
RENATO MORBIDELLI

CURRICULUM VITAE

*Department of Civil and Environmental Engineering
Perugia University*



A.D. 1308 —
unipg

DEPARTMENT OF CIVIL
AND ENVIRONMENTAL
ENGINEERING

May 2024

INDEX

PERSONAL INFORMATION	3
CURRENT POSITION	3
PREVIOUS POSITIONS AND ACADEMIC BACKGROUND	3
ACADEMIC AND INSTITUTIONAL ROLES	3
TEACHING ACTIVITY	6
UNIVERSITY COURSES	6
SELECTION OF STUDENT COMMENTS	9
OTHER TEACHING ACTIVITIES	11
TUTOR ACTIVITY FOR DOCTORAL THESIS	12
SUPERVISOR ACTIVITY FOR DEGREE THESIS	12
PARTICIPATION IN EXAMINATION AND GRADUATION COMMITTEES	17
SCIENTIFIC ACTIVITY	18
RESEARCH TOPICS	18
SCIENTIFIC PRODUCTION	19
PERFORMANCE OF THE SCIENTIFIC PRODUCTION	19
EDITORIAL PLACEMENT AND IMPACT OF THE SCIENTIFIC PRODUCTION	20
PATENTS	22
INTERNATIONAL RESEARCH COLLABORATIONS	23
RESEARCH PROJECTS, PARTICIPATION	23
RESEARCH PROJECTS, COORDINATION	24
RESEARCH CONTRACTS	24
RESEARCH AGREEMENTS	24
COMMITTEES AND BOARDS	26
EDITORIAL ACTIVITY	27
REVIEWER ACTIVITY	27
SCIENTIFIC PUBLICATIONS	28
PAPERS ON INTERNATIONAL JOURNALS	28
BOOK CHAPTERS	35
MONOGRAPHS	35
PAPERS ON NATIONAL JOURNALS	36
ABSTRACT ON INTERNATIONAL JOURNALS	36
PAPERS IN PROCEEDINGS OF INTERNATIONAL CONFERENCES	37
PAPERS IN PROCEEDINGS OF NATIONAL CONFERENCES	40
ABSTRACT IN PROCEEDINGS OF NATIONAL AND INTERNATIONAL CONFERENCES	41
CURATORSHIPS	43



PERSONAL INFORMATION

Name	RENATO MORBIDELLI
Place and date of birth	PERUGIA (PG), FEBRUARY 07 1968
Citizenship	Italian
Phone	+39 0755853620
E-mail	renato.morbidelli@unipg.it
URL	https://www.unipg.it/personale/renato.morbidelli
ORCID	https://orcid.org/0000-0001-8388-2149

CURRENT POSITION

2022-today	Full Professor of Hydrology and Hydraulic Works at the Department of Civil and Environmental Engineering, Perugia University.
------------	---

PREVIOUS POSITIONS AND ACADEMIC BACKGROUND

2002-2022	Associate Professor of Hydrology and Hydraulic Works at the Faculty of Engineering of the Perugia University until 2013 and at the Department of Civil and Environmental Engineering until 2022.
1997-2002	Assistant Professor of Hydrology and Hydraulic Works at the Faculty of Engineering of the Perugia University.
1998	PhD in Hydronomy, X cycle, Universities of Padova (administrative seat), Perugia and Bari. Thesis title: "Areal infiltration and surface runoff from slope to basin scale", tutor Prof. C. Corradini.
1994	Qualification to the Profession of Engineer achieved with the overcoming of the State examination at Perugia University (II session of 1993). Registration since February 01, 1994 in the Professional Register of the Order of Engineers of Perugia with the number A1255.
1993	Degree in Civil Engineering at Perugia University (evaluation: 110/110 cum laude). Thesis title: "Critical analysis on the performance of the DAMBRK calculation code. Applications to the Montedoglio dam", supervisors Prof. L. Ubertini and Prof. P. Manciola.

ACADEMIC AND INSTITUTIONAL ROLES

2023	President of 2 Examining Committees for the selection based on qualifications and interview for the recruitment of 2 staff members with the professional profile of Researcher level III at CNR-IRPI in Perugia (Announcements no. 390.64 RIC IRPI and 400/7 IRPI PNRR).
------	--

2023	Member of the Commission of the public competition for the recruitment of 1 unit in the profile of Istruttore Direttivo Tecnico Ingegnere Idrraulico Forestale at the Regional Forest Agency (announced by D.D. n. 4255/2022 and 4308/2022 of the Regional Forest Agency).
2022-today	Delegate of the DICA Director for Communication and for the revision and maintenance of the departmental website
2022	Member of the Final Examination Committee for the PhD "International Doctorate in Civil and Environmental Engineering" with administrative seat at Florence University (candidates: Marco Lompi and Matteo Pampaloni; November 21, 2022).
2022-today	Responsible for the University of Perugia under the cooperation agreement with the Department of Fire, Public Rescue and Civil Defence.
2022	Member of the Final Examination Committee for the PhD "International Doctorate in Civil and Environmental Engineering" with administrative seat at Florence University (candidate: Sara Modanesi; June 21, 2022).
2022-today	Quality Manager of the Master's Degree Course in Planet Life Design.
2021	President of the Final Examination Committee for the PhD "International Doctorate in Civil and Environmental Engineering" with administrative seat at Florence University (candidate: Jacopo Dari; March 29, 2021).
2020-today	Member of the Sustainability Commission of the University of Perugia.
2020- today	Member of the Communication Commission of the Department of Civil and Environmental Engineering, Perugia University.
2020- 2022	Member of the Teaching Management Committee of the Master's Degree Course in Planet Life Design (LM12), Perugia University.
2020- 2022	Member of the "Paritetica" Commission of the Department of Civil and Environmental Engineering, Perugia University.
2020- today	Member of the Teaching Board of the International Doctorate Program in "Civil and Environmental Engineering", Perugia University.
2020	Member of the Committee of the Examination for the qualification to the profession of Industrial Engineer, Information Engineer, Junior Industrial Engineer and Junior Information Engineer - I and II Session of the year 2020, Perugia University.
2019- today	Member of the Interuniversity Center for the Environment (CIPLA).
2019- today	Member of the Departmental Spaces Commission of the Department of Civil and Environmental Engineering, Perugia University.
2019-2020	Member of the Relating Commission, Superior Council LL.PP. Affair No. 62/2019 - A13 Bologna-Padova. Widening of the third lane of the Padova-Monselice section. Amount EUR 224,522,639.10.
2019	Member of the Final Examination Committee for the PhD "International Doctorate in Civil and Environmental Engineering" with administrative seat at Florence University (candidates: Costanza Carbonari and Tommaso Picciafuoco; May 3, 2019).
2018-2021	Delegate of the Perugia University for the Interuniversity Experimental Center for Road and Airport Research.
2018	President of the Committee for the "Procedure for the assignment of the integrated services of final/executive design, direction of works, safety coordination and survey and investigation services in support of the design for the intervention called "Collettore di adduzione all'ID dell'ASI di Giamoro". CUP: F93J12000230001- CIG: 7412421B4E.
2018	Member of the Committee for the admission to the "International Doctorate in Civil and Environmental Engineering" with administrative seat at Florence University (XXXIV cycle).
2018	Member of the Committee for the test of knowledge of the Italian language for foreign candidates residing abroad (a.y. 2018/2019).
2018	Member of the Final Examination Committee for the PhD "International Doctorate in Civil and Environmental Engineering" with administrative seat at Florence University (candidate: Luca Ciabatta; June 15, 2018).
2017	Member of the Committee for the admission to the "International Doctorate in Civil and Environmental Engineering" with administrative seat at Florence University (XXXIII cycle).

2016	President of the Final Examination Committee for the PhD at Escuela Internacional de Doctorado de la Universidad de Castilla-La Mancha (candidate: Pablo Duran Barroso; January 27, 2016).
2015-2020	Member of the Teaching Management Committee of the Departmental Degree Courses in Civil Engineering-Architecture (LM4) and Master in Civil Engineering (LM23).
2015	President of the Committee of the Examination for the qualification to the profession of Industrial Engineer, Information Engineer, Civil Engineer, Junior Industrial Engineer, Junior Information Engineer and Junior Civil Engineer - I and II Session of the year 2015, Perugia University.
2015	Member of the Committee for the admission to the "International Doctorate in Civil and Environmental Engineering" with administrative seat at Florence University (XXXI ciclo).
2014-2020	Member of the Teaching Board of the International Doctorate Program in "Civil and Environmental Engineering". National consortium between Florence University, Pisa University and Perugia University. Administrative office at Florence University.
2013	Member of the Technical Commission for the evaluation of projects submitted in support of the practices of concession for hydroelectric purposes referred to R.D. 1775/1933 and R.D. n. 1285/1920 (executive determination of Perugia Province n.374 of Jan 24, 2013).
2011	Member of the Technical-Administrative Committee of Public Works of the Umbria Region (executive determination of the Regional Council n. 935 of Sept 06, 2011).
2010- today	Reference Professor of the Socrates-Erasmus exchanges study area 06.4 Civil Engineering, Perugia University.
2010	Member of the Selection Committee for the "Open procedure for the definitive and executive planning and relative realization of the works for the collection and purification of the circumlacual agglomerations - 1st lot", Umbra Acque.
2009-2014	Member of the Teaching Board of the PhD program in "Civil Engineering and Innovative Materials", Perugia University.
2009	Member of the Commission of the public competition for the position of Hydraulic Engineer of the Umbria Region (D.D. n. 1389 of the Umbria Region, Feb 17, 2009).
2009	Member of the Committee for the admission to the "Civil Engineering Doctorate" with administrative seat at Perugia University (XXV cycle).
2007	Member of the Committee for the Comparative Evaluation Procedure for a position of Assistant Professor at Pavia University (published in the Official Gazette - 4th Special Series n. 91, of Nov 28, 2006).
2005	Member of the Committee of the Examination for the qualification to the profession of Civil Engineer - II Session year 2005, Perugia University.
2004- today	Scientific Director of the Experimental Field of Water Engineering and Agricultural and Forest Hydraulics of the Department of Civil and Environmental Engineering, Perugia University.
2004-2010	Member of the Intercourse Council in Energetic Engineering, Perugia University.
2004	Member of the Committee for the admission to the "Civil Engineering Doctorate" with administrative seat at Perugia University (XXV cycle).
2003-2011	Member of the Intercourse Council in Management Engineering, Perugia University.
2002-2009	Member of the Board of Teachers of the Doctorate in Civil Engineering, Perugia University.
2002	Member of the Committee for the Comparative Evaluation Procedure for a position of Assistant Professor at Mediterranea University (Reggio Calabria) (published in the Official Gazette - 4th Special Series n. 3, Jan 11, 2002).
2002	Member of the Committee for the admission to the "2nd Master in Stabilization and Conservation of Historic Centers in Unstable Territories" (course UM.01.03.33.020), Umbria Region.
2000-today	Member of the Jury for the attribution of research grants, Research Institute for the Hydrogeological Protection of the National Council of the Researches, Perugia.
2000-2013	Member of the Intercourse Council in Civil Engineering, Perugia University.
2000-2001, 2004-2005 and 2006-2007	Member of the Commission for the Scientific-Disciplinary Area "Sciences of Civil Engineering (09)", Perugia University.
1999-2013	Member of the Council of the Engineering Faculty, Perugia University.

1998-2010

Member of the Intercourse Council in Environment Engineering, Perugia University.

TEACHING ACTIVITY

The teaching activity described below has been carried out since the academic year (a.y.) 1997/1998 with continuity in the courses provided by the Engineering Faculty until 2013 and then by the Department of Civil and Environmental Engineering of the Perugia University. This activity has consisted of teaching assignments, conducting exercises, assistance and support as supervisor of thesis and tutor of doctoral thesis, tutoring of students, as well as participation in committees for final and degree examinations.

UNIVERSITY COURSES

a.y. 2020/2021-today

Lecturer of Hydraulic Risk and Environmental Protection (5 ECTS), within the Master in Planet Life Design (seat of Assisi), Department of Civil and Environmental Engineering, University of Perugia. The course of Hydraulic Risk and Environmental Protection, autonomous in every its element, can assume value of part of the integrated course of Territory and Patrimony.

The topics covered during the course concern the quantification of the flow design and the implementation of all necessary actions for the mitigation of hydraulic risk. The course is attended, depending on the years, by a variable number of 10-20 students of the above mentioned Master Degree Course.

a.y. 2008/2009-today

Lecturer of Urban Hydraulics (5 ECTS), within the five-year Degree Course in Engineering-Architecture, Faculty of Engineering (until 2013) and Department of Civil and Environmental Engineering (since Jan 01, 2014), Perugia University. The course of Urban Hydraulics, autonomous in each of its elements, according to the specific a.y. and to the students' program, sometimes assumed the value of a part of the integrated course of Hydraulic and Urban Hydraulics.

The topics covered during the course concern the mathematical modeling of the main processes of the hydrological cycle with particular regard to precipitation, design of aqueduct and urban drainage networks. The course is attended, depending on the year, by a variable number of 40-70 students of the above mentioned five years Degree Course.

a.y. 2004/2005-today

Lecturer of Water Resources Management (5 ECTS), within the Master Degree Courses in Civil Engineering and Environmental Engineering, Faculty of Engineering (until 2013) and Department of Civil and Environmental Engineering (since Jan 01, 2014), Perugia University. The course of Water Resources Management, autonomous in all its elements, according to the specific a.y. and to the students' program, sometimes assumed value as a part of the integrated course of Management and Plants for Water Resources or of the integrated course of Hydrology and Water Resources Management.

The topics covered during the course concern the definition and optimal management of a hydro-system through the use of optimization techniques. Issues related to stochastic processes and data generation are also addressed. The course is attended, depending on the years, by a variable number of 20-50 students of the above mentioned Master Degree Courses.

a.y. 2004/2005–
2009/2010

Lecturer of Transport Processes in Fluids (2 ECTS), within the Bachelor Degree Course in Energetic Engineering (seat of Terni), Faculty of Engineering, Perugia University. The course of Transport Processes in Fluids, autonomous in all its elements, according to the specific a.y. and to the students' program, sometimes assumed value of part of the integrated course of Fluid Dynamics.

The topics covered during the course concerned issues related to the modeling of pollutants in the lower atmosphere layers. The course was attended, depending on the years, by a variable number of 10-20 students of the above mentioned Bachelor Degree Course.

a.y. 2003/2004–
2010/2011

Lecturer of Water Resources Management (3 ECTS), within the Bachelor Degree Course in Management Engineering (seat of Terni), Faculty of Engineering, Perugia University. The course of Water Resources Management, autonomous in every its element, according to the specific a.y. and to the students' program, sometimes assumed value of part of the integrated course of Management of Water Resources and Plants.

The topics covered during the course concerned the definition and optimal management of a

hydro-system through the use of optimization techniques. The course has been attended, depending on the years, by a variable number of 30-40 students of the above mentioned Bachelor Degree Course.

a.y. 2002/2003

Lecturer of Laboratory of Hydrology and Hydraulic Works, within the Master Degree Courses in Civil Engineering and Environment Engineering, Faculty of Engineering, Perugia University.
The topics covered during the course concerned the development and use of hydrological modeling and included laboratory activities for the observation and subsequent modeling of basic hydrological processes. The course was attended by about 30 students of the above mentioned Master Degree Courses.

a.y. 2000/2001-today

Lecturer of Hydraulic Systems (5 ECTS), within the Master Degree Courses in Civil Engineering, Faculty of Engineering (until 2013) and Department of Civil and Environmental Engineering (since Jan 01, 2014), Perugia University. The course of Hydraulic Systems, autonomous in each of its elements, according to the specific a.y. and to the students' program, sometimes assumed value as a part of the integrated course of Management and Plants for Water Resources.
The topics covered during the course concern the design and construction of plants for the production of hydroelectric energy, irrigation and drainage systems and the main equipment for the measurement of hydrometeorological quantities. The course is attended, depending on the years, by a variable number of 10-30 students of the above mentioned Master Degree Course.

a.y. 1997/1998–
2001/2002

Tutor of Water Resources Management within the Old Degree (with duration five years) in Civil Engineering and Environmental Engineering, Faculty of Engineering, Perugia University.

a.y. 1997/1998–
2001/2002

Tutor of Hydrology within the Old Degree (with duration five years) in Civil Engineering and Environmental Engineering, Faculty of Engineering, Perugia University.

Table 1 summarizes the main teaching activities performed.

Tabella 1. Summary of teaching assignments/activities by academic year and type (five-year Old Degree – LV, three-year Bachelor Degree – LT, two-year Master Degree of type 1 – LS, two-year Master Degree of type 2 – LM, five-year Degree - LCU) and divided by course of study (Civil Engineering – C, Environmental Engineering – AT, Engineering-Architecture – AE, Management Engineering – G, Energetic Engineering – M, Planet Life Design - PLD) and by role.

a.y.	Tutor	Lecturer	Tutor Degree Thesis (n°)	Tutor Doctoral Thesis (n°)
1996/1997			1 LV	
1997/1998	- Hydrology (LV-C and AT) - Water Resources Management (LV-C e AT)		2 LV	
1998/1999	- Hydrology (LV-C and AT) - Water Resources Management (LV-C and AT)		3 LV	
1999/2000	- Hydrology (LV-C and AT) - Water Resources Management (in parte) (LV -C and AT)		2 LV	
2000/2001	- Hydrology (LV -C and AT) - Water Resources Management (LV -C and AT)	- Hydraulic Systems (LV -C)	5 LV	
2001/2002	- Hydrology (LV -C and AT) - Water Resources Management (LV -C and AT)	- Hydraulic Systems (LV -C)	8 LV	
2002/2003	- Water Resources Management (LV -C and AT)	- Hydraulic Systems (LV -C); - Laboratory of Hydrology and Hydraulic Works (LV -C)	11 LV 4 LT	
2003/2004	- Water Resources Management (LV -C and AT)	- Hydraulic Systems (LV -C); - Water Resources Management (5 ECTS) (LT-G)	5 LV 6 LT	
2004/2005		- Hydraulic Systems (6 ECTS) (LS-C); - Water Resources Management (5	3 LV 4 LT	

	ECTS) (LM-C e AT); - Water Resources Management (3 ECTS) (LT-G); - Transport Processes in Fluids (2 ECTS) (LT-E)	3 LS	
2005/2006	- Hydraulic Systems (6 ECTS) (LS-C); - Water Resources Management (5 ECTS) (LM-C e AT); - Water Resources Management (3 ECTS) (LT-G); - Transport Processes in Fluids (2 ECTS) (LT-E)	5 LV 5 LT 2 LS	
2006/2007	- Hydraulic Systems (6 ECTS) (LS-C); - Water Resources Management (5 ECTS) (LM-C e AT); - Water Resources Management (3 ECTS) (LT-G); - Transport Processes in Fluids (2 ECTS) (LT-E)	3 LV 4 LT 7 LS	1 (XX cycle)
2007/2008	- Hydraulic Systems (6 ECTS) (LS-C); - Water Resources Management (5 ECTS) (LM-C e AT); - Water Resources Management (3 ECTS) (LT-G); - Transport Processes in Fluids (2 ECTS) (LT-E)	1 LT 4 LS	
2008/2009	- Hydraulic Systems (6 ECTS) (LS-C); - Water Resources Management (5 ECTS) (LM-C e AT); - Water Resources Management (3 ECTS) (LT-G); - Transport Processes in Fluids (2 ECTS) (LT-E) - Urban Hydraulics (5 ECTS) (LCU-EA)	1 LT 13 LS	1 (XXII cycle)
2009/2010	- Hydraulic Systems (6 ECTS) (LS-C); - Water Resources Management (5 ECTS) (LM-C e AT); - Water Resources Management (3 ECTS) (LT-G); - Transport Processes in Fluids (2 ECTS) (LT-E) - Urban Hydraulics (5 ECTS) (LCU-EA)	1 LV 4 LS	
2010/2011	- Hydraulic Systems (5 ECTS) (LS-C); - Water Resources Management (5 ECTS) (LM-C e AT); - Water Resources Management (3 ECTS) (LT-G); - Urban Hydraulics (5 ECTS) (LCU-EA)	1 LV 5 LS	
2011/2012	- Hydraulic Systems (5 ECTS) (LS-C); - Water Resources Management (5 ECTS) (LM-C e AT); - Urban Hydraulics (5 ECTS) (LCU-EA)	2 LT 6 LS	1 (XXV cycle)
2012/2013	- Hydraulic Systems (5 ECTS) (LS-C); - Water Resources Management (5 ECTS) (LM-C e AT); - Urban Hydraulics (5 ECTS) (LCU-EA)	7 LM	1 (XXVI cycle)
2013/2014	- Hydraulic Systems (5 ECTS) (LS-C); - Water Resources Management (5 ECTS) (LM-C e AT); - Urban Hydraulics (5 ECTS) (LCU-EA)	1 LV 12 LM	
2014/2015	- Hydraulic Systems (5 ECTS) (LS-C); - Water Resources Management (5 ECTS) (LM-C e AT); - Urban Hydraulics (5 ECTS) (LCU-EA)	10 LM	1 (XXVIII cycle)
2015/2016	- Hydraulic Systems (5 ECTS) (LS-C); - Water Resources Management (5 ECTS) (LM-C e AT); - Urban Hydraulics (5 ECTS) (LCU-EA)	1 LT 4 LM	1 (XXIX cycle)

2016/2017	- Hydraulic Systems (5 ECTS) (LS-C); - Water Resources Management (5 ECTS) (LM-C e AT); - Urban Hydraulics (5 ECTS) (LCU-EA)	12 LM	
2017/2018	- Hydraulic Systems (5 ECTS) (LS-C); - Water Resources Management (5 ECTS) (LM-C e AT); - Urban Hydraulics (5 ECTS) (LCU-EA)	10 LM 2 LCU	1 (XXXI cycle)
2018/2019	- Hydraulic Systems (5 ECTS) (LS-C); - Water Resources Management (5 ECTS) (LM-C e AT); - Urban Hydraulics (5 ECTS) (LCU-EA)	3 LM	
2019/2020	- Hydraulic Systems (5 ECTS) (LS-C); - Water Resources Management (5 ECTS) (LM-C e AT); - Urban Hydraulics (5 ECTS) (LCU-EA)	4 LM	1 (XXXIII cycle)
2020/2021	- Hydraulic Systems (5 ECTS) (LS-C); - Water Resources Management (5 ECTS) (LM-C e AT); - Urban Hydraulics (5 ECTS) (LCU-EA) - Hydraulic Risk and Environmental Protection (5 ECTS) (LM-PLD)	6 LM	2 (XXXIV cycle) 1 (foreign)
2021/2022	- Hydraulic Systems (5 ECTS) (LS-C); - Water Resources Management (5 ECTS) (LM-C e AT); - Urban Hydraulics (5 ECTS) (LCU-EA) - Hydraulic Risk and Environmental Protection (5 ECTS) (LM-PLD)	5 LM	
2022/2023	- Hydraulic Systems (5 ECTS) (LS-C); - Water Resources Management (5 ECTS) (LM-C e AT); - Urban Hydraulics (5 ECTS) (LCU-EA) - Hydraulic Risk and Environmental Protection (5 ECTS) (LM-PLD)	1 LT 1 LM	
2023/2024	Hydraulic Systems (5 ECTS) (LS-C); - Water Resources Management (5 ECTS) (LM-C e AT); - Urban Hydraulics (5 ECTS) (LCU-EA)		1 (XXXVII ciclo)

SELECTION OF STUDENT COMMENTS

Selection of "Free Comments" reported by students when completing the "Teaching Evaluation Questionnaires".

