

GIUSEPPE SAPPA

Curriculum Vitae

Place Rome

Date 21st June, 2019

Part I – General Information

Full Name	Giuseppe Sappa
Date of Birth	26 th May, 1963
Place of Birth	Rome
Citizenship	Italian
Permanent Address	Via Levico 11, 00198 Rome
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Spoken Languages	Italian, English, French

Part II – Education

Type	Year	Institution	Notes (Degree, Experience,...)
University graduation	1987	Sapienza University of Rome	Degree in Civil Hydraulic Engineering, completed with a grade of 110/110 cum Laude. Thesis discussed “Characterizing unstable systems via inclinometer measurements”
Licensure 01	1987	Sapienza University of Rome	Licensure exam for admission to the Order of Engineers
Licensure 02	1989	Order of Engineers of the Province of Rome	Admission in Register A
Licensure 03	1998	Sapienza University of Rome	Certificate of attendance of course prescribed in Art. 10 of the D.Lgs. 494/96 confirmed in 2013 and in May 2018
Licensure 04	2011	Order of Geologists of Lazio	Admission in the Special Register

Part III – Appointments

IIIA – Academic Appointments

Start	End	Institution	Position
02/01/1991	17/12/1996	Department of Hydraulics, Transportation and Roads, Faculty of Engineering - Sapienza University of Rome	Technical Collaborator in Applied Geology
18/12/1996	31/10/2006	Department of Hydraulics, Transportation and Roads, Faculty of Engineering - Sapienza University of Rome	University Researcher, scientific disciplinary section GEO05 “Applied Geology and Hydrogeology”, confirmed from 18/12/1999
01/11/1999	31/10/2001	Sapienza University Faculty of Engineering	Member of the Faculty Board for Quality Engineering Enhancement
01/11/2002	31/10/2009	Department of Hydraulics, Transportation and Roads, Faculty of Engineering - Sapienza University of Rome, now DICEA Department	Member of PhD Board, Hydraulic and Environmental Engineering
01/11/2002	present	Department of Hydraulics, Transportation and Roads, Faculty of	Member of the Curriculum Committee, Engineering Faculty, Rieti

		Engineering - Sapienza University of Rome, now DICEA Department	
AY 2002/2003	AY 2005/2006	Faculty of Engineering - Sapienza University of Rome	Tutor and PhD thesis supervisor (18 th cycle) in Environmental Engineering
01/11/2003	31/10/2012	Faculty of Engineering - Sapienza University of Rome	Council Member and Manager of the Technical Secretariat for the Construction Site Safety Course
AY 2003/2004	AY 2006/2007	Faculty of Engineering - Sapienza University of Rome	Tutor and PhD thesis supervisor (19 th cycle) in Environmental Engineering
01/11/2004	31/10/2012	Faculty of Engineering - Sapienza University of Rome	Coordinator of the Construction Site Safety Course
01/11/2006	present	Department of Hydraulics, Transportation and Roads, Faculty of Engineering - Sapienza University of Rome, now DICEA Department	Associate Professor, scientific disciplinary section GEO05 “Applied Geology and Hydrogeology”, confirmed from 2/11/2009
01/11/2006	present	Department of Hydraulics, Transportation and Roads, Faculty of Engineering - Sapienza University of Rome, now DICEA Department	Scientific Head of the Laboratory of Applied Geology and Geotechnics
AY 2006/2007	AY 2009/2010	Faculty of Engineering - Sapienza University of Rome	Tutor and PhD thesis supervisor (22 th cycle) in Chemical Engineering
01/11/2008	30/10/2017	Faculty of Engineering - Sapienza University of Rome	Substitute Vice-Director of the Workplace Safety Enhancement Course
2008	present	CRITEVAT, Reatin Research Center of Engineering for the Protection and Enhancement of the Environment and Territory	Member for DICEA, which is part of the CRITEVAT
AY 2010/2011		PhD School - Politecnico di Torino	Member of the Final Exam Committees of the PhD Board in Civil and Environmental Engineering (23 th cycle)
01/11/2011	present	Department of Hydraulics, Transportation and Roads, Faculty of Engineering - Sapienza University of Rome, now DICEA Department	Member of PhD Board in Hydraulic and Environmental Engineering
AY 2011/2012		PhD School - Politecnico di Torino	Member of the Final Exam Committees of the PhD Board in Civil and Environmental Engineering (24 th cycle)
AY 2013/2014	AY 2017/2018	Faculty of Engineering - Sapienza University of Rome	Tutor and PhD thesis supervisor (29 th cycle) in Environmental Engineering
AY 2013/2014		PhD School – Politecnico di Torino	Member of the Final Exam Committee of the PhD Council in Civil and Environmental Engineering (26 th cycle)
2014		Faculty of Engineering - Sapienza University of Rome	President of the Licensure Exam Committee for admission to the Order of Engineers
AY 2014/2015	AY 2017/2018	Faculty of Engineering - Sapienza University of Rome	Tutor and PhD thesis supervisor (30 th cycle) in Environmental Engineering
11/09/2015	present	Department of Hydraulics, Transportation and Roads, Faculty of Engineering - Sapienza University of Rome, now DICEA Department	Chair of the Curriculum Committee for the Sustainable Building and Environmental Engineering Course
01/11/2017	present	Department of Hydraulics, Transportation and Roads, Faculty of Engineering - Sapienza University of	Chair of the Sustainable Building Engineering Degree Course Start up Project – First Engineering Degree

		Rome, now DICEA Department	Course of Sapienza offered in English
AY 2017/2018	present	Faculty of Engineering - Sapienza University of Rome	Tutor and PhD thesis supervisor (33 th cycle) in Environmental Engineering
28/11/2017	28/11/2023	Italian Ministry of Education, Universities and Research (MIUR)	Award of the National Scientific Qualification as Full Professor for the SC 04/A3, SSD GEO/05 in 2017
AY 2018/2019	present	Faculty of Engineering - Sapienza University of Rome	Tutor and PhD thesis supervisor (34 th cycle) in Environmental Engineering

