0314-x.
 36. Borsato*, E., Rosa, L., Marinello, F., **Tarolli, P.**, D'Odorico, P (2020). Weak and Strong Sustainability of Irrigation: A framework for irrigation practices under limited water availability. *Front. Sustain. Food Syst.*, 4, 17, ISSN: 2571-581X, doi:10.3389/fsufs.2020.00017.
 37. Xu*, X., Ma, Y., Yang, W., Zhang, H., **Tarolli, P.**, Jiang, Y., Yan, Q. (2020). Qualifying mass failures on loess gully sidewalls using laboratory experimentation. *Catena*, 187, 104252, ISSN: 0341-8162, doi:10.1016/j.catena.2019.104252.
 38. Borsato*, E., Zucchinielli, M., D'Ammaro, D., Giubilato, E., Zabeo, A., Criscione, P., Pizzol, L., Cohen, Y., **Tarolli, P.**, Lamastra, L., Marinello, F. (2020). Use of Multiple Indicators to compare Sustainability Performance of Organic vs Conventional Vineyard Management. *Science of the Total Environment*, 711, 135081, ISSN: 0048-9697, doi: 10.1016/j.scitotenv.2019.135081.
 39. Pijj*, A., Bailly J.S., Feurer, D., El Maaoui M.A., Boussema M.R., **Tarolli, P.** (2020). TERRA: Terrain Extraction from elevation Rasters through Repetitive Anisotropic filtering. *International Journal of Applied Earth Observation and Geoinformation*, 84, 101977, ISSN: 1569-8432, doi:10.1016/j.jag.2019.101977.
 40. Zhao*, W., Ding, J., Wang, Y., Jia, L., Cao, W., **Tarolli, P.** (2020). Ecological water conveyance drives human-water system evolution in the Heihe watershed, China. *Environmental Research*, 182, 109009, ISSN: 0013-9351, doi:10.1016/j.envres.2019.109009.
- 2019
41. Mauri, L., Sallustio, L., **Tarolli***, P. (2019). The geomorphologic forcing of wild boars. *Earth Surface Processes and Landforms*, 44, 2085 – 2094, ISSN: 0197-9337, doi:10.1002/esp.4623. ***media impact***
 42. Du*, J., Watts, J.D., Lu, H., Jiang, L., **Tarolli, P.** (2019). Editorial for Special Issue: "Remote Sensing of Environmental Changes in Cold Regions". *Remote Sensing*, 11, ISSN: 2072-4292, 2165, doi:10.3390/rs11182165 (Special Issue Editorial)
 43. Du, J., Watts, J.D., Jiang*, L., Lu, H., Cheng, X., Duguay, C., Farina, M., Qiu, Y., Kim, Y., Kimball, J.S., **Tarolli, P.** (2019). Remote Sensing of Environmental Changes in Cold Regions: Methods, Achievements and Challenges. *Remote Sensing*, 11, 1952, ISSN: 2072-4292, doi:10.3390/rs11161952 (Review Article)
 44. Xiang*, J., Li, S., Xiao, K., Chen, J., Sofia, G., **Tarolli, P.** (2019). Quantitative Analysis of Anthropogenic Morphologies Based on Multi-Temporal High-Resolution Topography. *Remote Sensing*, 11, 1493, ISSN: 2072-4292, doi: 10.3390/rs11121493.
 45. Torresani*, L., Wu, J., Masin, R., Penasa, M., **Tarolli, P.** (2019). Estimating soil degradation in montane grasslands of North-eastern Italian Alps (Italy). *Heliyon*, 5(6), e01825, ISSN: 2405-8440, doi:10.1016/j.heliyon.2019.e01825.
 46. Wu*, J., Song, M., Ma, W., Zhang, X., Shen, Z., **Tarolli, P.**, Wurst, S., Shi, P., Ratzmann, G., Feng, Y., Li, M., Wang, X., Tietjen, B. (2019). Plant and soil's $\delta^{15}\text{N}$ are regulated by climate, soil nutrients, and species diversity in alpine grasslands on the northern Tibetan Plateau. *Agriculture, Ecosystems and Environment*, 281, 111 – 123, ISSN: 0167-8809, doi:10.1016/j.agee.2019.05.011.
 47. Yang*, X., Lu, X., Ran, L., **Tarolli, P.** (2019). Geomorphometric Assessment of the Impacts of Dam Construction on River Disconnectivity and Flow Regulation in the Yangtze Basin. *Sustainability*, 11, 3427, ISSN: 2071-1050, doi:10.3390/su11123427.
 48. Pawłuszek*, K., Marczak, S., Borkowski, A., **Tarolli, P.** (2019). Multi-Aspect Analysis of Object-Oriented Landslide Detection Based on an Extended Set of LiDAR-Derived Terrain Features. *ISPRS International Journal of Geo-Information*, 8(8), 321, ISSN: 2220-9964, doi:10.3390/ijgi8080321.
 49. Yang*, X., Lu, X., Park, E., **Tarolli, P.** (2019). Impacts of Climate Change on Lake Fluctuations in the Hindu Kush-Himalaya-Tibetan Plateau. *Remote Sensing*, 11, 1082, ISSN: 2072-4292, doi:10.3390/rs11091082.
 50. Roder*, G., Hudson, P., **Tarolli, P.** (2019). Flood risk perceptions and the willingness to pay for flood insurance in the Veneto region of Italy. *International Journal of Disaster Risk Reduction*, 37, 101172, ISSN: 2212-4209, doi: 10.1016/j.ijdrr.2019.101172. ***media impact***

51. Pijj*, A., Tosoni, M., Roder, G., Sofia, G., **Tarolli, P.** (2019). Design of Terrace Drainage Networks Using UAV-Based High-Resolution Topographic Data. *Water*, 11, 814, ISSN: 2073-4441, doi:10.3390/w11040814.
 52. **Tarolli***, P., Cavalli, M., Masin, R., (2019). High-resolution morphologic characterization of conservation agriculture. *Catena*, 172, 846–856, ISSN: 0341-8162, doi:10.1016/j.catena.2018.08.026.
 53. **Tarolli***, P., Cao, W., Sofia, G., Evans, D., Ellis, E.C. (2019). From features to fingerprints: a general diagnostic framework for anthropogenic geomorphology. *Progress in Physical Geography*, 43, 95–128, ISSN: 0309-1333, doi:10.1177/0309133318825284.
 54. Sofia*, G., Ragazzi, F., Giandon, P., Dalla Fontana, G., **Tarolli, P.** (2019). On the linkage between runoff generation, land drainage, soil properties, and temporal patterns of precipitation in agricultural floodplains. *Advances in Water Resources*, 124, 120–138, ISSN: 0309-1708, doi:10.1016/j.advwatres.2018.12.003
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