- a.y. 2022/2023 course: *Urban Hydraulic* (average student rating: 8.8/10)
"very clear explanations, teacher absolutely helpful".
- a.y. 2022/2023 course: *Hydraulic Systems* (average student rating not available)
"If there were more good teachers, passionate about teaching and consistent with modern learning issues as Professor Morbidelli is, the university would be a better place."
- a.y. 2019/2020 course: *Hydraulic Systems* (average student rating: 9.3/10)
"The course is clear and understandable thanks to the comprehensive explanations of the professor. Excellent the idea of making visits to the hydroelectric plants in Umbria, although due to covid-19, this year was not possible."
- a.y. 2016/2017 course: *Hydraulic Systems* (average student rating: 9.7/10)
"Professor Morbidelli is truly the best professor I have encountered in the past five years. He is really smart, helpful, super attentive to engage the student and motivate them in their studies and lessons. He is really enjoyable to go to class, which in other courses is really an antithesis. I thank him because he really is an example for all of us and especially should be an example for other faculty."

a.y. 2015/2016	<p>course: <i>Water Resources Management</i> (average student rating: 9.5/10)</p> <p>"A well-structured course, not heavy but at the same time interesting. The teacher, in my opinion, stimulates and manages to keep the students' attention, as well as being very well prepared. A topic that has never been covered and has an important relevance. I am satisfied with the course and the teacher."</p>
a.y. 2014/2015	<p>course: <i>Water Resources Management</i> (average student rating: 9.2/10)</p> <p>"Course taught in an exemplary manner. Lecturer helpful and knowledgeable. Topics covered in a comprehensive manner."</p>
a.y. 2013/2014	<p>course: <i>Urban Hydraulic</i> (average student rating: 9.0/10)</p> <p>"Bravi!!! Between Morbidelli and Meniconi I could not describe who is more inspiring and clear. They are both excellent professors, extremely competent and helpful. Really a course taught excellently. My compliments to the professors and many thanks for your knowledge, transmitted with great competence".</p> <p>course: <i>Water Resources Management</i> (average student rating: 9.7/10)</p> <p>"The course is delivered in an efficient and challenging manner. It is an excellent example of what teaching at university should be like."</p>
a.y. 2012/2013	<p>course: <i>Water Resources Management</i> (average student rating: 9.5/10)</p> <p>"The lectures are taught in a clear and stimulating manner, allowing for excellent discussion between professor and student. The professor is always available for any explanation and the structuring of the course makes it easy to take the exam at the end of the course."</p>
a.y. 2008/2009	<p>course: <i>Water Resources Management</i> (average student rating: 9.1/10)</p> <p>"Good, precise, very clear in explanations."</p> <p>"The teaching is clear, precise and timely. The lectures are interesting and useful to follow for exam purposes. Congratulations to Prof. Morbidelli."</p>
a.y. 2007/2008	<p>course: <i>Water Resources Management</i> (average student rating: 9.6/10)</p> <p>"The course is articulated and run in the best possible way and the lectures given by the lecturer are clear and understandable, which is difficult to find in other subjects"</p> <p>"The lectures are delivered in a timely and comprehensive manner. The course is well developed and the professor is great"</p>
a.y. 2006/2007	<p>course: <i>Hydraulic Systems</i> (average student rating: 9.3/10)</p> <p>"The professor has always been very helpful, knowledgeable and manages to make the lectures clear and interesting. He should be considered as a model for many other faculty to follow."</p> <p>"I wish all courses were taught this way."</p>
a.y. 2005/2006	<p>course: <i>Water Resources Management</i> (average student rating: 9.4/10)</p> <p>"The course is taught in a truly exemplary manner with the course material complete and comprehensive and the lectures delivered clearly and in the time necessary for the student to write notes and reflect of the subject matter. I would like to see this way of lecturing adopted in other courses as well."</p> <p>"Prof. Renato Morbidelli is great, I wish they were all like him!!! To all his colleagues: take example!!!"</p>
a.y. 2004/2005	<p>course: <i>Hydraulic Systems</i> (average student rating: 9.5/10)</p> <p>"Congratulations! Renato, you are one of the best professors I have had in 5 years."</p> <p>" Congratulations for a course taught in a clear yet comprehensive manner."</p>
a.y. 2003/2004	<p>course: <i>Water Resources Management</i> (average student rating: 9.5/10)</p> <p>"Lecturer with innate communication skills, excellent level lectures and very understandable. Fascinating attendance. Wish they were all like this."</p>
a.y. 2002/2003	<p>course: <i>Laboratory of Hydrology and Hydraulic Works</i> (average student rating: 9.1/10)</p> <p>"Classes are taught in a clear and inspiring professional manner. I wish they were all like this!"</p> <p>"A note of merit and great appreciation and esteem for Professor Morbidelli who, in addition to always being very helpful, punctual in his lectures, makes sure that the lectures are always very interesting and engaging"</p>
a.y. 2001/2002	<p>course: <i>Hydraulic Systems</i> (average student rating: 9.3/10)</p> <p>"The course is very interesting also in future and applicative vision, so it could gain more importance than courses of which we do not see the usefulness"</p> <p>"The course is carried out in an excellent way, I wish everyone was like that."</p>
a.y. 2000/2001	<p>course: <i>Hydraulic Systems</i> (average student rating: 9.7/10)</p> <p>"Finally, someone who really makes himself available to students, both for clarification and in</p>

class. The way of explaining is really good and makes the lesson very enjoyable, without stressing the students taking notes, waiting for them to be done. Way to go!"

OTHER TEACHING
ACTIVITIES

2023	Lecturer of a seminar entitled "There is no water to lose" within the Training Course "Good Practices for a More Sustainable University" organized by Perugia University, December 5 2023 (Engineering Campus - Perugia).
2023	Lecturer of "Water and Environmental Sustainability in a Climate-Changing Context" within the International Summer School organized by the "School of High Specialization and Study Center for the Maintenance and Conservation of Historical Centers in Unstable Territories" (Orvieto and Todi), 20-26 August 2023.
2019	Lecturer of a seminar entitled "The use of rain data in scientific research and in the free profession" organized by the Order of Engineers of the Province of Perugia (Engineering Campus - Perugia).
2019	Lecturer of a seminar entitled "Anthropization of the natural environment: the role of water" within the University course of History of Architecture 1, Degree Course in Engineering-Architecture, Department of Civil and Environmental Engineering, Perugia University (Engineering Campus - Perugia).
2016-2019	Didactic activity for school-work alternation paths. Project title: Hydrometeorology. Department of Civil and Environmental Engineering, Perugia University (Engineering Campus - Perugia).
2018	Lecturer of a seminar entitled "Climate change and main meteorological parameters in Umbria" organized by ARPA-Umbria (Perugia).
2018	Lecturer of a seminar entitled "Climate change and main meteorological parameters in Umbria" organized by Centro Funzionale Decentrato of Umbria Region (Foligno).
2017	Lecturer of a seminar entitled "Impact of temporal data aggregation on heavy rainfall climatic trend evaluation" within the "New frontiers of hydrology and environmental protection", Cooperation perspectives Yazd University (Iran)- Perugia University (Italy) (Engineering Campus - Perugia).
2017	Lecturer of a seminar entitled "The effect of climate change on extreme rainfall events in Umbria" in the framework of the widespread seminar "The flood, the floods. Memory and action" organized by CiNiD and GII (Convento di San Pietro - Perugia).
2016	Lecturer of a seminar entitled "Water, resource or problem" within the University course of History of Architecture 1, Degree Course in Engineering-Architecture, Department of Civil and Environmental Engineering, Perugia University (Engineering Campus - Perugia).
2015	Lecturer of a seminar entitled "The hydrogeological instability. Possible interventions for the safeguard of the territory" within the Study Day "The sustainable city: a cultural choice" (Engineering Campus - Perugia).
2014	Lecturer of a seminar entitled "Hydrological cycle and main interventions of hydraulic arrangement" organized by Centro Funzionale Decentrato of Umbria Region (Foligno).
2003	Lecturer of a seminar entitled "The Hydrological Aspects of the PAI" within the seminars on "Rehabilitation, Hydraulic Defense and Environmental Recovery of the river banks" - Agreement with the Province of Perugia for training courses on: "River rehabilitation: hydraulic and ecological aspects" (Villa Umbra - Perugia).
2003	Lecturer of a seminar within the University Master "Mathematical modeling of hydrogeological disasters" - entitled "Mathematical models for the estimation of local and areal infiltration" (University of Calabria, Cosenza).
2002	Lecturer of "Principles of Hydrology" within the Project "Training course for the maintenance of works of consolidation of unstable territories" code PG.01.03.33.019, Faculty of Engineering, Perugia University.
2000-2001	Lecturer of the Integrated Course of "Hydrological and Hydrogeological Risk" within the Interfaculty Bachelor in "Coordination of Civil Protection Activities" (Foligno).
2000-2001	Lecturer of "Principles of Hydrology", "Complements of Hydrology" within the "Master in Stabilization and Conservation of Historical Centers in Unstable Territories" organized by the "School of High Specialization and Study Center for the Maintenance and Conservation of Historical Centers in Unstable Territories" (Orvieto and Todi).

TUTOR ACTIVITY FOR
DOCTORAL THESIS

a.a. 2021/2022 – 2023/2024	Tutor of 1 PhD thesis in “Civil and Environmental Engineering”, XXXVII Cycle. Arash Rahi: “Interactions between land cover changes and runoff generation in a climate warming context”, Perugia University.
a.a. 2020/2021 – 2022/2023	Co-advisor of 1 PhD thesis abroad. Salehi Y: “Modeling rainwater infiltration rate based on slope gradient and rainfall intensity in various soils using rainfall simulator”, Zanjan University, Iran.
a.a. 2018/2019 – 2020/2021	Tutor of 1 PhD thesis in “Civil and Environmental Engineering”, XXXIV Cycle. Pampaloni M: “Investigating hydrological parameters for Nature Based Solution characterization”, Florence University and UPM, Universidad Politecnica de Madrid, Escuela Técnica Superior de Ingenieros de Caminos, Canales y Puertos.
a.a. 2018/2019 – 2020/2021	Tutor of 1 PhD thesis in “Civil and Environmental Engineering”, XXXIV Cycle. Modanesi S: “Innovative use of Earth observations into a land surface model for tracking human-induced changes to the terrestrial water cycle”, Florence University and KU Leuven. Agreement for Joint Research Doctoral Thesis (November 2019/January 2020) within the International Doctorate Program in “Civil and Environmental Engineering”, with research topic “Potential benefit of using innovative earth observations for tracking human induced changes in the terrestrial water cycle”, Florence University and KU Leuven.
a.a. 2017/2018 – 2019/2020	Tutor of 1 PhD thesis in “Civil and Environmental Engineering”, XXXIII Cycle. Dari J: “Antropogenic influence on the hydrological cycle: detecting and estimate irrigation through remote sensing soil moisture”, Florence University and Universitat Ramon Llull. Agreement for Joint Research Doctoral Thesis (February/March 2019) within the International Doctorate Program in “Civil and Environmental Engineering”, with research topic “Antropic impacts on the hydrological cycle”, Florence University and Universitat Ramon Llull.
a.a. 2015/2016 – 2017/2018	Tutor of 1 PhD thesis in “Civil and Environmental Engineering”, XXXI Cycle. Picciafuoco T: “On the estimation of soil saturated conductivity: from the plot scale to the field scale”, Florence University and Technische Universität Wien. Agreement for Joint Research Doctoral Thesis (January 08, 2016) within the International Doctorate Program in “Civil and Environmental Engineering”, with research topic “The hydrological balance from the plot scale to the small watershed scale”, Florence University and Technische Universität Wien.
a.a. 2013/2014 – 2015/2016	Tutor of 1 PhD thesis in "Civil Engineering and Innovative Materials", Cycle XXIX. Cifrodelli M: "Local and regional analysis of the intense rainfall regime in central Italy", Perugia University.
a.a. 2012/2013 – 2014/2015	Tutor of 1 PhD thesis in "Civil Engineering and Innovative Materials", Cycle XXVIII. Camici S: "Impact of Climate Change on Extreme Discharge", Perugia University.
a.a. 2010/2011 – 2012/2013	Tutor of 1 PhD thesis in "Civil Engineering and Innovative Materials", Cycle XXVI. Tarpanelli A: "Remote Sensing for Hydraulic Applications in Small-Medium Basins", Perugia University.
a.a. 2009/2010 – 2011/2012	Tutor of 1 PhD thesis in "Civil Engineering and Innovative Materials", Cycle XXV. Rossi E: "Theoretical-Experimental Analysis of the Evolution of the Vertical Profile of Water Content in Soil under Natural Conditions", Perugia University.
a.a. 2006/2007 – 2008/2009	Tutor of 1 PhD thesis in "Civil Engineering", Cycle XXII. D'Elia I: "Modeling for Integrated Air Quality Assessment", Perugia University.
a.a. 2004/2005 – 2006/2007	Tutor of 1 PhD thesis in "Civil Engineering", Cycle XX. Brocca L: "Monitoring and Modeling of Soil Water Content in the Hydrological Practice", Perugia University.

SUPERVISOR ACTIVITY
FOR DEGREE THESIS

1998-today	Tutor of 199 thesis (experimental, theoretical, or numerical), with deducible arguments from the listed titles (Perugia University): 51 Old Degree thesis (LV - Civil Engineering, Environmental Engineering), 29 Bachelor Degree thesis (LT - Civil Engineering, Environmental Engineering), 119 Master Degree thesis (LS, LM, LCU - Civil Engineering, Environmental Engineering, Engineering-Architecture).
------------	--

Old Degree thesis (LV - Civil Engineering, Environmental Engineering)

- Realization of an experimental model for the laboratory study of slope hydrology;
- Hydrological analysis and design proposals for the settlement of the final stretch of the Puglia stream;
- Adaptive conceptual model for real-time flood forecasting;
- Use of a physical laboratory model for slope hydrology analysis;
- Definition of a real-time hydrological telemetry network;
- Spatial variability of soil hydraulic characteristics and runoff production using a laboratory model;
- Pollutant transport in non-stationary situations;
- Real-time flood forecasting with a semi-distributed model;
- Comparative analysis of leakage estimation modeling on moderate-sized watersheds;
- Simulation of flood wave propagation due to dam failure.
- Hydrological analysis related to the Tescio stream catchment area;
- Implementation of the new experimental field of Water Engineering;
- Experimental analysis of the spatial variability of soil hydraulic properties;
- Transport of air pollutants: an analysis with different methodologies;
- Analysis of rainfall for different time aggregation scales;
- An adaptive semi-distributed model for real-time flood prediction;
- The influence of rainfall temporal aggregation on hydrogram development at the small basin scale;
- Sensitivity analysis in the calculation of atmospheric pollutant transport;
- A semi-analytical model for calculating areal mean infiltration in the presence of rainfall and spatially heterogeneous ground conditions;
- Definition of a monitoring network of hydrometeorological and surface water quality quantities;
- The use of similar profiles to calculate surface runoff over small basins;
- Environmental impact and multicriteria analysis of the project alternatives of the agroforestry biomass power plant in the municipality of Città di Castello;
- Runoff estimation on moderate-sized basins: link between initial soil conditions and the value of model parameters;
- Role of slope inclination using a small-scale physical model;
- The role of spatial variability of rainfall and soil hydraulic properties in direct runoff simulation;
- A 2-D infiltration model for verification of laboratory-conducted analyses;
- Experimental investigation of cold recycling using cement and expanded bitumen;
- Analysis of slope hydrology using a small-scale laboratory physical model;
- Tools for modeling, monitoring, and containment of soil pollutant diffusion;
- Role of temporal aggregation of rainfall in hydrogram development at the slope scale;
- Experimental analysis on the accuracy of a semi-analytical model for estimating local infiltration;
- Simplified modeling for the calculation of areal average infiltration at the slope scale;
- Experimental setup for the analysis of basic hydrological processes;
- The variability in three-dimensional space of the main hydraulic properties of a natural soil;
- Experimental analysis of the role of slope inclination in coarse-textured soils;
- The choice of temporal aggregation of precipitation for use in rainfall-runoff transformation models;
- Study of the Petrignano di Assisi variant. Intersection analysis;
- Analysis of soil water content in experimental sites in Central Italy;
- Comparison of different methodologies for the estimation of the design flow rate for the section of Ponte Nuovo on the Tiber river;
- Determination of areal mean rainfall at the small basin scale;
- A simplified model for the rain-flow transformation at the small basin scale;
- Experimental evidence on the run-on process;
- Laboratory analyses aimed at modeling the infiltration process;
- The optimal management of the Pasquarella and Acqua Loreto lifting and storage plants;
- Irrigation systems in the current socio-economic context;
- Verification of the hydrological safety of the Sovara dam on the homonymous stream;
- The Ponte San Giovanni hydroelectric plant on the Tiber River;
- A run-of-river hydroelectric plant on the Chiascio River at Ponte Rosciano;

- State of the hydroelectric exploitation in the province of Perugia;
- Experimental evidence on the process of infiltration and redistribution of water in a stratified soil;
- The irrigation technique and the current framework in the Umbrian territorial context.

Bachelor Degree thesis (LT - Civil Engineering, Environmental Engineering)

- Comparison of different methodologies for estimating design flow rate for the Santa Lucia section of the Tiber River;
- The estimation of the design flow rate using the UHI convolution;
- The use of the evaporimeter for modeling flood levels and soil water content;
- Rainfall possibility indicator lines for gauging stations in the upper and middle Tiber River basin;
- Verification of the Lag-area relationship for the Upper Tiber Valley;
- Rainfall possibility indicator lines for gauging stations in southwestern Umbria;
- An empirical relationship for determining the design rainfall duration;
- An empirical relation for calculating the design flow rate over small and medium-sized basins in the Tiber Valley;
- Determination of temperature profiles in the absence of elevation stations;
- Continuous monitoring of soil water content over the Ponte della Pietra experimental area;
- Atmospheric stability conditions based on ground temperature measurements;
- Analysis on the possibility of determining temperature profiles in the absence of altitude stations;
- Calculation of temperature profiles from the knowledge of ground measurements;
- Determination of temperature profiles in Umbria;
- Wind in Umbria: scenarios for the calculation of pollutant diffusion;
- Calculation of duration curves on sections of interest for hydroelectric production;
- Types of atmospheric stability scenarios for central Umbria;
- Climatological analysis on vertical temperature profiles in Umbria;
- The calculation of the design flow rate of the Calcione dam on the Foenna stream;
- The determination of atmospheric stability conditions in Umbria;
- Relative air humidity in Umbria: scenarios for the calculation of the diffusion of pollutants in the atmosphere;
- Determination of atmospheric stability conditions through the use of fictitious profiles;
- Analysis of effective rain-flow models for use in engineering applications;
- Analysis of direct effective rainfall-flow models for design hydrogram estimation;
- DICA's new weather-climate station;
- Influence of land use on spatiotemporal variability of water content;
- Soil water content trends in different experimental areas;
- The effect of climate change on cumulative annual rainfall in the Umbria region;
- Runoff coefficient analysis: the case of the Chiani River in Morrano

Master Degree thesis (LS, LM, LCU - Civil Engineering, Environmental Engineering, Engineering-Architecture)

- Hydrological safety assessment of Upper Tiber dams;
- Critical analysis of the Kineros 2 model. Application to small basins of the Upper Tiber Valley;
- Temporal stability of soil water content over an experimental area in central Italy;
- The evaluation of the duration of a design reach;
- The spatio-temporal variability of soil water content from slope to small catchment scale;
- Analysis of the hydraulic vulnerability of embankments;
- On the geometric representation of small watersheds;
- The optimal management of a water supply network;
- Diffusion of pollutants in the atmosphere: typical scenarios of cloud cover in Umbria;
- The spatio-temporal characterization of soil water content with TDR technique;
- Spatial variability characteristics of soil water content for a sub-basin of the Arno River;
- Experimental laboratory investigation of point infiltration;
- Indirect measurement of soil water content on experimental areas in the Upper Tiber Valley;
- Meteorological scenarios for atmospheric pollutant diffusion;
- Areal average infiltration in stratified soils in the presence of spatial variability in saturation hydraulic conductivity;

- On the use of temporally stable soil water contents;
- Criteria for choosing empirical relationships for estimating design flow for small basins of the Upper-Middle Tiber River;
- Implementation of an experimental system for complex rainfall simulation on field plots;
- Modeling of soil water content aimed at hydrological balance at the basin scale;
- Experimental analysis on the hydraulic tightness of embankments;
- Hydraulic vulnerability of the Topino river embankments in the urban area of Foligno;
- Evapotranspiration and soil water content modeling;
- The measurement of soil water content aimed at rainfall-runoff modeling;
- Temporal stability analysis of soil water content on the catchment areas of Genna and Caina streams;
- Hydrologic balance issues at the watershed scale;
- Soil water content modeling for river flood defense purposes;
- Spatio-temporal variability of soil water content on the Genna and Caina streams catchments;
- Status of hydroelectric exploitation in the Province of Terni;
- The spatio-temporal variability of soil water content over the Lake Trasimeno catchment area;
- The representation of soil water content over the Lake Trasimeno catchment area;
- Experimental analysis on the sensitivity of infiltration line in embankments to soil hydraulic parameters;
- Comparison of real and estimated air temperature profiles;
- Design of a run-of-river hydroelectric power plant on the Tiber River at Città di Castello;
- Use of neural networks to predict Lake Trasimeno levels;
- Selection criteria among competing applications for hydroelectric derivations;
- Areal reduction factor for design rainfall estimation;
- Estimation of uncertainty in flow determination using the "Rating Curve Model";
- Development of an alternative methodology for rainfall measurement;
- Analysis of the infiltration process in an experimental area of Northern Europe;
- Estimation of river flow using the Rating Curve Model from in-situ and remote data;
- Ground surface inclination and infiltration process;
- Experimental analysis on the performance of the CN-SCS model for the estimation of effective rainfall;
- Experimental evidence on the evolution of the vertical profile of water content in a naturally stratified soil;
- Soil water content monitoring at the watershed scale;
- Experimental analysis on in situ measurement of soil saturation hydraulic conductivity;
- Characteristics and perspectives of micro hydroelectricity in Umbria;
- Experimental analysis of water hammer phenomenon as example of transient flow in supply system of hydropower plants;
- The safeguard of the Petriano aquifer well field through the artificial recharge technique;
- The hydrological balance of Serra di Burano (Umbro-Marchigiano Preappennines) addressed to the use of water resources for drinking water purposes;
- Modeling artificial recharge of the Cannara aquifer system;
- The role of initial soil water content on hydrogram formation at the small basin scale;
- Verification of the representativeness of initial soil moisture categories in the Curve Number method of the Soil Conservation Service;
- Prediction of Petriano aquifer levels using neural networks;
- Breach formation and evolution on a loose material dam;
- A mini-hydroelectric plant on the Racanello stream in Basilicata;
- Proposed modification of the Soil Conservation Service-Curve Number (SCS-CN) method through an experimental analysis at the slope scale;
- The problem of silting of artificial reservoirs in Central Italy;
- The device for the evaluation of competing applications in the granting of concessions for hydroelectric use;
- Proposed modification of the "Soil Conservation Service-Curve Number (SCS-CN)" method by means of a small catchment scale analysis;
- Urban drainage networks and sinkhole formation. The case study of the historic center of Perugia;

- Operational protocol for the regulation of the Trasimeno-Chiusi hydraulic system;
- Rainfall estimation by meteorological radar: the November 2013 flood event in the Chiascio River basin;
- Penstock in Italy: normative evolution, technical characteristics and analysis of the variations in the thickness of some penstocks realized in the last century;
- Experimental analysis on the methods of estimation of potential evapotranspiration at plot scale;
- The role of evapotranspiration in the hydrological balance at plot scale;
- Effects of climate change on heavy rainfall in the Umbria region;
- The optimal management of artificial inflows to Lake Trasimeno;
- The interaction between new hydroelectric derivations and hydrometric monitoring stations;
- Soil erosion and sediment delivery at small watershed scale: the case study of Madonna delle Mosse dam watershed (central Italy);
- The influence of rainfall data availability on LSPP determination;
- A new calibration procedure of the "Soil Conservation Service - Curve Number (SCS-CN)" method for the estimation of effective rainfall;
- A novel procedure for estimating embankment vulnerability;
- Effect of climate change on annual maximum rainfall for periods of several consecutive days in the Umbria region;
- Determination of the geomorphological instantaneous unit hydrogram of an uninstrumented catchment;
- The influence of the temporal aggregation of rainfall on the calculation of maximum annual thicknesses;
- The temporal stability of rainfall produced by frontal systems;
- The effect of climate change on temperatures in two Mediterranean regions;
- The temporal stability of soil water content at the scale of a medium-sized river basin;
- Influence of rainfall on the reduction of road pavement adhesion;
- The temporal distribution of the rains in Umbria in relation to the climatic changes;
- Securing the sewage disposal system of the built-up area of Bastia Umbra;
- Use of a model to estimate the components of the hydrological balance at the parcel scale;
- The influence of climate change on the thermometric indices of the Umbria region;
- Numerical-experimental modeling of the triggering mechanisms of rain-induced landslides;
- The effect of temporal aggregation of rainfall data on climatic indices of extreme rainfall;
- The rainfall grouping factor by empirical method;
- The hydraulic arrangement of the Tomb of Mamia at Pompeii;
- The spatial variability of saturation hydraulic continuity in the Hoal experimental area (Petzenkirchen, Austria);
- Characteristics of underestimation errors in the assessment of maximum annual rainfall thicknesses;
- Areal reconciliation of rainfall extremes for the Umbria region;
- Optimal and automated management of a municipal wastewater treatment plant;
- Analysis of urban wastewater treatment sludge production and management methods;
- Restoring identity to a building;
- Optimal management of the discharge works of an artificial reservoir for the containment of the silting process: the case study of Le Grazie reservoir, Tolentino (MC);
- Urban regeneration of a degraded area: the Alcantara Valley in Lisbon. A project for the reduction of environmental, ecological and social fragmentation and the role of water;
- Micro hydroelectricity in integrated water systems;
- The solid transport process in hill basins: modeling and mitigation interventions;
- Interaction between precipitation and landslides: a time series analysis for Umbria Region;
- Estimation of stream discharge using observations from the next SWOT satellite mission: a river trunk mass balance approach;
- Some analyses related to extreme rainfall events;
- The spatio-temporal variability of extreme rainfall events in Umbria;
- Design of mitigation actions for the silting process of an artificial lake;
- On the fraudulent use of drinking water in agriculture;
- Evaluation of flood flows with ensemble forecasting systems;
- Experimental analysis on the interaction of complex hydrological processes;

- The areal grouping factor of extreme rainfall in the Umbria region using an empirical method;
- The overflow of Le Grazie Lake (Tolentino) with experimental technique;
- Satellite irrigation estimation: evaluation of different evapotranspiration calculation approaches;
- Areal reduction of design rainfall (ARF): the case of Umbria region;
- The evaluation of the main climate indicators in Umbria;
- Interaction between land use change and runoff generation in a climate change context;
- Preserving water in the Athenaeum to build a sustainable future;
- Effect of climate change on rainfall in Umbria;
- BIM modelling applied to the sewerage network of Giglio Castello in Tuscany;
- Radar-pluviometer comparison for precipitation detection;
- Event-scale runoff coefficient analysis
- Assessing the effect of climate change on the runoff coefficient in the Ruhr river basin in Germany;
- Evaluation and analysis of hydrological changes in the Wustebach catchment (Germany) due to partial deforestation;
- Trends of the main climate indicators in Umbria;
- Sediment management in hydropower plants: the innovative technique of sand trap.

PARTICIPATION IN
EXAMINATION AND
GRADUATION
COMMITTEES
1997/1998 - today

Member of the committees for the final examinations of the following courses:

- Hydrology;
- Hydrology I;
- Hydrology II;
- Hydrology and Hydraulic Works;
- Hydrology e Water Resources Management;
- Hydraulic Works;
- Hydraulic and Urban Hydraulics;
- Transport Processes in Fluids and Soils;
- Water Resources Management;
- Transport Processes and Water Resources Management;
- Transport Processes and Hydraulic Systems;
- Hydraulic Systems;
- River Engineering and Channel Protection Design;
- Hydraulic Risk;
- Sanitary Engineering;
- Laboratory of Hydrology and Hydraulic Works;
- Fluid Dynamic;
- Hydraulic Risk and Environmental Protection.

1997/1998 - today

Member of the Degree Commissions in:

- Civil Engineering (LV);
- Environmental Engineering (LV);
- Civil Engineering (LT);
- Environmental Engineering (LT);
- Civil Engineering (LS/LM);
- Environmental Engineering (LS/LM);
- Engineering-Architecture (LCU);
- Planet Life Design (LM).

RESEARCH TOPICS

1995 - today

The research activity, started at the Department of Civil and Environmental Engineering of the Perugia University, during the PhD course in Hydrometry (X cycle) was essentially oriented to the study of basic hydrological processes. The activity has continued in the following years oriented in the representation of the process of infiltration in saturated and unsaturated soils, theme on which focuses most of the scientific production until now. At first, the attention was focused on the spatial variability of the hydraulic characteristics of soils and on the realization of modeling for the estimation of areal infiltration. To achieve this goal, a new conceptual model of the infiltration process at the local scale in the case of vertically stratified soils was first formulated. The mathematical structure of this model, suitably integrated taking into account the spatial variability of the hydraulic conductivity of soil saturation, has then allowed the formulation of a model for the estimation of the average areal infiltration at the "plot" scale. The study of the infiltration process has been enriched by laboratory and field experimental activities that have allowed to analyze the vertical profile of the volumetric water content, in the presence or absence of vegetation. These experimental investigations have also allowed to interpret and simulate phenomena such as the formation of the crust on the surface of bare soils subjected to intense rainfall and the formation of a more permeable surface layer in the presence of vegetation. The laboratory activity has been particularly important for the study of the influence of the surface slope on the infiltration process both in grassy and bare soil and to highlight some criticalities in the classical representation of the process. The experimental activity in the field has also allowed to validate the modeling for the estimation of infiltration at the areal scale on vertically homogeneous soil, where the process of infiltration of water coming from areas with saturated surface flows on areas with unsaturated surface (called "run-on") assumes a fundamental role and to conduct studies on the dynamics of evaporation from bare soil in relation to the available volumetric water content.

Another secondary research topic developed since 2017 has concerned the spatial variability of soil saturation hydraulic conductivity and its representation at the plot scale in areal infiltration modeling. In this context, a reliability assessment of the most commonly adopted measurement techniques was performed using a rain-flow approach under steady-state conditions as a "benchmark". Through an intensive field activity, a methodology has been proposed to plan a monitoring campaign of the saturation hydraulic conductivity with a minimum number of measurements, such as to ensure an adequate level of confidence of the average areal value from plot to small catchment scale. In addition, a procedure has been proposed to identify a function ("pedotransfer function") useful to provide an estimate of the saturation hydraulic conductivity at the plot scale.

One area of research addressed since 2015 has concerned the study of the effects of climate change on both rainfall indices (in particular on extreme rainfall), based on an intense validation activity of rainfall data available at the regional scale, and on thermometric indices. In addition, the effects of the reduced temporal resolution of the oldest part of the rainfall time series on the estimation of annual rainfall maxima, on the frequency analysis of extreme rainfall and on climate trends have been investigated.

Recently, a new line of research has been launched aimed at quantitative estimation of irrigation from satellite images.

The main research activities have been therefore developed along the following lines:

- infiltration modeling at the local scale;
- representation of spatial variability in soil saturation hydraulic conductivity;
- modeling of areal average infiltration in vertically homogeneous and stratified soils;
- surface runoff modeling at the slope scale;
- volumetric water content profiles in homogeneous and stratified soils, effects of soil surface slope in the partitioning between surface and subsurface flow, and determination of saturation hydraulic conductivity through experimental field and laboratory analyses;
- characterization of the spatial variability of soil hydraulic properties;
- analysis of extreme rainfall events;
- analysis of atmospheric profiles;
- analysis of climate trends in thermo-pluviometric data series;
- dynamics of atmospheric pollutants in relation to engineering applications (civil-environmental);
- quantification of irrigation through the use of remote sensing.

SCIENTIFIC
PRODUCTION
1996 - today

Since 1996 a total of 203 publications were produced, divided as follows:

- 89 Papers on International Journals;
- 12 Book Chapters;
- 9 Monographs or Scientific Treatises;
- 4 Papers on National Journals;
- 15 Abstracts on International Journals;
- 29 Papers in Proceedings of International Conferences;
- 17 Papers in Proceedings of National Conferences;
- 25 Abstracts in Proceedings of International and National Conferences;
- 3 Curatorships.

According to the **ISI Web of Science** database, there are currently 92 publications by R. Morbidelli (May 2024). The total citations received are 3037. The average number of citations per article contained in the database is 33.01, with a maximum of 332 citations and second value, in descending order, of 307. The H-index is 30.

According to the **Scopus** database, the publications of R. Morbidelli are currently 105 (May 2024). The total citations received are 3399. The average number of citations per article contained in the database is 32.37, with a maximum of 357 citations and second value, in descending order, equal to 343. The H index is 31.

PERFORMANCE OF THE
SCIENTIFIC
PRODUCTION

The time progression of the scientific production over the period 1996-today is shown in Table 4.

Table 4. Temporal collocation of publications distinguished by type: international journals (RI), national journals (RN), book chapters or editorships (CL), proceedings of international conferences (CI), proceedings of national conferences (CN), monograph or technical report or collection of contributions or abstracts (A)

Year	RI	RN	CL	CI	CN	A	Tot. Year
1996	-	1	-	2	-	-	3
1997	-	-	-	1	-	1	2
1998	1	-	-	1	1	-	3
1999	1	-	-	2	-	-	3
2000	-	-	-	3	1	-	4
2001	1	-	-	2	-	1	4
2002	1	-	1	2	1	-	5
2003	-	-	-	2	-	-	2
2004	2	-	-	1	1	1	5
2005	-	-	-	-	-	-	-
2006	3	1	-	2	1	-	7
2007	2	1	1	1	-	-	5
2008	4	-	2	1	1	1	9
2009	3	-	-	3	-	2	8
2010	1	-	-	-	3	1	5
2011	4	-	-	1	-	1	6
2012	3	-	1	2	2	2	10
2013	1	-	1	-	-	-	2

2014	5	-	-	-	1	1	7
2015	3	-	1	-	-	4	8
2016	3	-	-	1	1	3	8
2017	4	-	1	-	-	-	5
2018	8	-	-	-	2	5	15
2019	8	-	-	-	-	7	15
2020	6	-	1	2	-	4	13
2021	9	1	1	-	1	3	15
2022	7	-	5	-	1	3	16
2023	5	-	-	-	-	5	10
2024	4					4	8
1996-2022	89	4	15	29	17	49	203

EDITORIAL PLACEMENT
AND IMPACT OF THE
SCIENTIFIC
PRODUCTION

Tables 5 and 6 and Figure 1 provide information on the editorial placement and impact on the scientific community of the production in international journals.

Table 5. Quartiles of scientific papers in international journals according to the Scopus (SC) and ISI Web of Science (WoS) databases related to the indicated categories and year of publication or the nearest available year.

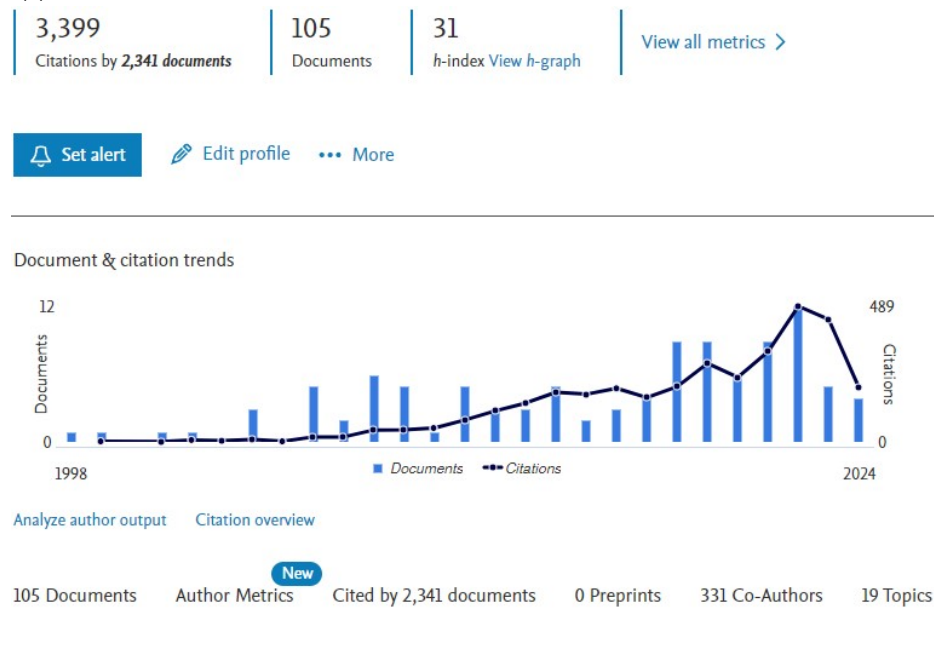
International Journal	Number of papers	SC/Category	WoS/Category
Journal of Hydrology	28	Q1/Water Science and Technology	Q1/Water Resources
Water	10	Q2/Water Science and Technology	Q2/Water Resources
Hydrological Processes	9	Q1/ Water Science and Technology	Q1/Water Resources
Journal of Hydrologic Engineering	8	Q2/Water Science and Technology	Q2/Civil Engineering
Water Resources Research	4	Q1/Water Science and Technology	Q1/Water Resources
Hydrological Sciences Journal	3	Q1/Water Science and Technology	Q2/Water Resources
Hydrology and Earth System Sciences	3	Q1/ Water Science and Technology	Q1/Water Resources
Advances in Water Resources	3	Q1/Water Science and Technology	Q1/Water Resources
Water Resources Management	2	Q1/Water Science and Technology	Q1/Water Resources
Vadose Zone Journal	2	Q1/Soil Science	Q2/Water Resources
Journal Hydrology: Regional Studies	2	Q1/Water Science and Technology	Q1/Water Resources
Agricultural Water Management	1	Q1/Water Science and Technology	Q1/Water Resources
Hydrology Research	1	Q2/Water Science and Technology	Q2/Water Resources
Earth System Science Data	1	Q1/General Earth and Planetary Sciences	Q1/ Multidisciplinary Geosciences
Natural Hazard	1	Q2/Water Resources	Q2/ Multidisciplinary Geosciences
Water, Air, and Soil Pollution	1	Q1/Water Science and Technology	Q2/Water Resources

Atmosphere	1	Q2/Environmental Science	Q3/Meteorology and Atmospheric Sciences
Chaos	1	Q1/Mathematical Physics	Q1/Mathematical Applied
Geoderma	1	Q1/Soil Science	Q1/Soil Science
Remote Sensing	1	Q1/General Earth and Planetary Sciences	Q2/Remote Sensing
Modeling Earth System and Environment	1	Q1/Decision Sciences	Q3/Environmental Sciences
Agronomy for Sustainable Development	1	Q1/Environmental Engineering	Q1/Agronomy
Acta Geophysica	1	Q3/Geophysics	Q4/Geochemistry and Geophysics
Sensors	1	Q1/Instrumentation	Q1/Instruments and Instrumentation
Procedia Earth and Planetary Science	1	-	-
Italian Geotechnical Journal	1	-	-

Table 6. Bibliometric indicators extracted on May 07, 2024 from Scopus and ISI Web of Science databases.

Database	SCOPUS	ISI WEB OF SCIENCE
Number of publications	105	92
H-index	31	30
Number of citations	3399	3037

(a)



(b)

Publications 92 Total From 1985 to 2024	Citing Articles 2,072 Analyze Total 1,990 Analyze Without self-citations	Times Cited 3,037 Total 2,688 Without self-citations 33.01 Average per item	30 H-Index
--	---	---	----------------------

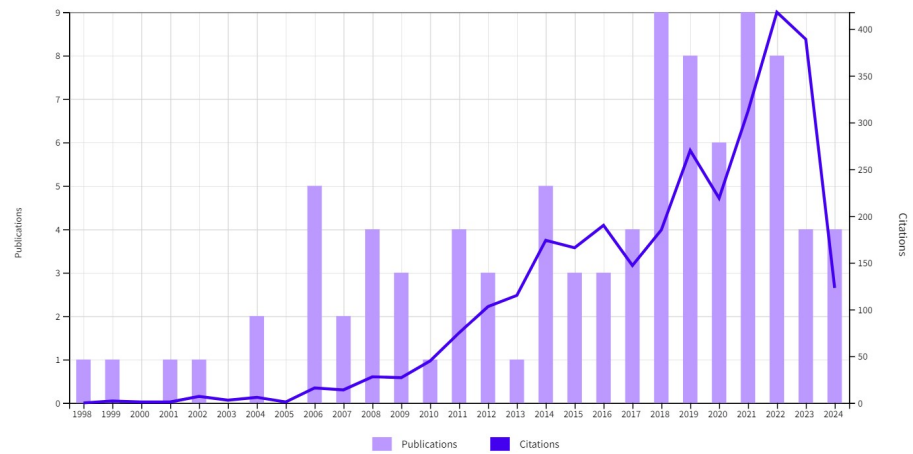


Figure 1. Number of publications and citations trends from 1996 to May 07, 2024 in the Scopus (a) and ISI Web of Science (b) databases.

PATENTS

2023

MORBIDELLI R., CERNI G., SERAFINI R. (Inventors), Patent for Utility Model subject of Application No. 202022000002099 with certificate of the Ministry of Enterprise and Industry issued on 14/Dec/2023. Title: "Device for signalling the speed of aquaplaning", Classification: G08G.

INTERNATIONAL RESEARCH COLLABORATIONS

2020–today

D. Koutsoyiannis – National Technical University of Athens, Athens, Greece, within the writing of the book entitled "Rainfall. Modeling, Measurement and Applications" commissioned by Elsevier.

2020- today

A.A. Albalasmeh - Department of Natural Resources and The Environment, Faculty of Agriculture, Jordan University of Science and Technology, Irbid, Jordan, in the area of the influence of water quality on modeling the infiltration process. Co-authored articles in international journals: n. 1.

2020- today

A. Reza Vaezi – Department of Soil Science, University of Zanjan, Zanjan, Iran, as part of the tutoring of the doctoral thesis of Yasin Salehi with title "Modeling rainwater infiltration rate based on slope gradient and rainfall intensity in various soils using rainfall simulator" (Zanjan University).

2018– today

M.J. Escorihuela, V. Stefan – IsardSAT, Parc Tecnològic Barcelona Activa, Carrer de Marie Curie, Barcelona, Spain, in the area of remote irrigation quantification. International journal articles published in collaboration: n. 2.

2018– today

P. Quintana-Segui – Observatori de L'Ebre (OE), Ramon Llull University – CSIS, Roquetes, Spain, in the area of remote irrigation quantification. International journal articles published in collaboration: n. 2.

2017– today

M.C. Casas-Castillo – Departamentos de Física, ESEIAAT, Universitat Politècnica de Catalunya, BarcelonaTech (UPC), Terrassa, Spain, in the field of rainfall series analysis. Co-authored articles in international journals: n. 2.

2017- today

M. Rahmati – Department of Soil Science and Engineering, Faculty of Agriculture, University of Maragheh, Maragheh, Iran, as part of the construction of a global database of infiltration curves. Articles in international journal published in collaboration: n. 2.

2016– today

H.J. Fowler, S.M. Wilkinson - School of Civil Engineering and Geosciences, Newcastle University, UK, within the research activity on the analysis of extreme rainfall events and climate trends in thermo-pluviometric data series. Articles on international journals published in collaboration: n. 3.

2015– today

G. Blöschl - Institute of Hydraulic Engineering and Water Resources Management, Technische Universität (TU), Wien (AUSTRIA) in the study of spatial variability of soil hydraulic properties. Co-authored articles in international journal: n. 2.

2015- today

J.V. Giraldez-Cervera, J.L. Ayuso-Muñoz, A.P. García-Marín - Departamentos Agronomía, Ingeniería Rural, Física Aplicada, Universidad de Córdoba (SPAIN) as part of research activity on

	evaporation, evapotranspiration, soil erosion, sediment transport, reservoir filling, regional analysis, climate trends. Co-authored articles in international journals: n. 7.
2014-2018	P. Duran Barroso - Departamento de Construcción, Área de Ingeniería Hidráulica, Escuela Politécnica, Universidad de Extremadura, Cáceres (SPAIN), as part of the infiltration process and estimation of excess rainfall at the local scale.
2013-2015	J.-F. Didon-Lescot – UMR -7300 ESPACE CNRS, Departement de Geographie, Université de Nice-Sophia-Antipolis, Nice, France, in soil water content modelling. Co-authored articles in international journals: n. 1.
1999- today	V.P. Singh – Texas A&M University, College Station, Texas (US), within the project CNR-GNDCI “Modellistica fisico-matematica di processi idrologici di base negli studi a scala di bacino” and writing a chapter in the book “Handbook of Applied Hydrology Second Edition”, Vijay P. Singh (Editor), McGraw-Hill.
1996- today	R.S. Govindaraju - School of Civil Engineering della Purdue University, as part of the research activity on semi-analytical mathematical modeling for the representation of the areal infiltration process. Co-authored articles in international journals: n. 26.

RESEARCH PROJECTS, PARTICIPATION

2023-2025	Participant in the collaboration agreement between CNR-IRSA, CNR-IIT, Central Apennine District Basin Authority and DICA for the implementation of the Project " Central Apennine District Basin Authority - Interventions to improve the quality of water bodies - ACQUACENTRO", valid for the Operational Plan Environment FSC 2014-2020, regarding the activity L.3.1 "Implementation of the water resources management model" (Scientific Responsible for DICA, Prof. S. Casadei).
2018-2019	Participant in the project "Numerical-experimental modeling of rain-induced landslide triggering mechanisms", University Basic Research Fund - year 2018, Perugia University.
2016-2017	Participant in the project "The effect of climate change on extreme rainfall events", University Basic Research Fund - year 2015, University Perugia.
2017-2019	Participant in the project "Innovative monitoring and design strategies for sustainable landslide risk mitigation" - PRIN 2015 (Scientific Responsible of the Research Unit Prof.ssa D. Salciarini, Perugia University - Scientific Coordinator of the Research Program Prof.ssa F. Cotecchia, Politecnico di Bari).
2015-2016	Participant in the project "Infiltration modeling in inclined surface and perpendicularly homogeneous soil, in absence and presence of vegetation", University Basic Research Fund - year 2014, Perugia University.
2011-2014	Participant in the project "Landslide risk mitigation through sustainable interventions" - PRIN 2010-2011 (Scientific Responsible of the Research Unit Prof. C. Tamagnini, Perugia University - Scientific Coordinator of the Research Program Prof. L. Cascini, Salerno University).
2008-2009	Participant to the project "The defense from river floods: realization of an experimental system for the simulation of complex rainfall on plots in the field" - Bando 2008 Fondazione Cassa di Risparmio di Perugia (Scientific Responsible Prof. C. Corradini, Perugia University).
2007-2009	Participant to the Research Unit "Uncertainty and spatial variability of rainfall and soil hydraulic properties in direct runoff simulation" of the project "Spatial variability of soil water content and hydrological response at slope scale" - PRIN 2006 (Scientific Responsible of the Research Unit Prof. C. Corradini, Perugia University - Scientific Coordinator of the Research Program Prof. F. Castelli, Florence University).
2006-2007	Participant to the project "Experimental analysis finalized to the definition of modeling for the preannouncement of the floods in real time on small basins of the Middle - High Tiber Valley" - Announcement 2006 Fondazione Cassa di Risparmio di Perugia (Scientific Responsible Prof. C. Corradini, Perugia University).
2001-2003	Participant to the Research Unit "Uncertainty and spatial variability of rainfall and soil hydraulic properties in direct runoff simulation" of the project "Predictability of extreme hydro-meteorological events and floods in small catchment areas" - PRIN 2000 (Scientific Responsible of the Research Unit Prof. C. Corradini, Perugia University - Scientific Coordinator of the Research Program Prof. F. Castelli, Florence University).
1997, 1998, 1999, 2000, 2001, 2002, 2003	Participant to the project "Physical-mathematical modelling of basic hydrological processes in basin scale studies", U.O. 1.26 of CNR-GNDCI (Scientific responsible Prof. C. Corradini, Perugia University).

1998	Participant to the University project 1998; "Optimal criteria for the evaluation and use of water resources" (Scientific Responsible Prof. C. Corradini, Perugia University).
RESEARCH PROJECTS, COORDINATION	
2021-2023	Coordinator WP A within the project "Study of multi-risk scenarios for natural disasters in the area of Central and Southern Italy and Sicily: understanding the past and present to protect the future", University Research Projects, WP 3.1 Disasters and Complex Crises - year 2021, Perugia University.
2019-2020	Coordinator of the project "The effect of climate change on extreme rainfall events, landslides and droughts.", University Basic Research Funding - year 2019, Perugia University.
2007-2013	Coordinator of the project "Experimentation of innovative agronomic techniques and comparative evaluation of seed tobacco varieties for oil production" - Rural Development Program for Umbria 2007-2013, Second phase of implementation of measure 1.2.4 "Cooperation for the development of new products, processes and technologies in the agricultural, food and forestry sectors".
2008 – 2009	Coordinator of the project "Hydraulic safety of embankments and earthen dams", Theme Call, Basic Research 2008 Fondazione Cassa di Risparmio di Perugia.
RESEARCH CONTRACTS	
1996	Assignment by the National Research Council (National Group for the Defense from Hydrogeological Catastrophes) for a collaboration finalized to the following research: "Interaction between outflows relative to the Montedoglio Dam and the Cerfone Stream".
1995	Assignment by the Institute of Hydraulics of the Perugia University for a collaboration finalized to the following research: "Determination of morphometric data for the sub-basins of the Tiber River between Ponte Nuovo and the confluence with the Paglia River necessary for the calculation of the Geomorphological UHI according to the scheme used by Corradini et al. (1986) incorporating the Horton-Strahler ordering".
1994	Assignment by the National Research Council (National Group for the Defense from Hydrogeological Catastrophes) for a collaboration finalized to the following research: "The propagation of waves at steep fronts".
1993	Assignment by the Institute of Hydraulics, Perugia University for a collaboration finalized to the following research: "Analysis and archiving of simulation studies of the propagation of the wave of submersion produced by the collapse of the dams and the opening of the drains (as provided respectively by the circulars No. 352 of Dec 04, 1987 and No. 125 of Aug 28, 1986) received by the Service Dams at the Ministry of Public Works.
RESEARCH AGREEMENT	
2023	Scientific Responsible of DICA of the study " Evaluation of runoff coefficient trends over time in the Umbria region in the main closure sections where hydrometers managed by the Regional Hydrographic Service are present ", assigned by Umbria Region.
2022	DICA Scientific Responsible for the agreement with the Municipality of Bettona for 'the study for the realisation of co-working spaces and temporary work rooms with related communication activities and promotional campaign".
2022	DICA Scientific Responsible for the following Memorandum of Understanding with the Hansgrohe: "Studies and researches in the field of water-saving communication and technology".
2021	Participation in the research group of the Department of Civil and Environmental Engineering of Perugia University (DICA) within the contract for third parties having as object: Activity of technical and scientific assistance, aimed at studying the main emissions and the main environmental

	factors involved in the expansion of the landfill for non-hazardous waste of Borgo Giglione; Customer: Trasimeno Servizi Ambientali Spa with headquarters in Magione (PG). Scientific Responsible DICA: G. Gigliotti.
2021	Scientific Responsible of DICA of the study "Determination of the areal grouping factor of extreme precipitations in the Umbria region", assigned by Umbria Region.
2021	DICA Scientific Responsible for the following Memorandum of Understanding with Hansgrohe: "Development and dissemination of communication content and research on water saving to be developed within the disciplinary field through the teaching of the Department of Civil and Environmental Engineering as a context of implementation".
2020	DICA Scientific Responsible for the study "Potential of satellite data for the determination of irrigation practices at different spatial scales and evaluation of their impact on the hydrological cycle", assigned by IRPI-CNR of Perugia.
2020	DICA Scientific Responsible for the contract on behalf of third parties having as object: Research and development activities for the study of sediment removal in the artificial reservoir Le Grazie in Tolentino (MC) through a new custom process of sludge dilution in the volume of water turbinated in compliance with the environmental parameters of the Chienti river and the functional parameters of the turbine of the hydroelectric plant and of the potabilization plant placed downstream; evaluation of the plant able to manage automatically the dilution activity and the replication on other reservoirs; Customer: Azienda Specializzata Settore Multiservizi (ASSM) Spa based in Tolentino (MC)
2020	Participation to the research group of DICA within the contract for third parties having as object: Revision and integration of the management project of the artificial reservoir of Le Grazie lake (according to D.L. 152/99 and D.M. Jun 30, 2004) - Municipality of Tolentino; Customer: Azienda Specializzata Settore Multiservizi (ASSM) Spa with seat in Tolentino (MC). DICA scientific coordinators: A. Flammini, C. Saltalippi.
2018-2019	Participation to the research group of DICA within the contract for third parties having as object: Assignment of consultancy and support to the design and production of the technical-economic feasibility project concerning the mitigation and prevention of the silting up of the lake Le Grazie with execution of hydraulic works for the recovery of the useful volume of reservoir (second lot) - Municipality of Tolentino; Customer: Azienda Specializzata Settore Multiservizi (ASSM) Spa based in Tolentino (MC). DICA scientific coordinators: A. Flammini, C. Saltalippi.
2018	Participation to the DICA research group within the contract for third parties having as object: Updating of the Management Project and drafting of the Operational Plan (according to D.L. 152/99 and D.M. Jun 30, 2004) of the Le Grazie reservoir, Tolentino (MC); Customer: Azienda Specializzata Settore Multiservizi (ASSM) Spa with seat in Tolentino (MC). DICA scientific coordinators: A. Flammini, C. Saltalippi.
2018	Participation to the DICA research group within the contract for third parties having as object: Drafting of the operational plan of the Management Project (according to D.L. 152/99 and D.M. Jun 30, 2004) of the Le Grazie reservoir, Tolentino (MC), concerning the operational modalities of execution of the spillway intervention; Customer: Azienda Specializzata Settore Multiservizi (ASSM) Spa with seat in Tolentino (MC). DICA Scientific Managers: A. Flammini, C. Saltalippi
2017	Participation to the research group of DICA in the framework of the research agreement "Agreement for applied research in areas related to the prevention of hydrogeological risk between the Department of Civil and Environmental Engineering-University of Perugia and the Functional Center of the Service Organization and Development of the Civil Protection System of the Umbria Region". Scientific coordinators DICA: A. Flammini, D. Salciarini.
2016-2017	Participation in the DICA research group within the framework of the contract stipulated with the Pompeii Superintendency for the performance of research and teaching activities aimed at the enhancement, fruition and dissemination of the Pompeii site, with specific object "Area of the Tomb of Mamia: cognitive investigation campaign and preliminary project for the restoration and recovery of a monumental funerary complex of the Herculaneum Gate Necropolis"; Scientific Managers: Prof. Massimo Osanna (Soprintendenza), Prof.ssa Concetta Masseria and Prof. Ing. Filippo Ubertini (DICA).
2016	Participation in the research group of DICA in the framework of the Memorandum of Understanding between the Municipality of Bastia Umbra and the DICA for the collaboration on environmental issues, with particular reference to the optimization of hydraulic networks and the defense of the territory.
2015	Scientific Responsible DICA of the contract for third parties having as object: The drafting of the hydrological-hydraulic reevaluation study, according to art. 4 co. 1 of D.L. Mar 03, 2004 n. 79, concerning the dam of Le Grazie Lake in the Municipality of Tolentino (MC); Customer: Azienda Specializzata Settore Multiservizi (ASSM) SpA based in Tolentino (MC).
2010	Scientific Responsible DICA for the agreement with Immobiliare Santa Elisabetta s.r.l. for

	"Evaluation of the hydraulic compatibility of the intervention of arrangement realized by Immobiliare Santa Elisabetta s.r.l. in Costano - Municipality of Bastia - Subdivision Plan Compartment C3 P.R.G. D.M. 2336/71 and Compartment C2 Variante Generale PRG DCC 112/96".
2005	Participation to the research group of DICA within the research agreement with the Research Institute for the Hydrogeological Protection of the National Council of Researches (CNR-IRPI) and the Ente Irriguo Umbro-Toscano entitled: Studies on the hydrological-hydraulic revaluations of the dams of Montedoglio on the Tiber River, of Casanova on the Chiascio River, of Sovara on the homonym Stream and of Calcione on the Foenna Stream.
2005	Participation to the DICA research group in the framework of the research agreement with CNR-IRPI and the Po River Basin Authority entitled: Estimation of the flow rate in sample hydrometric sections of the Po River and its main tributaries with surface current measurements. Scientific Responsible DICA: C. Corradini.
2003	Participation to the research group of DICA within the research agreement with the Regional Agency for Environmental Protection of Umbria (ARPA-UMBRIA) entitled: Collection, adjustment and integration of information, in collaboration with APAT thematic experts. Natural water cycle: inputs, outflows, accumulations. Scientific Responsible DICA: C. Corradini.
1999-2001	Participation to the research group of DICA in the framework of the research agreement with Umbria Region entitled: Project for the realization of flooding maps of the main regional catchment areas. Scientific responsible of DICA: P. Manciola.

BOARDS AND COMMITTEES

2022	Member of the Technical Advisory Committee of the "27th International Conference on Hydraulics, Water Resources and Coastal Engineering, HYDRO 2022 International", Indian Society for Hydraulics (ISH), Chandigar, India, December 22-24, 2022.
2021	Member of the Technical Advisory Committee of the "26th International Conference on Hydraulics, Water Resources and Coastal Engineering, HYDRO 2021 International", Indian Society for Hydraulics (ISH), Surat, Gujarat, India, December 23-25, 2021.
2020	Member of the Scientific Committee of the "Trans-Asia IWA Young Water Professionals Conference on Smart Technologies for Water and Wastewater Treatment", Vellore, India, December 16-19 2020.
2019	Member of the Organizing Committee of the Seminar "The knowledge of rainfall as a tool for the mitigation of the effects of a changing climate", Perugia.
2017	Member of the Scientific Committee of the Study Day "La diga di Valfabbrica: the state of the works and the management of water resources", Valfabbrica (PG).
2017	Member of the Workshop Organizing Committee "New frontiers of hydrology and environmental protection", Prof. Farhad Nejadkoorki, within the "Cooperation Perspectives" Yazd University (IRAN) – Perugia University.
2016	Member of the Organizing Committee of the Seminar entitled "Hydrological and hydraulic criticality in the prediction of flooding phenomena", part of a series of seminars organized simultaneously in different universities and research institutions throughout the country as part of the national Seminar Diffused "The flood, the floods: Memory and Action", in the recurrence of the flood of November 4, 1966 of the city of Florence.
2016-today	Member of the Italian Group of Hydraulics (GII).
2016-today	Member of the Italian National Committee for the International Commission on Irrigation and Drainage (ITAL-ICID).
2015-today	Registered in REPRISE (register of scientific experts established at MIUR) for the section: Basic research - ERC Sectors: Civil engineering, architecture, maritime/hydraulic engineering, geotechnics, waste treatment (PE8_3), Hydrology, water and soil pollution (PE10_17) Scientific disciplinary fields: Hydraulic and maritime constructions and hydrology (ICAR/02).
2013	Member of the Organizing Committee of the Florisa Melone Memorial Conference, Assisi (PG).
2008	Member of the Organizing Committee of the XXXI National Conference of Hydraulics and Hydraulic Works, Perugia, Italy.

EDITORIAL ACTIVITY

2023	Guest Editor Special Issue: Interactions between Land Cover Changes and Runoff and Subsurface Flow Generation in Agro-Urban Systems in the Context of Climate Warming, Water, MDPI.
2022	Guest Editor Special Issue: "Interactions between Land Cover Changes and Runoff Generation in a Climate Warming Context", Frontiers in Water.
2021	Guest Editor Special Issue: "Mechanisms and processes of water movement, contamination, protection and sustainable management of groundwater, aquifers and geothermal resources", Environmental Earth Sciences, Springer.
2021- 2024	Section Board Member for Water, MDPI.
2021	Member of the Committee for the "Best Paper Award 2021" for Water.
2020- 2024	Editorial Board Member for Water, MDPI.
2020- 2022	Guest Editor Special Issue: "Time-resolution of the rainfall data and its role in the hydrological analyses", Water, MDPI.
2019- 2022	Editor of the book entitled "Rainfall. Modeling, Measurement and Applications", Elsevier.
2019-2020	Guest Editor Special Issue: "Rainfall Infiltration Modeling", Water, MDPI.
2018- today	Associate Editor for Journal of Hydrology X, Elsevier.
2018– 2019	Guest Editor Special Issue: "Determination of Soil Hydraulic Properties", Journal of Hydrology, Elsevier.
2014- today	Associate Editor for Journal of Hydrology, Elsevier.

REVIEWER ACTIVITY

2005-today	<p>Reviewer for the following international journals:</p> <ul style="list-style-type: none">- Journal of Hydrologic Engineering – ASCE (since 2005);- Computer & Geosciences – Elsevier (since 2007);- Hydrology and Earth System Sciences – Copernicus Publications (since 2007);- Journal of Hydrology – Elsevier (since 2008);- Natural Hazards – Springer (since 2008);- Water Resources Management – Springer (since 2008);- Physics and Chemistry of the Earth – Elsevier (since 2009);- Environmental Modelling & Software – Elsevier (since 2009);- Natural Hazards and Earth System Sciences – Copernicus Publications (since 2010);- Geoderma – Elsevier (since 2011);- Advances in Water Resources – Elsevier (since 2011);- Environmental Earth Sciences - Springer (since 2013);- Journal of Applied Geophysics – Elsevier (since 2014);- Water Resources Research – Wiley (since 2014);- Land Degradation and Development – Wiley (since 2018);- Journal of Environmental Management – Elsevier (since 2018);- Environmental Science – Springer (since 2019);- Hydrology Research – IWA Publishing (since 2019);- Environmental Monitoring and Assessment (since 2021);- Environmental Challenges – Elsevier (since 2021);- Journal of Hydrology: Regional Studies – Elsevier (since 2021);- Soil & Tillage Research – Elsevier (since 2021);- Scientific Data – Nature Research, Springer (since 2022).
2008-today	<p>Reviewer for the following national journals:</p> <ul style="list-style-type: none">- L'Acqua – All (since 2008);- Bollettino Geofisico – AGI (since 2008).

**SCIENTIFIC
PUBLICATIONS**

PAPERS ON
INTERNATIONAL
JOURNALS

- 2024 DJELLIT L., LAOUACHERIA F., **MORBIDELLI R.**, "Assessment of the impact of LULC changes on peak discharge and runoff volume in Kebir river catchment Northeastern of Algeria", *Modeling Earth System and Environment*, 2024, <https://doi.org/10.1007/s40808-024-01981-w>, Scopus Code: 2-s2.0-85188523616, WOS Code: 001190490100002.
- 2024 DARI J., **MORBIDELLI R.**, QUINTANA-SEGUI' P., BROCCA L., "The Temporal-Stability-based Irrigation MAPping (TSIMAP) method: A virtuous trade-off between accuracy, flexibility, and facility for end-users", *Water*, 16, 664, 2024, <https://doi.org/10.3390/w16050644>, Scopus Code: 2-s2.0-85187479126, WOS Code: 001183085800001.
- 2024 SALTALIPPI C., **MORBIDELLI R.**, CORRADINI C., FLAMMINI A., BARCA E., DARI J., "Investigation of new approaches for the determination of the annual maximum rainfall depths of different durations", *Journal of Hydrology*, 631, 130809, 2024, <https://doi.org/10.1016/j.jhydrol.2024.130809>, Scopus Code: 2-s2.0-85185488952, WOS Code: 001182517700001.
- 2024 FLAMMINI A., **MORBIDELLI R.**, DARI J., PORCEDDU P.R., MORAMARCO T., SALTALIPPI C., "A new empirical formulation of the areal reduction factor for design rainfalls applied to the Umbria Region in Central Italy", *Journal of Hydrologic Engineering*, 29(2), 04024003, 2024, <https://doi.org/10.1061/jhyeff.heeng-6076>, Scopus Code: 2-s2.0-85184838361, WOS Code: 001162907100006.
- 2023 DARI J., FLAMMINI A., **MORBIDELLI R.**, RAHI A., SALTALIPPI C., "Evolution of freshwater availability in a climate-changing Mediterranean context: The case of Umbria region, central Italy", *Hydrological Processes*, 37(12), e15050, 2023, <https://doi.org/10.1002/hyp.15050>, Scopus Code: 2-s2.0-85180153478, WOS Code: 001126214200001.
- 2023 RAHI A., RAHAMATI M., DARI J., SALTALIPPI C., BROGI C., **MORBIDELLI R.**, "Unraveling hydroclimatic forces controlling the runoff coefficient trends in central Italy's Upper Tiber Basin", *Journal Hydrology: Regional Studies*, 50, 101579, 2023, <https://doi.org/10.1016/j.ejrh.2023.101579>, Scopus Code: 2-s2.0-85177866256, WOS Code: 001125658800001.
- 2023 GOYAL A., FLAMMINI A., **MORBIDELLI R.**, CORRADINI C., GOVINDARAJU R.S., "Impact of observation thresholds in the assessment of field-scale soil saturated hydraulic conductivity", *Journal of Hydrology*, 626, 130310, 2023, doi: 10.1016/j.jhydrol.2023.130310, Scopus Code: 2-s2.0-85174447775, WOS Code: 001108699400001.
- 2023 GOYAL A., FLAMMINI A., **MORBIDELLI R.**, CORRADINI C., GOVINDARAJU R.S., "Role of in-situ point instruments in the estimation of variability in soil saturated hydraulic conductivity", *Hydrological Sciences Journal*, 68(3), 448-461, 2023, doi:10.1080/02626667.2022.2162407, Scopus Code: 2-s2.0-85148280745, WOS Code: 000930522800001.
- 2023 FLAMMINI A., **MORBIDELLI R.**, CORRADINI C., DARI J., SALTALIPPI C., GOYAL A., GOVINDARAJU R.S., "A statistical approach for the assessment of the saturated hydraulic conductivity applied to an Austrian region", *Journal Hydrology: Regional Studies*, 45, 101310, 2023, <https://doi.org/10.1016/j.ejrh.2022.101310>, Scopus Code: 2-s2.0-85145056509, WOS Code: 000976095500001.
- 2022 FLAMMINI A., DARI J., SALTALIPPI C., **MORBIDELLI R.**, CORRADINI C., GOVINDARAJU R.S., "Experimental evidence for modulation of slope effect on heterogeneous infiltrating surfaces by run-on", *Advances in Water Resources*, 169, 104318, 2022, <https://doi.org/10.1016/j.advwatres.2022.104318>, Scopus Code: 2-s2.0-85139071126, WOS Code: 000870482400002.
- 2022 RAHMATI M., LATORRE B., MORET-FERNANDEZ D., LASSABATERE L., TALEBIAN N., MILLER D., **MORBIDELLI R.**, IOVINO M., BAAGRELLO V., REZA NEYSHABOURI M., ZHAO Y., VANDERBORGH J., WEIHERMULLER L., ANGULO JAMARILLO R., OR D., VAN GENUCHTEN M.T., VERECKEN H., "On infiltration characteristic times", *Water Resources Research*, 58, e2021WR031600, <https://doi.org/10.1029/2021WR031600>, Scopus Code: 2-

- 2022 GUPTA A., GOVINDARAJU R.S., **MORBIDELLI R.**, CORRADINI C., "The role of prior probabilities on parameter estimation in hydrological models", *Water Resources Research*, 58, e2021WR031291. <https://doi.org/10.1029/2021WR031291>, Scopus Code: 2-s2.0-85130604877, WoS Code: 000788118300001.
- 2022 SALCIARINI D., **MORBIDELLI R.**, CATTONI E., VOLPE E., "Physical and numerical modelling of the response of slopes under different rainfalls, inclinations and vegetation conditions", *Italian Geotechnical Journal*, 1, 47-61, 2021, doi.org/10.19199/2022.1.0557-1405.047, Scopus Code: 2-s2.0-85135071733, WoS Code: 000783677800005.
- 2022 LOMPI M., TAMAGONE P., PACETTI T., **MORBIDELLI R.**, CAPORALI E., "Impacts of rainfall data aggregation time on pluvial flood hazard in urban watersheds", *Water*, 14(4), 544, <https://doi.org/10.3390/w14040544>, Scopus Code: 2-s2.0-85124615910, WoS Code: 000764146900001.
- 2022 DARI J., QUINTANA-SEGUÍ P., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., GIUGLIARELLI E., ESCORIHUELA M.J., STEFAN V., BROCCA L., "Irrigation estimates from space: Implementation of different approaches to model the evapotranspiration contribution within a soilmoisture-based inversion algorithm", *Agricultural Water Management*, 265, 107537, <https://doi.org/10.1016/j.agwat.2022.107537>, Scopus Code: 2-s2.0-85124387733, WoS Code: 000792807700002.
- 2022 DARI J., BROCCA L., QUINTANA-SEGUÍ P., CASADEI S., ESCORIHUELA M.J., STEFAN V., **MORBIDELLI R.**, "Double-scale analysis on the detectability of irrigation signals from remote sensing soil moisture over an area with complex topography in central Italy", *Advances in Water Resources*, 161, 104130, <https://doi.org/10.1016/j.advwatres.2022.104130>, Scopus Code: 2-s2.0-85123602985, WoS Code: 000820572900003.
- 2021 MODANESI S., MASSARI C., GRUBER A., LIEVENS H., TARPANELLI A., **MORBIDELLI R.**, DE LANNOY G.J.M., "Optimizing a backscatter forward operator using Sentinel-1 data over irrigated land", *Hydrology and Earth System Sciences*, 25, 6283–6307, 2021, <https://doi.org/10.5194/hess-25-6283-2021>, Scopus Code: 2-s2.0-85117370899, WoS Code: 000730166900001
- 2021 **MORBIDELLI R.**, SALTALIPPI C., DARI J., FLAMMINI A., "Effect of time-resolution of rainfall data on trend estimation for annual maximum depths with a duration of 24 hours", *Water*, 13(22), 3264, <https://doi.org/10.3390/w13223264>, Scopus Code: 2-s2.0-85119582035, WoS Code: 000724802800001.
- 2021 DORIGO W., HIMMELBAUER I., ABERER D., SCHREMMER L., PETRAKOVIC I., ZAPPA L., PREIMESBERGER W., XAVER A., ANNOR F., ARDÖ J., BALDOCCHI D., BLÖSCHL G., BOGENA H., BROCCA L., CALVET J.-C., CAMARERO J.J., CAPELLO G., CHOI M., COSH M.C., JEROME DEMARTY, NICK VAN DE GIESEN, ISTVAN HAJDU, KARSTEN H. JENSEN, DEVI KANNIAH K., DE KAT I., KIRCHENGAST G., KUMAR RAI P., KYROUAC J., LARSON K., LIU S., LOEW A., MOGHADDAM M., MARTÍNEZ FERNÁNDEZ J., MATTAR BADER C., **MORBIDELLI R.**, MUSIAL J.P., OSENGA E., PALECKI M.A., PFEIL I., POWERS J., IKONEN J., ROBOCK A., RÜDIGER C., RUMMEL U., STROBEL M., SU Z., SULLIVAN R., TAGESSON T., VREUGDENHIL M., WALKER J., WIGNERON J.P., WOODS M., YANG K., ZHANG X., ZREDA M., DIETRICH S., GRUBER A., VAN OEVELEN P., WAGNER W., SCIPAL K., DRUSCH M., SABIA R., "The International Soil Moisture Network: serving Earth system science for over a decade", *Hydrology and Earth System Sciences*, 25, 5749-5804, 2021, <https://doi.org/10.5194/hess-25-5749-2021> Scopus Code: 2-s2.0-85119091250, WoS Code: 000716459500001.
- 2021 PLACIDI P., **MORBIDELLI R.**, FORTUNATI D., PAPINI N., GOBBI F., SCORZONI A., "Monitoring of soil parameters in the IoT precision agriculture scenario: an original modelling approach dedicated to low-cost soil water content sensors", *Sensors*, 2021, 21, 5110, doi.org/10.3390/s21155110, Scopus Code: 2-s2.0-85111326261, WoS Code: 000682259100001.
- 2021 RAHMATI M., REZAEI M., LASSABATERE L., **MORBIDELLI R.**, VERECKEN H., "Simplified characteristic time method for accurate estimation of the soil hydraulic parameters from one-dimensional infiltration experiments", *Vadose Zone Journal*, [doi: 10.1002/vzj2.20117](https://doi.org/10.1002/vzj2.20117), Scopus Code: 2-s2.0-85105988438, WoS Code: 000652184800001.
- 2021 **MORBIDELLI R.**, SALTALIPPI C., DARI J., FLAMMINI A., "A review on rainfall data resolution and its role in the hydrological practice", *Water*, 13 (8), Article number 1012, 13 pp, 2021, [doi: 10.3390/w13081012](https://doi.org/10.3390/w13081012), Scopus Code: 2-s2.0-85104682419, WoS Code: 000644904600001

- 2021 DARI J., QUINTANA-SEGUÍ P., ESCORIHUELA M.J., STEFAN V., BROCCA L., **MORBIDELLI R.**, "Detecting and mapping irrigated areas in a Mediterranean environment by using remote sensing soil moisture and a land surface model", *Journal of Hydrology*, 596, Article number 126129, 2021, doi: 10.1016/j.jhydrol.2021.126129, Scopus Code: 2-s2.0-85102021589, WoS Code: 000642334400089.
- 2021 GARIANO, S.L., VERINI SUPPLIZI, G., ARDIZZONE, F. SALVATI P., BIANCHI C., **MORBIDELLI R.**, SALTALIPPI C., "Long-term analysis of rainfall-induced landslides in Umbria, central Italy", *Natural Hazards*, 106(3), 2207-2225, 2021, doi:10.1007/s11069-021-04539-6, Scopus Code: 2-s2.0-85100741733, WoS Code 000616955200002.
- 2021 BAGARELLO V., BARCA E., CASTELLINI M., IOVINO M., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., "A Plot-scale uncertainty analysis of saturated hydraulic conductivity of a clay soil", *Journal of Hydrology*, Article number 125694, 2021, doi: 10.1016/j.jhydrol.2020.125694, Scopus Code: 2-s2.0-85094925064, WoS Code: 000642334400011.
- 2020 ADAB H., **MORBIDELLI R.**, SALTALIPPI C., MORADIAN M., GHALHARI G.A.F., "Machine learning to estimate surface soil moisture from remote sensing data", *Water*, 12 (11), Article number 3223, 28 pp, 2020, doi: 10.3390/w12113223, Scopus Code: 2-s2.0-85096358098, WoS Code:000594153100001.
- 2020 DARI J., BROCCA L., QUINTANA-SEGUÍ P., ESCORIHUELA M.J., STEFAN V., **MORBIDELLI R.**, "Exploiting High-Resolution Remote Sensing Soil Moisture to Estimate Irrigation Water Amounts over a Mediterranean Region", *Remote Sensing*, 12 (16), Article number 2593, 2020, doi:10.3390/rs12162593, Scopus Code: 2-s2.0-85090197750, WoS Code: 000565438900001.
- 2020 **MORBIDELLI R.**, GARCÍA-MARÍN A.P., AL MAMUN A., ATIQR R.M., AYUSO-MUÑOZ J.L., BACHIR TAOUTI M., BARANOWSKI P., BELLOCCHI G., SANGÜESA-POO C., BENNETT B., BYAMBAA O., BONACCORSO B., BROCCA L., CALOIERO T., CAPORALI E., CARACCILO D., CASAS-CASTILLO M.C., CATALINI C.G., CHETTIH M., CHOWDHURY A.F.M.K., CHOWDHURY R., CORRADINI C., CUSTÓ J., DARI J., DIODATO N., DOESKEN N., DUMITRESCU A., ESTÉVEZ J., FLAMMINI A., FOWLER H.J., FRENI G., FUSTO F., GARCÍA-BARRÓN L., MANEA A., GOENSTER-JORDAN S., HINSON S., KANECKA-GESZKE E., KANTI KAR K., KASPERSKA-WOŁOWICZ W., KRABBI M., KRZYSZCZAK J., LLABRÉS-BRUSTENGA A., LEDESMA J.L.J., LIU T., LOMPI M., MARSICO L., MASCARO G., MORAMARCO T., NEWMAN N., ORZAN A., PAMPALONI M., PIZARRO-TAPIA R., PUENTES TORRES A., RASHID M.D.M., RODRÍGUEZ-SOLÀ R., SEPULVEDA MANZOR M., SIWEK K., SOUSA A., TIMBADIYA, TYMVIOS FILIPPOS P.V., VILCEA M.G., VITERBO F., YOO C., ZERI M., ZITTIS G., SALTALIPPI C., "The history of rainfall data time-resolution in a wide variety of geographical areas", *Journal of Hydrology*, 590, Article number 125258, 2020, doi: 10.1016/j.jhydrol.2020.125258, Scopus Code: 2-s2.0-85087518152, WoS Code: 000599754500059
- 2020 ALBALASMEH A.A., GHARAIBEH M.A., ALGHZAWI M.Z., **MORBIDELLI R.**, SALTALIPPI C., GHEZZEHEI T.A., FLAMMINI A., "Using Wastewater in Irrigation: The Effects on Infiltration Process in a Clayey Soil", *Water*, 12, Article number 968, 10 pp, 2020, doi: 10.3390/w12040968, Scopus Code: 2-s2.0-85086805494, WoS Code: 000539527500045.
- 2020 GARCÍA-MARÍN A.P., ESTÉVEZ J., **MORBIDELLI R.**, SALTALIPPI C., AYUSO-MUÑOZ J.L., FLAMMINI A., "Assessing Inhomogeneities in Extreme Annual Rainfall Data Series by Multifractal Approach", *Water*, 12, Article number 1030, 18 pp, 2020, doi: 10.3390/w12041030, Scopus Code: 2-s2.0-85086637233, WoS Code: 000539527500107.
- 2020 **MORBIDELLI R.**, "On the determination of soil hydraulic properties", *Journal of Hydrology*, 580, Article number 124362, 2020, doi:10.1016/j.jhydrol.2019.124362, Scopus Code: 2-s2.0-85075483846, WoS Code:000509620900055.
- 2019 GOYAL A., **MORBIDELLI R.**, FLAMMINI A., CORRADINI C., GOVINDARAJU R.S., "Estimation of field-scale variability in soil saturated hydraulic conductivity from rainfall-runoff experiments", *Water Resources Research*, 55 (9), 7902-7915, 2019, doi:10.1029/2019WR025213, Scopus Code: 2-s2.0-85073792848, WoS Code: 000487405000001.
- 2019 GARCÍA-MARÍN A. P., ESTÉVEZ J., ALCALÁ-MIRAS, J.A., **MORBIDELLI R.**, FLAMMINI A., AYUSO MUNOZ J. L., "Multifractal analysis to study break points in temperature data sets", *Chaos*, 29 (9), Article number 093116, 2019, <https://doi.org/10.1063/1.5096938>, Scopus Code: 2-s2.0-85072409170, WoS Code:000489154100010.
- 2019 PICCIAFUOCO T., **MORBIDELLI R.**, FLAMMINI A., SALTALIPPI C., CORRADINI C.,

- STRAUSS P., BLÖSCHL G., "A pedotransfer function for field-scale saturated hydraulic conductivity of a small watershed", *Vadose Zone Journal*, 18 (1), Article number 190018, 2019, doi: 10.2136/vzj2019.02.0018, Scopus Code: 2-s2.0-85073387170, WoS Code: 000485265800001.
- 2019 **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., CIFRODELLI M., DARI J., CORRADINI C., GARCÍA-MARÍN A. P., MORAMARCO T., "On the applicability of temporal stability analysis to raingauge network design", *Hydrological Science Journal*, 2019, <https://doi.org/10.1080/02626667.2019.1645959>, Scopus Code: 2-s2.0-85070452982, WoS Code: 000480280500001.
- 2019 GARCÍA-MARÍN A. P., **MORBIDELLI R.**, SALTALIPPI C., CIFRODELLI M., ESTÉVEZ J., FLAMMINI A., "On the choice of the optimal frequency analysis of annual extreme rainfall by multifractal approach", *Journal of Hydrology*, 575, 1267-1279, 2019, <https://doi.org/10.1016/j.jhydrol.2019.06.013>, Scopus Code: 2-s2.0-85067641756, WoS Code: 000488143000099.
- 2019 **MORBIDELLI R.**, CORRADINI C., SALTALIPPI C., FLAMMINI A., DARI J., GOVINDARAJU R.S., "A new conceptual model for slope-infiltration", *Water*, 11 (4), Article number 678, 13 pp, 2019, doi:10.3390/w11040678, Scopus Code: 2-s2.0-85065042346, WoS Code: 000473105700048.
- 2019 DARI J., **MORBIDELLI R.**, SALTALIPPI C., MASSARI C., BROCCA L., "Spatial-temporal variability of soil moisture: Addressing the monitoring at the catchment scale", *Journal of Hydrology*, 570, 436-444, 2019, <https://doi.org/10.1016/j.jhydrol.2019.01.014>, Scopus Code: 2-s2.0-85060353734, WoS Code:000460709400035.
- 2019 PICCIAFUOCO T., **MORBIDELLI R.**, FLAMMINI A., SALTALIPPI C., CORRADINI C., STRAUSS P., BLÖSCHL G., "On the estimation of spatially representative plot scale saturated hydraulic conductivity in an agricultural setting", *Journal of Hydrology*, 570, 106-117, 2019, <https://doi.org/10.1016/j.jhydrol.2018.12.044>, Scopus Code: 2-s2.0-85060236272, WoS Code:000460709400010.
- 2018 **MORBIDELLI R.**, CORRADINI C., FLAMMINI A., SALTALIPPI C., DARI J., GOVINDARAJU R.S., "Rainfall infiltration modeling: A review", *Water*, 10 (12), Article number 1873, 20 pp, 2018, doi:10.3390/w10121873, Scopus Code: 2-s2.0-85059009439, WoS Code: 000455314300168.
- 2018 **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., CORRADINI C., WILKINSON S.M., FOWLER H.J., "Influence of temporal data aggregation on trend estimation for intense rainfall", *Advances in Water Resources*, 122, 304-316, 2018, <https://doi.org/10.1016/j.advwatres.2018.10.027>, Scopus Code: 2-s2.0-85054931526, WoS Code:000450094200024.
- 2018 **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., PICCIAFUOCO T., DARI J., CORRADINI C., "Characteristics of the Underestimation Error of Annual Maximum Rainfall Depth Due to Coarse Temporal Aggregation", *Atmosphere*, 9(8), 303, 2018, <https://doi.org/10.3390/atmos9080303>, Scopus Code: 2-s2.0-85054931568, WoS Code: 000443247300017.
- 2018 PASCUAL HERRERA-GRIMALDI P., GARCÍA-MARÍN A., AYUSO-MUÑOZ J. L., FLAMMINI A., **MORBIDELLI R.**, AYUSO-RUIZ J. L., "Detection of trends and break points in temperature: the case of Umbria (Italy) and Guadalquivir Valley (Spain)", *Acta Geophysica*, 66 (3), 329-343, 2018, doi: 10.1007/s11600-018-0118-1, Scopus Code: 2-s2.0-85041917704, WoS Code: 000435607500008.
- 2018 **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., GOVINDARAJU R.S., "Role of slope on infiltration: a review", *Journal of Hydrology*, 557, 878-886, 2018, doi: 10.1016/j.jhydrol.2018.01.019, Scopus Code: 2-s2.0-85040318076, WoS Code: 000425077300068.
- 2018 FLAMMINI A., **MORBIDELLI R.**, SALTALIPPI C., PICCIAFUOCO T., CORRADINI C., GOVINDARAJU R.S., "Reassessment of a semi-analytical field-scale infiltration model through experiments under natural rainfall events", *Journal of Hydrology*, 565, 835-845, 2018, <https://doi.org/10.1016/j.jhydrol.2018.08.073>, Scopus Code: 2-s2.0-85053026749, WoS Code: 000447477200069.
- 2018 FLAMMINI A., CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., PICCIAFUOCO T., GIRALDEZ J.V., "Experimental Analyses of the Evaporation Dynamics in Bare Soils under Natural Conditions", *Water Resources Management*, 32 (3), 1153-1166, 2018, doi: 10.1007/s11269-017-1860-x, Scopus Code: 2-s2.0-85034632795, WoS Code: 000447477200069.

000422982300020.

- 2018 RAHMATI M., WEIHERMÜLLER L., VANDERBORGHT J., PACHEPSKY Y.A., MAO L., SADEGHI S.H., MOOSAVI N., KHEIRFAM H., MONTZKA C., VAN LOOY K., TOTH B., HAZBAVI Z., AL YAMANI W., ALBALASMEH A.A., ALGHZAWI M.Z., ANGULO-JARAMILLO R., DANTAS ANTONINO A.C., ARAMPATZIS G., ARMINDO R.A., ASADI H., BAMUTAZE Y., BATLLE-AGUILAR J., BÉCHET B., BECKER F., BLÖSCHL G., BOHNE K., BRAUD I., CASTELLANO C., CERDÀ A., CHALHOUB M., CICHOTA R., CÍSLEROVÁ M., CLOTHIER B., COQUET Y., CORNELIS W., CORRADINI C., PAIVA COUTINHO A., DE OLIVEIRA M.B., DE MACEDO J.R., DURÃES M.F., EMAMI H., ESKANDARI I., FARAJNIA A., FLAMMINI A., FODOR N., GHARAIBEH M., GHAVIMIPANAH M.H., GHEZZEHEI T.A., GIERTZ S., HATZIGIANNAKIS E.G., HORN R., JIMÉNEZ J.J., JACQUES D., KEESSTRA S.D., KELISHADI H., KIANI-HARCHEGANI M., KOUSELOU M., KUMAR J.H.A.M., LASSABATERE L., LI X., LIEBIG M.A., LICHNER L., LÓPEZ M.V., MACHIWAL D., MALLANTS D., MALLMANN M.S., DE OLIVEIRA MARQUES J.D., MARSHALL M.R., MERTENS J., MEUNIER F., MOHAMMADI M.H., MOHANTY B.P., MONCADA M.P., MONTENEGRO S., **MORBIDELLI R.**, MORET-FERNÁNDEZ D., MOOSAVI A.A., MOSADDEGHI M.R., MOUSAVI S.B., MOZAFFARI H., NABIOLLAHI K., NEYSHABOURI M.R., OTTONI M.V., OTTONI FILHO T.B., PAHLAVAN RAD M.R., PANAGOPOULOS A., PETH S., PEYNEAU P.-E., PICCIAFUOCO T., POESEN J., PULIDO M., REINERT D.J., REINSCH S., REZAEI M., ROBERTS F.P., ROBINSON D., RODRIGO-COMINO J., ROTUNNO FILHO O.C., SAITO T., SUGANUMA H., SALTALIPPI C., SÁNDOR R., SCHÜTT B., SEEGER M., SEPEHRNIA N., SHARIFI MOGHADDAM E., SHUKLA M., SHUTARO S., SORANDO R., STANLEY A.A., STRAUSS P., SU Z., TAGHIZADEH-MEHRJARDI R., TAGUAS E., TEIXEIRA W.G., VAEZI A.R., VAFAKHAH M., VOGEL T., VOGELER I., VOTRUBOVA J., WERNER S., WINARSKI T., YILMAZ D., YOUNG M.H., ZACHARIAS S., ZENG Y., ZHAO Y., ZHAO H., VERECKEN H., "Development and Analysis of Soil Water Infiltration Global Database", *Earth Syst. Sci. Data*, 10(3), 1237-1263, 2018, doi: 10.5194/essd-10-1237-2018, Scopus Code: 2-s2.0-85049846331, WoS Code: 000438160500001.
- 2017 **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., CIFRODELLI M., PICCIAFUOCO T., CORRADINI C., GOVINDARAJU R.S., "In situ measurements of soil saturated hydraulic conductivity: Assessment of reliability through rainfall-runoff experiments", *Hydrological Processes*, 31(17), 3084-3094, 2017, doi: 10.1002/hyp.11247, Scopus Code: 2-s2.0-85021920693, WoS Code: 000406839300008.
- 2017 **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., CIFRODELLI M., PICCIAFUOCO T., CORRADINI C., CASAS-CASTILLO M.C., FOWLER H.J., WILKINSON S.M., "Effect of temporal aggregation on the estimate of annual maximum rainfall depths for the design of hydraulic infrastructure systems", *Journal of Hydrology*, 554, 710-720, 2017, doi: 10.1016/j.jhydrol.2017.09.050, Scopus Code: 2-s2.0-85030705982, WoS Code: 000415769600053.
- 2017 **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., CIFRODELLI M., CORRADINI C., "A laboratory experimental system for infiltration studies", *Hydrology Research*, 48(3), 741-748, 2017, doi: 10.2166/nh.2016.066, Scopus Code: 2-s2.0-85020527592, WoS Code: 000402453100011.
- 2017 OJHA R., CORRADINI C., **MORBIDELLI R.**, GOVINDARAJU R.S., "Effective Saturated Hydraulic Conductivity for Representing Field-Scale Infiltration and Surface Soil Moisture in Heterogeneous Unsaturated Soils Subjected to Rainfall Events", *Water*, 9(2), Article number 134, 17 pp, 2017, doi: 10.3390/w9020134, Scopus Code: 2-s2.0-85013831868, WoS Code: 000395435800064.
- 2016 **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., CIFRODELLI M., PICCIAFUOCO T., CORRADINI C., GOVINDARAJU R.S., "Laboratory investigation on the role of slope on infiltration over grassy soils", *Journal of Hydrology*, 543, 542-547, 2016, doi: 10.1016/j.jhydrol.2016.10.024, Scopus Code: 2-s2.0-85003587469, WoS Code: 000390735900029.
- 2016 **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., CORRADINI C., BROCCA L., GOVINDARAJU R.S., "An investigation of the effects of spatial heterogeneity of initial soil moisture content on surface runoff simulation at a small watershed scale", *Journal of Hydrology*, 539, 589-598, 2016, doi: 10.1016/j.jhydrol.2016.05.067, Scopus Code: 2-s2.0-84973459514, WoS Code: 00378953700045.
- 2016 GRISAN S., POLIZZOTTO R., RAIOLA P., CRISTIANI S., VENTURA F., DI LUCIA F., ZUIN M., TOMMASINI S., **MORBIDELLI R.**, DAMIANI F., PUPILLI F., BELLUCCI M., "Alternative use of tobacco as a sustainable crop for seed oil, biofuel, and biomass", *Agronomy for*

- Sustainable Development*, 36, 4, 2016, doi: 10.1007/s13593-016-0395-5, Scopus Code: 2-s2.0-84988661430, WoS Code: 000388279100002.
- 2015 OJHA R., PRAKASH A, CORRADINI C., **MORBIDELLI R.**, GOVINDARAJU R.S., "Temporal moment analysis for stochastic-advective solute transport in heterogeneous unsaturated soils", *Journal of Hydrology*, 521, 261-273, 2015, doi: 10.1016/j.jhydrol.2014.11.076, Scopus Code: 2-s2.0-85013831868, WoS Code: 000348879900021.
- 2015 CIFRODELLI M., CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., "The Influence of Climate Change on Heavy Rainfalls in Central Italy", *Procedia Earth and Planetary Science*, 15, 694-701, 2015, doi: 10.1016/j.proeps.2015.08.097, WoS Code: 000370751200107.
- 2015 **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., CIFRODELLI M., CORRADINI C., GOVINDARAJU R.S., "Infiltration on sloping surfaces: Laboratory experimental evidence and implications for infiltration modeling", *Journal of Hydrology*, 523, 79-85, 2015, doi: 10.1016/j.jhydrol.2015.01.041, Scopus Code: 2-s2.0-84922289436; WoS Code: 000351971700007.
- 2014 MORAMARCO T., BARBETTA S., PANDOLFO C., TARPANELLI A., BERNI N., **MORBIDELLI R.**, "Spillway collapse of the Montedoglio dam on the Tiber River, Central Italy: data collection and event analysis", *Journal of Hydrologic Engineering*, 19 (6), 1264-1270, 2014, doi: 10.1016/(ASCE)HE.1943-5584.0000890, Scopus Code: 2-s2.0-84921023197, WoS Code: 000336254900022.
- 2014 **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., ROSSI E., CORRADINI C., "Soil water content vertical profiles under natural conditions: matching of experiments and simulations by a conceptual model", *Hydrological Processes*, 28 (17), 4732-4742, 2014, doi:10.1002/hyp.9973, Scopus Code: 2-s2.0-84905732846, WoS Code: 000340611500006.
- 2014 ZUCCO G., BROCCA L., MORAMARCO T., **MORBIDELLI R.**, "Influence of land use on soil moisture spatial-temporal variability and monitoring", *Journal of Hydrology*, 516, 193-199, 2014, doi: 10/1016/j.jhydrol.2014.01.043, Scopus Code: 2-s2.0-84945173644, WoS Code: 000339036100018.
- 2014 OJHA R., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., GOVINDARAJU R.S., "Scaling of surface soil moisture over heterogeneous fields subjected to a single rainfall event". *Journal of Hydrology*, 516, 21-36, 2014, doi: 10.1016/j.jhydrol.2014.01.057, Scopus Code: 2-s2.0-84945173659, WoS Code: 000339036100003.
- 2014 BROCCA L., CAMICI S., MELONE F., MORAMARCO T., MARTINEZ-FERNANDEZ J., DIDON-LESCOT J.-F., **MORBIDELLI R.**, "Improving the representation of soil moisture by using a semi-analytical infiltration model", *Hydrological Processes*, 28 (4), 2103-2115, 2014, doi:10.1002/hyp.9766, Scopus Code: 2-s2.0-84892439115, WoS Code: 000330743000044.
- 2013 BROCCA L., ZUCCO G., MORAMARCO T., **MORBIDELLI R.**, "Developing and testing a long-term soil moisture dataset at the catchment scale", *Journal of Hydrology*, 490, 144-151, 2013, doi: 10/1016/j.jhydrol.2013.03.029, Scopus Code: 2-s2.0-84876850162, WoS Code: 000319090100013.
- 2012 GOVINDARAJU R. S., CORRADINI C., **MORBIDELLI R.**, "Local- and field-scale infiltration into vertically non-uniform soils with spatially-variable surface hydraulic conductivities", *Hydrological Processes*, 26 (21), 3293-3301, 2012, doi:10.1002/hyp.8454, Scopus Code: 2-s2.0-84866432272, WoS Code: 000308941600013.
- 2012 BROCCA L., TULLO T., MELONE F., MORAMARCO T., **MORBIDELLI R.**, "Catchment scale soil moisture spatial-temporal variability", *Journal of Hydrology*, 422-423, 63-75, 2012, doi: 10/1016/j.jhydrol.2011.12.039, Scopus Code: 2-s2.0-84856367893, WoS Code: 000301208100007.
- 2012 **MORBIDELLI R.**, CORRADINI C., SALTALIPPI C., BROCCA L., "Initial Soil Water Content as Input to Field-Scale Infiltration and Surface Runoff Models", *Water Resources Management*, 26 (7), 1793-1807, 2012, doi: 10.1007/s11269-012-9986-3, Scopus Code: 2-s2.0-84860428102, WoS Code: 000303506900002.
- 2011 CORRADINI C., FLAMMINI A., **MORBIDELLI R.**, GOVINDARAJU R.S., "A conceptual model for infiltration in two-layered soils with a more permeable upper layer: From local to field scale", *Journal of Hydrology*, 410 (1-2), 62-72, 2011, doi:10.1016/j.jhydrol.2011.09.005, Scopus Code: 2-s2.0-80054870002, WoS Code: 000297968000006.
- 2011 CORRADINI C., **MORBIDELLI R.**, FLAMMINI A., GOVINDARAJU R.S., "A parameterized model for local infiltration in two-layered soils with a more permeable upper layer", *Journal of*

- Hydrology*, 396 (3-4), 221-232, 2011, doi: 10.1016/j.jhydrol.2010.11.010, Scopus Code: 2-s2.0-78650304279, WoS Code: 000286554000003.
- 2011 **MORBIDELLI R.**, CORRADINI C., SALTALIPPI C., FLAMMINI A., ROSSI E., "Infiltration-soil moisture redistribution under natural conditions: experimental evidence as a guideline for realizing simulation models", *Hydrology and Earth System Sciences*, 15, 2937-2945, 2011, doi:10.5194/hess-15-2937-2011, Scopus Code: 2-s2.0-80052885350, WoS Code: 000295357100012.
- 2011 **MORBIDELLI R.**, CORRADINI C., SALTALIPPI C., FLAMMINI A., "Atmospheric stability and meteorological scenarios as input to air pollution transport modeling", *Water, Air and Soil Pollution*, 218 (1-4), 275-281, 2011, doi: 10.1007/s11270-010-0640-5, Scopus Code: 2-s2.0-80053560409, WoS Code: 000290724400024.
- 2010 BROCCA L., MELONE F., MORAMARCO T., **MORBIDELLI R.**, "Spatial-temporal variability of soil moisture and its estimation across scales", *Water Resources Research*, 46, W02516, 2010, DOI: 1.1029/2009WR008016, Scopus Code: 2-S2.0-77955280283, WoS Code: 000274791900001.
- 2009 BROCCA L., MELONE F., MORAMARCO T., **MORBIDELLI R.**, "Antecedent wetness conditions based on ERS scatterometer data", *Journal of Hydrology*, 364, 73-87, 2009 DOI: 10.1016/J.JHYDROL.2008.10.007, Scopus Code: 2-S2.0-57749193496, WoS Code: 000262789900007.
- 2009 ESSIG E.T., CORRADINI C., **MORBIDELLI R.**, GOVINDARAJU R.S., "Infiltration and deep flow over sloping surfaces: Comparison of numerical and experimental results", *Journal of Hydrology*, 374, 30-42, 2009, DOI: 10.1016/J.JHYDROL.2009.05.017, Scopus Code: 2-S2.0-67650381882, WoS Code: 000269071000003.
- 2009 BROCCA L., MELONE F., MORAMARCO T., **MORBIDELLI R.**, "Soil moisture temporal stability over experimental areas of Central Italy", *Geoderma*, 148, 364-374, 2009, DOI: 10.1016/J.GEODERMA.2008.11.004, Scopus Code: 2-S2.0-57749085354, WoS Code: 000262778000013.
- 2008 MELONE F., CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., "Comparison of theoretical and experimental soil moisture profiles under complex rainfall patterns", *Journal of Hydrologic Engineering*, 13(12), 1170-1176, 2008, doi: 10.1061/(ASCE)1084-0699(2008)13:12(1170), Scopus Code: 2-s2.0-56449086241, WoS Code: 000260937800007.
- 2008 **MORBIDELLI R.**, GOVINDARAJU R.S., CORRADINI C., FLAMMINI A., "Simplified model for simulating basin-scale surface runoff hydrographs", *Journal of Hydrologic Engineering*, 13(3), 164-170, 2008, doi: 10.1061/(ASCE)1084-0699(2008)13:3(164), Scopus Code: 2-s2.0-39549123811, WoS Code: 000253457600007.
- 2008 NAHAR N., GOVINDARAJU R.S., CORRADINI C., **MORBIDELLI R.**, "Numerical evaluation of the role of run-on on sediment transport over heterogeneous hillslopes", *Journal of Hydrologic Engineering*, 13(4), 215-225, 2008, doi: 10.1061/(ASCE)1084-0699(2008)13:4(215), Scopus Code: 2-s2.0-41049106919, WoS Code: 000254545100003
- 2008 **MORBIDELLI R.**, CORRADINI C., SALTALIPPI C., GOVINDARAJU R.S., "Laboratory experimental investigation of infiltration by the run-on process", *Journal of Hydrologic Engineering*, 13(12), 1187-1192, 2008, doi: 10.1061/(ASCE)1084-0699(2008)13:12(1187), Scopus Code: 2-s2.0-56449108140, WoS Code: 000260937800009
- 2007 **MORBIDELLI R.**, CORRADINI C., GOVINDARAJU R.S., "A simplified model for estimating field-scale surface runoff hydrographs", *Hydrological Processes*, 21, 1772-1779, 2007, doi: 10.1002/hyp.6345, Scopus Code: 2-s2.0-34447094735, WoS Code: 000247895600010.
- 2007 BROCCA L., **MORBIDELLI R.**, MELONE F., MORAMARCO T., "Soil moisture spatial variability in experimental areas of central Italy", *Journal of Hydrology*, 333(2-4), 356-373., 2007, doi: 10.1016/j.jhydrol.2006.09.004, Scopus Code: 2-s2.0-33845998963, WoS Code: 000244160900015.
- 2006 **MORBIDELLI R.**, CORRADINI C., GOVINDARAJU R.S., "A field-scale infiltration model accounting for spatial heterogeneity of rainfall and soil saturated hydraulic conductivity", *Hydrological Processes*, 20, 1465-1481, 2006, doi: 10.1002/hyp.5943, Scopus Code: 2-s2.0-33646020374, WoS Code: 000237230500002.
- 2006 MELONE F., CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., "Laboratory experimental check of a conceptual model for infiltration under complex rainfall patterns", *Hydrological Processes*, 20, 439-452, 2006, doi: 10.1002/hyp.5913, Scopus Code: 2-s2.0-33644750641;

WoS Code: 000235759600001.

- 2006 GOVINDARAJU R.S., CORRADINI C., **MORBIDELLI R.**, "A semi-analytical model of expected areal-average infiltration under spatial heterogeneity of rainfall and soil saturated hydraulic conductivity", *Journal of Hydrology*, 316 (1-4), 184-194, 2006, doi: 10.1016/j.jhydrol.2005.04.019, Scopus Code: 2-s2.0-28744455603, WoS Code: 000234275900013.
- 2004 CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., MELONE F., "Flood forecasting and infiltration modeling", *Hydrological Sciences Journal*, 49(2), 227-236, 2004, doi: 10.1623/hysj.49.2.227.34840, Scopus Code: 2-s2.0-2142701103; WoS Code: 000220582600002.
- 2004 NAHAR N., GOVINDARAJU R.S., CORRADINI C., **MORBIDELLI R.**, "Role of run-on for describing field-scale infiltration and overland flow over spatially variable soils", *Journal of Hydrology*, 286 (1-4), 36-51, 2004, doi: 10.1016/j.jhydrol.2003.09.011, Scopus Code: 2-s2.0-1142306213; WoS Code: 000188887100003.
- 2002 CORRADINI C., GOVINDARAJU R.S., **MORBIDELLI R.**, "Simplified modelling of areal average infiltration at the hillslope scale", *Hydrological Processes*, 16, 1757-1770, 2002, doi: 10.1002/hyp.394, Scopus Code: 2-s2.0-0037199168; WoS Code: 000176606400005.
- 2001 GOVINDARAJU R.S., **MORBIDELLI R.**, CORRADINI C., "Areal infiltration modeling over soils with spatially-correlated hydraulic conductivities", *Journal of Hydrologic Engineering*, 6 (2), 150-158, 2001 doi: 10.1061/(ASCE)1084-0699(2001)6:2(150), Scopus Code: 2-s2.0-0035282341, WoS Code: 000171431700008.
- 1999 GOVINDARAJU R.S., **MORBIDELLI R.**, CORRADINI C., "Use of similarity profiles for computing surface runoff over small watersheds", *Journal of Hydrologic Engineering*, 4 (2), 100-107, 1999, doi: 10.1061/(ASCE)1084-0699(1999)4:2(100), Scopus Code: 2-s2.0-0033117416, WoS Code: 000207775300002.
- 1998 CORRADINI C., **MORBIDELLI R.**, MELONE F., "On the interaction between infiltration and Hortonian runoff", *Journal of Hydrology*, 204, 52-67, 1998, doi: 10.1016/S0022-1694(97)00100-5, Scopus Code: 2-s2.0-0032579303, WoS Code: 000072288500004.

BOOK CHAPTERS

- 2022 **MORBIDELLI R.**, CORRADINI C., SALTALIPPI C., FLAMMINI A., "Time Resolution of Rain Gauge Data and its Hydrological Role". In Morbidelli R. (Editor): *Rainfall. Modeling, Measurement and Applications*, Chapter 7, Amsterdam, 2022, Elsevier, ISBN: 9780128225448.
- 2022 SALTALIPPI C., CORRADINI C., DARI J., **MORBIDELLI R.**, FLAMMINI A., "Rainfall-Runoff Transformation". In Morbidelli R. (Editor): *Rainfall. Modeling, Measurement and Applications*, Chapter 13, Amsterdam, 2022, Elsevier, ISBN: 9780128225448.
- 2022 FLAMMINI A., DARI J., CORRADINI C., SALTALIPPI C., **MORBIDELLI R.**, "Areal Reduction Factor Estimate for Extreme Rainfall Events". In Morbidelli R. (Editor): *Rainfall. Modeling, Measurement and Applications*, Chapter 10, Amsterdam, 2022, Elsevier, ISBN: 9780128225448.
- 2022 CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., "Meteorological Systems Producing Rainfall". In Morbidelli R. (Editor): *Rainfall. Modeling, Measurement and Applications*, Chapter 2, Amsterdam, 2022, Elsevier, ISBN: 9780128225448.
- 2021 CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., "Relazione Idrologico-Idraulica", in L. Fiorini e C. Masseria (Editori): *Il Monumento Funerario della Sacerdotessa Mamia a Pompei, L' "Erma" di Bretschneider*, Roma, pp. 49-66, 2021, ISBN: 978-88-913-2181-7.
- 2017 CORRADINI C., **MORBIDELLI R.**, GOVINDARAJU R. S., "Infiltration Modeling". In Vijay P. Singh (Editor): *Handbook of Applied Hydrology Second Edition*, McGraw-Hill, New York, pp. 45-1; 45-9, 2017, ISBN: 9780071835091.
- 2015 CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., "A review of local infiltration modeling: from regular to complex rainfall patterns", Water Resources Publications, LCC, pp. 25-44, 2015, ISBN: 978-188720185-8.
- 2013 **MORBIDELLI R.**, CORRADINI C., SALTALIPPI C., FLAMMINI A., GOVINDARAJU R.S., "The role of slope on the overland flow production", Wit Transactions on Ecology and the

- Environment, vol 172, 63-71, 2013, doi:10.2495/RBM130061, Scopus Code: 2-s2.0-84878117046.
- 2012 GOVINDARAJU R. S., CORRADINI C., **MORBIDELLI R.**, "Overland Flow and the Runon Process", in Tommy S. W. Wong (Editor): *Overland Flow and Surface Runoff*, Nova Science Publishers, Inc., New York, , pp. 55-90, 2012, ISBN: 978-1-61122-868-7, Scopus Code: 2-s2.0-84895341648.
- 2008 CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., GOVINDARAJU R.S., "A simplified model for estimating surface runoff hydrographs at watershed scale", *Surface Water- Groundwater Interactions: Process Understanding, Conceptualization and Modelling*, IAHS Publ. 321, 110-116, 2008, ISBN: 978-1-901502-59-6; ISSN 0144-7815, Scopus Code: 2-s2.0-55849087297.
- 2007 GOVINDARAJU R.S., NAHAR N., CORRADINI C., **MORBIDELLI R.**, "Infiltration and run-on under spatially variable hydrologic properties", in J.W. Delleur (Editor): *The Handbook of Ground Water Engineering (2nd edition)*, CRC Press, Boca Raton, FL, 8.1-8.15, 2007, ISBN: 978-0-8493-4316-2.
- 2002 BRUNONE B., FERRANTE M., **MORBIDELLI R.**, "The Water Engineering Laboratory of the University of Perugia", In K. Andah (Editor): *Hydro-Geological Disaster Reduction: Developments and Perspectives*, 271-274, 2002.

MONOGRAPHS

- 2024 **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., DARI J., CASADEI S., "Coefficienti di deflusso fluviale in Umbria", Cipla, Perugia, pp. 1-91, 2024, ISBN: 9788894466232.
- 2023 **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., DARI J., VENTURI S., CASADEI S., "Principali indicatori climatici in Umbria. Rapporto 2023", Cipla, Perugia, pp. 1-174, 2023, ISBN: 9788894466225.
- 2022 FLAMMINI A., **MORBIDELLI R.**, SALTALIPPI C., DARI J., STELLUTI M., "Ragguaglio areale delle precipitazioni intense in Umbria", Morlacchi Editore U.P., Perugia, pp. 1-87, 2022, ISBN: 9788893923842.
- 2021 **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., DARI J., CASADEI S., "Principali indicatori climatici in Umbria. Rapporto 2021", Cipla, Perugia, pp. 1-166, 2021, ISBN: 9788894466218.
- 2020 SALTALIPPI C., **MORBIDELLI R.**, FLAMMINI A., MORAMARCO T., CAMICI S., STELLUTI M., VITERBO A., "Analisi regionale delle precipitazioni intense in Umbria", Morlacchi Editore U.P., Perugia, pp. 1-153, 2020, ISBN: 9788893921947.
- 2016 **MORBIDELLI R.**, SALTALIPPI C., CIFRODELLI M., FLAMMINI A., CORRADINI C., BROCCA L., STELLUTI M., "Analisi delle precipitazioni intense in Umbria", Morlacchi Editore U.P., Perugia, 1-472, 2016, ISBN: 9788860748058.
- 2015 **MORBIDELLI R.**, CORRADINI C., "Metodi quantitativi per la gestione ottimale delle acque", Morlacchi Editore University Press, Perugia, pp. 1-139, 2015, ISBN: 9788860747006.
- 2012 **MORBIDELLI R.**, TALAMELLI M., "L'Umbria degli impianti idroelettrici", Quattroemme Editore, Perugia, pp. 1-213, 2012, ISBN: 9788889398746.
- 2011 **MORBIDELLI R.**, CORRADINI C., "Lezioni di Gestione delle Risorse Idriche", Morlacchi Galeno Editrice, Perugia, pp. 1-137, 2011, ISBN: 9788896663127.

PAPERS ON NATIONAL JOURNALS

- 2021 **MORBIDELLI R.**, "Cambiamenti climatici e principali grandezze meteorologiche in Umbria", *L'Acqua*, 6, 75-81, 2021.
- 2007 CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., "Un modello di infiltrazione a scala di versante per pioggia variabile nello spazio e nel tempo", *L'Acqua*, 4, 9-18, 2007.
- 2006 CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., "Determinazione preliminare della stabilità atmosferica per la modellazione degli inquinanti nella bassa troposfera", *Bollettino Geofisico*, anno XXIX, n.1-4, 5-16, 2006.
- 1996 **MORBIDELLI R.**, CORRADINI C., MELONE F., "Influenza della struttura spaziale della conduttività idraulica del suolo sullo sviluppo dell'idrogramma prodotto da piogge discontinue",

ABSTRACT IN
INTERNATIONAL
JOURNALS

2024

BERTOLA M., MAZZOGLIO P., HIRBO GELEBO A., RAJENDRAN SHOBHA A., JAMPANI M., SINGH S., PRIETO C., PANDA S., ZAIFOGLUH., BHOWMIK A., GUESRI M., DIETRICH S., TEGEGN Z., VIGLIONE A., BONACCORSO B., CLAPS P., MANFREDA S., KOREN G., MOULDS S., GANAPATHY A., PIZARRO A., LEŠČEŠEN I., JORQUERA J., **MORBIDELLI R.**, NEARING G., TREPIEDI D., ALEXANDER S., GILITE K., DALLAN E., OTIENO W., KOUBODANA HOUTETA D., FILIPOVA V., ROSSELLÓ-GELI J., KORICHE S., FAERBER C., VIDAL J.-P., KOMLAVI A., VINCENT K., ASLAM H., MUSAU J., DOMENEGHETTI A., RAHMAD R., MOCCIA B., AMINA B., CEOLA S., JEAN-EMMANUEL P., ROY T., SYAM NANDIKANTI S.S., ZHANG Q., CHAFFE P., MENDIONDO E.M., CUDENNEC C., BADJI A., FAN X., GARGOURI E., IZZEDDINE M., KORICHI A., ABDESSAMED D., MERHEB M., LAMIA R., SLIMANE B., DE SMETH K., GOODY N., NEWCOMER M., SLAMA F., SLIMANE ABDELJABBAR B., WHITAKER A., SURENDRAN U., CHAUHAN G., MONTANARI A., CHEN A., TAN X., LI Y., WU S., YANG Y., YAO J., PAYNE T., "REHYDRATE - an international HELPING working group to REtrieve historical HYDRologic dATa and Estimates", EGU General Assembly 2024, Vienna, Austria, 14–19 Apr 2024, EGU24-5911, <https://doi.org/10.5194/egusphere-egu24-5911>, 2024

2024

DARI J., FILIPPUCCI P., BROCCA L., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., "A water balance approach for estimating groundwater recharge rates through high-resolution satellite soil moisture", EGU General Assembly 2024, Vienna, Austria, 14–19 Apr 2024, EGU24-3537, <https://doi.org/10.5194/egusphere-egu24-3537>, 2024

2024

RAHI A., RAHMATI M., DARI J., **MORBIDELLI R.**, "Runoff coefficient modelling using Long Short-Term Memory (LSTM) in the Rur catchment", Germany, EGU General Assembly 2024, Vienna, Austria, 14–19 Apr 2024, EGU24-2872, <https://doi.org/10.5194/egusphere-egu24-2872>, 2024.

2023

RAHI, A., RAHMATI, M., DARI, J., SALTALIPPI, C., **MORBIDELLI, R.**, "Assessment of factors controlling the runoff coefficient in the Mediterranean context: a case study in central Italy", EGU General Assembly 2023, 23–28 Apr 2023, EGU23-6661, <https://doi.org/10.5194/egusphere-egu23-6661>, 2023.

2023

FLAMMINI, A., DARI, J., SALTALIPPI, C., **MORBIDELLI, R.**, "Areal reduction factor assessment for extreme rainfalls through a new empirical fixed-area formulation", EGU General Assembly 2023, 23–28 Apr 2023, EGU23-7000, <https://doi.org/10.5194/egusphere-egu23-7000>, 2023.

2021

MODANESI, S., MASSARI, C., GRUBER, A., BROCCA, L., LIEVENS, H., **MORBIDELLI, R.**, DE LANNOY, G., "On the ability of Sentinel-1 backscatter to detect soil moisture and vegetation changes caused by irrigation fluxes over the Po River Valley (Italy)", EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-2212, <https://doi.org/10.5194/egusphere-egu21-2212>, 2021.

2021

DARI, J., QUINTANA-SEGUÍ, P., ESCORIHUELA, M. J., STEFAN, V., **MORBIDELLI, R.**, SALTALIPPI, C., FLAMMINI, A., BROCCA, L., "Irrigation Estimates from Remote Sensing Soil Moisture: A District-Scale Analysis in Spain", EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-2914, <https://doi.org/10.5194/egusphere-egu21-2914>, 2021.

2020

DARI J., QUINTANA-SEGUÍ P., ESCORIHUELA M.J., BROCCA L., **MORBIDELLI R.**, STEFAN V., "The detection of irrigation through remote sensing soil moisture and a land surface model: a case study in Spain", EGU2020-3654, EGU General Assembly 2020.

2020

MODANESI S., DE LANNOY G.J.M., GRUBER A., MASSARI C., BROCCA L., LIEVENS H., **MORBIDELLI R.**, "Irrigation detection with Sentinel-1 radar backscatter observations over an agricultural area in the Po River Valley (Italy)", Geophysical Research Abstracts, EGU2020-3884, EGU General Assembly 2020.

2019

DARI J., QUINTANA-SEGUÍ P., ESCORIHUELA M.J., **MORBIDELLI R.**, BROCCA L., "Understanding the impact of irrigation on the hydrological cycle: a PhD project that includes the use of remote sensing data and a land surface model", Geophysical Research Abstracts, vol. 21, EGU2019-5518, EGU General Assembly 2019.

2019

BROCCA L., DARI J., FILIPPUCCI P., TARPANELLI A., QUINTANA-SEGUÍ P.,

- ESCORIHUELA M.J., **MORBIDELLI R.**, "The missing information for hydrological modelling in agricultural areas: irrigation", Geophysical Research Abstracts, vol. 21, EGU2019-4317-1, EGU General Assembly 2019.
- 2018 PICCIAFUOCO T., **MORBIDELLI R.**, FLAMMINI A., SALTALIPPI C., CORRADINI C., BLOSCHL G., "Simplified method to derive a pedotransfer function for average field saturated hydraulic conductivity with limited data-set", Geophysical Research Abstracts, vol. 20, EGU2018-7485, EGU General Assembly 2018.
- 2018 DARI J., **MORBIDELLI R.**, SALTALIPPI C., MASSARI C., BROCCA L., "Spatial-temporal variability of soil moisture: a strategy to optimize monitoring at the catchment scale with varying topography and land use", Geophysical Research Abstracts, vol. 20, EGU2018-7632, EGU General Assembly 2018
- 2014 **MORBIDELLI R.**, CORRADINI C., SALTALIPPI C., FLAMMINI A., BROCCA L., "Initial soil water content as input to distributed rainfall-runoff models at small basin-scales", Geophysical Research Abstracts, vol. 16, EGU2014-1625, EGU General Assembly 2014.
- 2012 TARPANELLI A.; MORAMARCO T.; BARBETTA S.; MELONE F.; BERNI N.; PANDOLFO C.; **MORBIDELLI R.**, "Analyzing the spillway failure of the Montedoglio dam in Central Italy", Geophysical Research Abstracts, vol. 14, EGU General Assembly, 2012.
- 2010 RIZZO E., GIAMPAOLO V., VOTTA M., LAPENNA V., MORAMARCO T., ARICÒ C., CAMICI S., **MORBIDELLI R.**, SINAGRA M., TUCCIARELLI T., "Experimental analysis of the levees safety based on geophysical monitoring", Geophysical Research Abstracts, vol. 12, EGU General Assembly, 2010.
- 2008 CORRADINI C., GOVINDARAJU R.S., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., "On the representation of infiltration from the local to the hillslope scale", Geophysical Research Abstracts, vol. 10, EGU2008-A-07753, EGU General Assembly, 2008.
- 1997 GOVINDARAJU R.S., **MORBIDELLI R.**, CORRADINI C., "Similarity solutions for overland and stream flows to study watershed runoff", Annales Geophysicae, Supplement II to volume 15, C 319, 1997.

PAPERS IN
PROCEEDINGS OF
INTERNATIONAL
CONFERENCES

- 2020 **MORBIDELLI R.**, CORRADINI C., DARI J., FLAMMINI A., SALTALIPPI C., "Characterization of Annual Maximum Rainfall Depths at Regional Scale", Proceedings Roorkee Water Conclave 2020, Roorkee (India), 26-28 February 2020, 12 pp., 2020.
- 2020 FLAMMINI A., **MORBIDELLI R.**, CORRADINI C., SALTALIPPI C., DARI J., "Statistical Characterization of the Saturated Hydraulic Conductivity at the Plot Scale in Natural Grassy Soils", Proceedings Roorkee Water Conclave 2020, Roorkee (India), 26-28 February 2020, 11 pp., 2020.
- 2016 CIFRODELLI M., AYUSO MUNOZ J. L., GARCIA MARIN A., ESTEVEZ GUALDA J., **MORBIDELLI R.**, SALTALIPPI C., AYUSO RUIZ P., "Regional Frequency Analysis of extreme rainfall in the Umbria Region (Central Italy)", Proceedings 20th international congress on project management and engineering, Cartagena (Spain), 13-15 July 2016, 605-617, ISBN: 978-84-617-4180-9, 2016.
- 2012 MORAMARCO T., BARBETTA S., TARPANELLI A., BERNI N., PANDOLFO C., PEPI C., **MORBIDELLI R.**, "The disaster caused by the spillway failure of the Montedoglio dam in central Italy". In 2012 IPWE 5th International Perspective on Water Resources & the Environment © ASCE 2012, January 4-7, 2012, Marrakech, Marocco.
- 2012 FLAMMINI A., ROSSI E., CORRADINI C., SALTALIPPI C., **MORBIDELLI R.**, "On the evolution in time of the soil moisture vertical profile in two natural plots". In 2012 IPWE 5th International Perspective on Water Resources & the Environment © ASCE 2012, January 4-7, 2012, Marrakech, Marocco, 2012.
- 2011 **MORBIDELLI R.**, CORRADINI C., SALTALIPPI C., FLAMMINI A., ROSSI E. (2011), "An experimental hydrometeorological investigation to address infiltration-redistribution modelling" In World Environmental and Water Resources Congress 2011: Bearing Knowledge for Sustainability © ASCE 2011, edited by R. Edward Beighley II and Mark W. Killgore, May 22-26, 2011, Palm Springs, CA (USA), pp 4759-4768, doi: 10.1061/41173(414)494, 2011, ISBN:

- 2009 CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., GOVINDARAJU R.S., "A preliminary analysis for a simplified model of local infiltration into layered soils", In H. Ma and S. Narayanan (Editors): Modelling, Simulation and Identification, Proceedings of the IASTED International Conference on Modelling, Simulation and Identification (MSI 2009), Beijing (China), October 12 -14, 2009, ISBN: 978-0-88986-810-6, Scopus Code: 2-s2.0-77950611851.
- 2009 **MORBIDELLI R.**, CORRADINI C., SALTALIPPI C., FLAMMINI A., "Definition of atmospheric scenarios as inputs to the modeling of pollutant transfer", In H. Ma and S. Narayanan (Editors): Modelling, Simulation and Identification, Proceedings of the IASTED International Conference on Modelling, Simulation and Identification (MSI 2009), Beijing (China), October 12 -14, 2009, ISBN: 978-0-88986-810-6, Scopus Code: 2-s2.0-77950622890.
- 2009 ESSIG E.T., CORRADINI C., **MORBIDELLI R.**, FLAMMINI A., GOVINDARAJU R.S., "Modeling infiltration and deep flow over sloping surfaces", Thailand EWRI 2009 Conference, 2009.
- 2008 **MORBIDELLI R.**, GOVINDARAJU R.S., CORRADINI C., SALTALIPPI C., FLAMMINI A., "A preliminary analysis of field-scale infiltration into layered soils", In R.W. Babcock and R. Walton (Editors): World Environmental and Water Resources Congress 2008, ASCE EWRI, Ahupua'a, 2008, doi: 10.1061/40976(316)75, ISBN: 978-0-7844-0976-3, Scopus Code: 2-s2.0-79251506020.
- 2007 NAHAR N., GOVINDARAJU R.S., CORRADINI C., **MORBIDELLI R.**, "Runon and sediment transport over heterogeneous hillslopes", 32-nd IAHR Congress, Harmonizing the Demand of Art and Nature in Hydraulics, July 1-6, Venice, Italy, 11 pages, 2007, ISBN: 9788889405062.
- 2006 **MORBIDELLI R.**, CORRADINI C., FLAMMINI A., SALTALIPPI C., "On the representation of atmospheric stability in modelling the mechanism of transport in the low troposphere", In R. Wamkeue (Editor): Modelling and Simulation, IASTED ACTA PRESS, Anaheim, 74-76, 2006, ISBN: 889865949, Scopus Code: 2-s2.0-33751239727, WoS Code: 000246366600013.
- 2006 CORRADINI C., FLAMMINI A., **MORBIDELLI R.**, SALTALIPPI C., "On the adaptive component of a real-time flood forecasting model", In R. Wamkeue (Editor): Modelling and Simulation, IASTED ACTA PRESS, Anaheim, 568-572, 2006, ISBN: 889865949, Scopus Code: 2-s2.0-33751237649, WoS Code: 000246366600101.
- 2004 FLAMMINI A., CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., "A parameterized local infiltration model for complex rainfall patterns", In L. Ubertini (Editor): Environmental Modelling and Simulation, IASTED ACTA PRESS, Anaheim, 186-191, 2004, ISBN: 9780889864412.
- 2003 **MORBIDELLI R.**, CORRADINI C., SALTALIPPI C., MELONE F., "A simplified model for areal-average infiltration with spatial heterogeneity of rainfall and saturated hydraulic conductivity", In M.H. Hamza (Editor): Applied Simulation and Modelling, IASTED ACTA PRESS, Anaheim, 244-248, 2003, ISBN: 0889863849.
- 2003 **MORBIDELLI R.**, CORRADINI C., SALTALIPPI C., MELONE F., "An experimental investigation of a semi-analytical infiltration model for erratic rainfall", In M.H. Hamza (Editor): Applied Simulation and Modelling, IASTED ACTA PRESS, Anaheim, 238-243, 2003, ISBN: 0889863849.
- 2002 CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., MELONE F., "An adaptive model for flood forecasting on medium size basins", In L. Ubertini (Editor): Applied Simulation and Modelling, IASTED ACTA PRESS, Anaheim, 555-559, 2002, ISBN: 0889863342.
- 2002 **MORBIDELLI R.**, CORRADINI C., SALTALIPPI C., MELONE F., "Role of spatial variability of rainfall and soil hydraulic properties on the hillslope hydrograph", In L. Ubertini (Editor): Applied Simulation and Modelling, IASTED ACTA PRESS, Anaheim, 551-554, 2002, ISBN: 0889863342.
- 2001 **MORBIDELLI R.**, CORRADINI C., MELONE F., "A laboratory experimental analysis of overland flow production with different slope gradients", In M.H. Hamza (Editor): Applied Simulation and Modelling, IASTED ACTA PRESS, Anaheim, 456-460, 2001, ISBN: 0889863113.
- 2001 MELONE F., NERI N., **MORBIDELLI R.**, SALTALIPPI C., "A conceptual model for flood prediction in basin of moderate size", In M.H. Hamza (Editor): Applied Simulation and Modelling, IASTED ACTA PRESS, Anaheim, 461-466, 2001, ISBN: 0889863113.
- 2000 GOVINDARAJU R.S., CORRADINI C., **MORBIDELLI R.**, "Infiltration over soils with spatially-correlated hydraulic conductivities", Conference on Water Resources Engineering and Water

Resources Planning and Management, Minneapolis, July 30-August 2, 1-10, 2000, doi: 10.1061/40517(2000)385; ISBN: 978-0-7844-0517-8 Scopus Code: 2-s2.0-74949137072.

- 2000 **MORBIDELLI R.**, CORRADINI C., MELONE F., "Estimate of areal average infiltration through an equivalent saturated hydraulic conductivity", In M.H. Hamza (Editor): Modelling and Simulation, IASTED ACTA PRESS, Anaheim, 357-360, 2000, ISBN: 0889862842.
- 2000 CORRADINI C., MELONE F., **MORBIDELLI R.**, NERI N., SALTALIPPI C., "Semi-distributed rainfall-runoff models and representation of losses", In M.H. Hamza (Editor): Modelling and Simulation, IASTED ACTA PRESS, Anaheim, 345-349, 2000, ISBN: 0889862842.
- 1999 **MORBIDELLI R.**, CORRADINI C., MELONE F., "On the simulation of areal average infiltration by simplified approaches", In M.H. Hamza (Editor): Modelling and Simulation, IASTED ACTA PRESS, Anaheim, 283-287, 1999, ISBN: 0889862451.
- 1999 CORRADINI C., MELONE F., **MORBIDELLI R.**, "Simulation of local infiltration-redistribution-reinfiltration into layered soils", In M.H. Hamza (Editor): Modelling and Simulation, IASTED ACTA PRESS, Anaheim, 273-277, 1999, ISBN: 0889862451.
- 1998 CORRADINI C., MELONE F., **MORBIDELLI R.**, "Flow simulation in ungauged basins for water resources planning", In M.H. Hamza (Editor): Modelling and Simulation, IASTED ACTA PRESS, Anaheim, 168-172, 1998, ISBN: 0889862524.
- 1997 CORRADINI C., MELONE F., **MORBIDELLI R.**, "Local infiltration in a crusted soil: simulation by a conceptual approach", In M.H. Hamza (Editor): Modelling and Simulation, IASTED ACTA PRESS, Anaheim, California, 409-412, 1997, ISBN: 0889862214.
- 1996 CORRADINI C., MELONE F., MORAMARCO T., **MORBIDELLI R.**, "Basin representation and direct runoff hydrograph for different basin sizes", In M.H. Hamza (Editor): Modelling and Simulation, IASTED ACTA PRESS, Anaheim, California, 422-425, 1996, ISBN: 088986201X.
- 1996 CORRADINI C., MELONE F., **MORBIDELLI R.**, "An investigation of the relationship between spatial variability of soil hydraulic properties and overland flow formation", In M.H. Hamza (Editor): Modelling and Simulation, IASTED ACTA PRESS, Anaheim, California, 417-421, 1996, ISBN: 088986201X.

PAPERS IN
PROCEEDINGS OF
NATIONAL
CONFERENCES

- 2022 **MORBIDELLI R.**, FLAMMINI C., DARI J., SALTALIPPI C., "Il ruolo dell'inclinazione della superficie del suolo sull'infiltrazione areale", *Atti del 38° Convegno di Idraulica e Costruzioni Idrauliche*, Reggio Calabria, 4-7 Settembre 2022, 1-4, 2022, ISBN: 9788894379921.
- 2021 DARI J., QUINTANA-SEGUÍ P., ESCORIHUELA M.J., STEFAN V., BROCCA L., **MORBIDELLI R.**, "Exploiting Remote Sensing Soil Moisture and a Land Surface Model to Detect Irrigation: A Case Study in Spain", *Atti del 37° Convegno Nazionale di Idraulica e Costruzioni Idrauliche*, Edizione on-line, 14-16 Giugno 2021, 1-4, 2021, ISBN: 9788894379914.
- 2018 DARI J., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI C., MASSARI C., BROCCA L., "La variabilità spatio-temporale del contenuto d'acqua nel suolo: una strategia per ottimizzare il campionamento alla scala di bacino idrografico", *Atti del 36° Convegno di Idraulica e Costruzioni Idrauliche*, Ancona, 12-14 Settembre 2018, 1-4, 2018, ISBN: 9788894379907.
- 2018 **MORBIDELLI R.**, CORRADINI C., SALTALIPPI C., FLAMMINI C., PICCIAFUOCO T., DARI J., "Effetto dell'aggregazione temporale dei dati pluviometrici sulle analisi dei trend degli eventi intensi", *Atti del 36° Convegno di Idraulica e Costruzioni Idrauliche*, Ancona, 12-14 Settembre 2018, 1-4, 2018, ISBN: 9788894379907.
- 2016 **MORBIDELLI R.**, CORRADINI C., SALTALIPPI C., FLAMMINI C., PICCIAFUOCO T., CIFRODELLI M., "Il processo di infiltrazione su un suolo con superficie inclinata e inerbita", *Atti del 35° Convegno di Idraulica e Costruzioni Idrauliche*, Bologna, 14-16 Settembre 2016, 1-4, 2016, doi: 10.6092/unibo/amsacta/5400, ISBN: 9788898010400.
- 2014 **MORBIDELLI R.**, CORRADINI C., SALTALIPPI C., FLAMMINI C., "Gli impianti idroelettrici in Umbria: presente e futuro", *Atti del 34° Convegno di Idraulica e Costruzioni Idrauliche*, Bari, 8-11 Settembre 2014, 771-772, 2014, ISBN: 9788890456183.

- 2012 ROSSI E., CORRADINI C., SALTALIPPI C., FLAMMINI A., **MORBIDELLI R.**, "Evoluzione continua del profilo verticale di umidità del suolo in condizioni naturali", *Atti del 33° Convegno di Idraulica e Costruzioni Idrauliche*, Brescia, 10-14 Settembre 2012, 1-14, 2012, ISBN: 978-88-97181-18-7.
- 2012 TARPANELLI A., PANDOLFO C., BARBETTA S., BERNI N., MORAMARCO T., **MORBIDELLI R.**, "The disaster caused by the spillway failure of the Montedoglio dam in central Italy", *Atti del 33° Convegno di Idraulica e Costruzioni Idrauliche*, Brescia, 10-14 Settembre 2012, 1-14, ISBN: 978-88-97181-18-7.
- 2010 CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., ROSSI E., "Una analisi comparativa sulla rappresentazione dell'infiltrazione dalla scala locale alla scala di versante", *Atti del 32° Convegno di Idraulica e Costruzioni Idrauliche*, Palermo, 14-17 Settembre 2010, 1-10, 2010, ISBN: 978-88-903895-2-8, 2010.
- 2010 ARICO' C., MORAMARCO T., **MORBIDELLI R.**, RIZZO E., SINAGRA M., TUCCIARELLI T., "Il metodo MAST/LMHFE per la simulazione di mezzi porosi parzialmente saturi. Applicazione ad un'arginatura sperimentale", *Atti del 32° Convegno di Idraulica e Costruzioni Idrauliche*, Palermo, 14-17 Settembre 2010, ISBN: 978-88-903895-2-8, 2010.
- 2010 ARICO' C., CAMICI S., MORAMARCO T., SINAGRA M., TUCCIARELLI T., RIZZO E., GIAMPAOLO V., **MORBIDELLI R.**, "Analisi del moto di filtrazione in rilevati arginali mediante tomografia di resistività elettrica", *Atti del 32° Convegno di Idraulica e Costruzioni Idrauliche*, Palermo, 14-17 Settembre 2010, ISBN: 978-88-903895-2-8, 2010.
- 2008 CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., "Ruolo del contenuto di acqua iniziale del suolo sull'infiltrazione media areale", *Atti del XXXI Convegno Nazionale di Idraulica e Costruzioni Idrauliche*, Perugia, 9-12 settembre 2008, 1-8, 2008.
- 2006 CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., "Previsione delle piene in tempo reale su bacini di medie dimensioni con modello semi-distribuito", *Atti del XXX Convegno Nazionale di Idraulica e Costruzioni Idrauliche*, Roma, 10-15 settembre 2006, 1-13, 2006.
- 2004 **MORBIDELLI R.**, CORRADINI C., SALTALIPPI C., FLAMMINI A., "Modello semi-analitico per l'infiltrazione media areale con variabilità spazio-temporale della pioggia", *Atti del XXIX Convegno Nazionale di Idraulica e Costruzioni Idrauliche*, Trento, 7-10 settembre 2004, volume II, 803-810, 2004.
- 2002 CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., MELONE F., "Un modello adattivo semidistribuito per la previsione delle piene su bacini di medie dimensioni", XXVIII Convegno Nazionale di Idraulica e Costruzioni Idrauliche, Potenza, 16-19 settembre 2002, vol. I, 429-439, 2002.
- 2000 **MORBIDELLI R.**, CORRADINI C., MELONE F., "Stima dell'infiltrazione a scala di versante mediante approccio analitico-concettuale", XXVII Convegno Nazionale di Idraulica e Costruzioni Idrauliche, Genova, 12-15 settembre 2000, vol. II, 437-444, 2000.
- 1998 CORRADINI C., MELONE F., **MORBIDELLI R.**, "Modello semplificato per infiltrazione e redistribuzione in suoli stratificati", XXVI Convegno Nazionale di Idraulica e Costruzioni Idrauliche, Catania, 9-12 settembre 1998, volume II, 61-72, 1998.

ABSTRACT IN
PROCEEDINGS OF
NATIONAL AND
INTERNATIONAL
CONFERENCES

- 2023 DARI J., **MORBIDELLI R.**, QUINTANA-SEGUÍ P., BARELLA-ORTIZ A., RAHMATI M., SALTALIPPI C., FLAMMINI A., BROCCA L., "Towards a better understanding of the impact of irrigation on the water cycle through satellite-derived irrigation estimates", *Complessità dei fenomeni idrologici in ambiente naturale e antropizzato – Atti delle Giornate dell'Idrologia 2023 della Società Idrologica Italiana*, Matera, 13-15 Settembre 2023, pag. 118.
- 2023 FLAMMINI A., **MORBIDELLI R.**, DARI J., SALTALIPPI C., FELIX D., MALT V., BOES R.M., "An integrated set of measures for sustainable sediment management at the Le Grazie artificial reservoir, Central Italy", *BOOK OF ABSTRACT, 15th International Symposium on River Sedimentation. Sustainable Sediment Management in a changing Environment.*, 5-8

September 2023, Florence, Italy, pag. 224-225, 2023.

- 2022 **MORBIDELLI R.**, SALTALIPPI C., DARI J., FLAMMINI A., "Temporal aggregation of rainfall data and its influence on trend estimation for annual maximum depths with duration 24 hours", BOOK OF ABSTRACT, International Conference on Water Resources Management and Sustainability: Solutions for Arid Regions, Editors: SHERIF M., ABRAR FAIZ M., SEFELNASR A., 22-24 March 2022, Dubai, UAE, pag. 9, 2022.
- 2022 GOYAL A., **MORBIDELLI R.**, FLAMMINI A., CORRADINI C., GOVINDARAJU R.S., "Uncertainty in estimation of field-scale variability of soil saturated hydraulic conductivity", BOOK OF ABSTRACT, International Conference on Water Resources Management and Sustainability: Solutions for Arid Regions, Editors: SHERIF M., ABRAR FAIZ M., SEFELNASR A., 22-24 March 2022, Dubai, UAE, pag. 75, 2022.
- 2020 ABHISHEK A., **MORBIDELLI R.**, FLAMMINI A., CORRADINI C., GOVINDARAJU R. S., "Estimating Field-scale Variability in Soil Saturated Hydraulic Conductivity from Rainfall-Runoff Experiments", *THEME CONCEPTS & ABSTRACTS*, Roorkee Water Conclave 2020, Roorkee (India), 26-28 February 2020, pag. 16, 2020.
- 2019 DARI J., **MORBIDELLI R.**, BROCCA L., QUINTANA-SEGUÍ P., ESCORIHUELA M.J., "Combining remote sensing data and a land surface model within a PhD project to understand the impact of irrigation on the hydrological cycle", *L'idrologia al servizio dei cittadini: tra emergenze e gestione delle risorse idriche – Atti delle Giornate dell'Idrologia 2019 della Società Idrologica Italiana*, Bologna, 16-18 Settembre 2019, pag. 44.
- 2019 BARBETTA S., TARPANELLI A., CARAFFINI M., **MORBIDELLI R.**, "Stima della portata fluviale mediante misure da satellite: un approccio basato sul bilancio di massa", *L'idrologia al servizio dei cittadini: tra emergenze e gestione delle risorse idriche – Atti delle Giornate dell'Idrologia 2019 della Società Idrologica Italiana*, Bologna, 16-18 Settembre 2019, pag. 37.
- 2019 **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., DARI J., CORRADINI C., "On the mathematical representation of slope-infiltration", International Conference on Environmental Science and Ecology, Berlin (Germany), May 21-22, 2019, Part IX, 918, 2019.
- 2019 FLAMMINI A., **MORBIDELLI R.**, SALTALIPPI C., "Detection of trends and break points in climatic indices: the case of Umbria region in Italy", International Conference on Environmental Science and Ecology, Berlin (Germany), May 21-22, 2019, Part IX, 1049, 2019.
- 2019 ABHISHEK A., **MORBIDELLI R.**, CORRADINI C., GOVINDARAJU R. S., "Estimation of Field-scale Soil Saturated Hydraulic Conductivity from Rainfall-runoff Experiments", Indiana LTAP Stormwater Drainage Conference 2019, Purdue University, West Lafayette, IN, February 07, 2019 (poster).
- 2018 **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., PICCIAFUOCO T., CORRADINI C., "The Underestimate of the Annual Maximum Rainfall Depths due to Coarse Time Resolution Data", ICWM 2018: International Conference on Water Management, Lisbona (Portogallo) april 16-17, 2018, 20(4), Part V, 505, 2018, eissn: 1307-6892.
- 2018 ABHISHEK A., **MORBIDELLI R.**, CORRADINI C., GOVINDARAJU R. S., "Reconciling Soil Saturated Hydraulic Conductivity Estimates from Different Measurement Instruments", ASCE-EWRI World Environmental & Water Resources Congress (EWRI Congress), Minneapolis, MN, June 03, 2018 - June 07, 2018 (poster).
- 2018 PICCIAFUOCO T., **MORBIDELLI R.**, FLAMMINI A., SALTALIPPI C., CORRADINI C., BLÖSCHL G., "Simplified method to derive a pedotransfer function for average field saturated hydraulic conductivity with limited data-set", In: *Geophysical Research Abstracts*. vol. 20, Gottingen: COPERNICUS GESELLSCHAFT MBH, Wien, 8 - 13 aprile 2018, 2018.
- 2018 **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., GARCÍA-MARÍN A., AYUSO-MUÑOZ J.L., "Homogeneity and trend analyses of temperature indices: the case study of Umbria Region (Italy) in the Mediterranean area", ICWM 2018: International Conference on Water Management, Lisbona (Portogallo) april 16-17, 2018, 20(4), Part V, 512, 2018, eissn: 1307-6892.
- 2016 **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., CIFRODELLI M., CORRADINI C., "Analysis of Extreme Rainfall Trends in Central Italy", ICWRRED 2016: 18th International Conference on Water Resources and Renewable Energy Development, Paris France Oct 24-25, 2016, 18 (10) Part XI, 2016.
- 2016 CIFRODELLI M., AYUSO MUNOZ J. L., GARCIA MARIN A., ESTEVEZ GUALDA J., **MORBIDELLI R.**, SALTALIPPI C., AYUSO RUIZ P., "Regional Frequency Analysis of extreme rainfall in the Umbria Region (Central Italy)", 20th international congress on project

- management and engineering, Cartagena (Spain), 13-15 July 2016, 86.
- 2015 **MORBIDELLI R.**, CORRADINI C., SALTALIPPI C., FLAMMINI C., "L'uso dei modelli fisici di laboratorio per l'analisi dei processi idrologici di base", *Idrologia di Bacino e Rischi Naturali: Monitoraggio, Previsione, Prevenzione e Mitigazione in un Contesto di Cambiamenti Globali – Sommari, Giornate dell'Idrologia della Società Idrologica Italiana 2015*, Perugia, 6-8 Ottobre 2015, 2015.
- 2015 **MORBIDELLI R.**, CORRADINI C., SALTALIPPI C., FLAMMINI A., CIFRODELLI M., "Hydropower in Central Italy: current status and future prospects", The World Multidisciplinary Earth Sciences Symposium WMESS 2015, Prague (Czech Republic), 7-11 settembre 2015, 519, 2015, ISBN: 978-80-970698-4-1.
- 2015 CIFRODELLI M., CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., "Are heavy rainfalls in central Italy influenced by climate changes?", The World Multidisciplinary Earth Sciences Symposium WMESS 2015, Prague (Czech Republic), 7-11 settembre 2015, 143, 2015, ISBN: 978-80-970698-4-1.
- 2009 CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., GOVINDARAJU R.S., "Experimental evidences on the run-on process", International Conference on Water, Environment, Energy and Society (WEES-2009), New Delhi (India), 12-16 January 2009, New Delhi, Allied Publishers Pvt. Ltd., Vol. I, 2009, ISBN: 978-81-8424-400-7.
- 2009 CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., GOVINDARAJU R.S., "Experimental evidences on the run-on process", Thailand EWRI 2009 Conference, 2009.
- 2004 CORRADINI C., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., "Infiltrazione a scala di versante", Workshop: Conservazione e Difesa del Suolo, Torino, 7-8 giugno 2004.
- 2001 CORRADINI C., MELONE F., **MORBIDELLI R.**, SALTALIPPI C., "Flood prediction and infiltration modeling", International Workshop, River Runoff: Minima and Maxima, Saint Petersburg, 2001.

CURATORSHIPS

- 2022 **MORBIDELLI R.**, Rainfall. Modeling, Measurement and Applications, Amsterdam, 2022, Elsevier, ISBN: 9780128225448.
- 2020 **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., Rainfall Infiltration Modeling, <https://doi.org/10.3390/books978-3-03936-023-9>, ISBN 978-3-03936-022-2 (Hbk); ISBN 978-3-03936-023-9 (PDF), 182, 2020.
- 2008 CORRADINI C., BRUNONE B., MANCIOLA P., FERRANTE M., **MORBIDELLI R.**, SALTALIPPI C., FLAMMINI A., MENICONI S., 31° Convegno Nazionale di Idraulica e Costruzioni Idrauliche, Perugia, 9-12 settembre 2008, Perugia, Morlacchi, 294 + CD ROM, ISBN/EAN: 978-88-6074-220-9, 2008.

Perugia, May 07 2024

Signature