IIIB – Other Appointments

Start	End	Institution	Position
July 1998	present	Superior Council on Public Works	Invited as an expert attendee to the II, III, and IV sessions
1999	2000	EAAP – Apulia Network Company	Member of the Investigation Commission activated by the Special Commissioner to verify second tunnel feasibility between Caposele and Conza
October 1999	May 2003	Special Scientific Commission jointly established by the Ministry of the Environment and the Ministry of Internal Affairs	Member of the Scientific Commission for the waste emergency in the Roma Metropolitan Area
October 1999	2012	Lazio Regional Basin Authority	Member of the Technical Scientific Committee for the Lazio Regional Basin Authority ex lege 183/89 and subsequent modifications
	2001	Presidency of the Council of Ministers	Consultant for a pro-veritate opinion on the feasibility of an urban garbage dump in an alluvial plain of the Mate River in Albania within the framework of the ARCOBALENO MISSION
June 2003	June 2008	Special Scientific External Committee, jointly established by the Ministry of Environment and the Ministry of Internal Affairs	Member of the Special Scientific External Committee for the waste emergency in the Lazio Region
June 2007	December 2007	Italian Foreign Affairs Ministry	Hydrogeology Expert in the Hydraulic Commission, established during the V meeting of the Monitoring Committee for the South Sahara Programme, for the land reclamation and date tree planting project in Rjim Matoug (Tunisia)
December 2007	April 2008	Lazio Region – Water Resources Area	Lazio Region Representative on the Committee to assess the effects of the ENEL Inc. hydroelectric power stations on the flow regimes of the High Aniene Valley
July 2014	December 2018	Superior Health Council	Permanent expert for Mineral Waters release inside the III Section
January 2017	present	International Association of Hydrogeologists (IAH)	Director of IAH Coastal Aquifers Management and Coastal Zone Dynamics Network
2018	present	Leonardo Global Solutions S.p.A.	High Scientific Consultant for Management and Remediation of contaminated sites

Part IV – Teaching experience

Year	Institution	Lecture/Course
from AY 2016/2017 to present	Faculty of Engineering, Sapienza University of Rome (Rieti Campus)	Contaminated Site Management
from AY 2012/2013 to present	Faculty of Engineering, Sapienza University of Rome (Rome Campus)	Applied Hydrogeology, 2 nd cycle Master Program in Environmental and Territorial Engineering
from AY 2009/2010 to present	Faculty of Engineering, Sapienza University of Rome (Rieti Campus)	Applied Geology, 1 st cycle, Degree Course of Construction and Territorial Engineering
from AY 2006/2007 to present	Faculty of Engineering, Sapienza University of Rome (Rome Campus)	General and Applied Geology, 1 st cycle, Degree Course of Environmental and Territorial Engineering
from AY 2006/2007 to AY 2008/2009	Faculty of Engineering, Sapienza University of Rome (Civitavecchia Campus)	Applied Geology in the Degree Course, 1 st cycle, Safety and Protection Engineering
from AY 2006/2007 to AY 2008/2009	Faculty of Engineering, Sapienza University of Rome (Rieti Campus)	Applied Geology, 1 st cycle, Degree Course in Environmental and Territorial Engineering
from AY 2002/2003 to AY 2008/2009	Faculty of Engineering, Sapienza University of Rome (Rieti Campus)	Applied Hydrogeology, 1 st cycle Degree Course in Environmental and Territorial Engineering
from AY 2002/2003 to AY 2005/2006	Faculty of Engineering, Sapienza University of Rome (Rieti Campus)	Applied Geology, 1 st cycle, Degree Course of Environmental and Territorial Engineering
from AY 2001/2002 to AY 2009/2010	Faculty of Engineering, Sapienza University of Rome	Module “Risks and remediation for groundwater”, Master of Emergency Management”
from AY 2001/2002 to AY 2002/2003	Faculty of Engineering, Sapienza University of Rome (Rome Campus)	Excavation Engineering, 1 st cycle, Degree Course in Environmental and Territorial Engineering
AY 2000/2001	Faculty of Engineering, Sapienza University of Rome	Module “Hydrogeological Risks”, specialization course “Evaluating the Environmental Impact of Civil Infrastructure”
AY 1999/2000	Faculty of Engineering, Sapienza University of Rome (Latina Campus)	Aquifers Engineering, 1 st cycle, Degree Course in Environmental and Territorial Engineering
from AY 1998/1999 to AY 2001/2002	Faculty of Engineering, Sapienza University of Rome (Rome Campus)	Excavation Engineering in Diploma Course in Environmental and Natural Resources Engineering

Part V – Advanced teaching experience

Year	Institution	Lecture/Course
from 25/02/2018 to 11/03/2018	Italian Environmental Ministry with Sapienza University and Politecnico di Milano	SICAB (Sino Italian Capacity Building for Environmental Protection) - Training Italy-China Module 1 “Environmental pollution control” – 24 hours
17/02/2018	INTEMA Engineering Association	Professor of the seminar “Environmental monitoring in the design and execution of civil engineering works”
13/01/2018	INTEMA Engineering Association	Professor of the seminar “Danger and seismic prevention”

18/11/2017	INTEMA Engineering Association	Professor of the seminar “Origin and characterization of natural materials in buildings”
11/11/2017	INTEMA Engineering Association	Professor of the seminar “Environmental characterization of soils and groundwater”
22/06/2017	Eduardo Mondlane University, Maputo	“Geochemical and Hydrogeological monitoring and assessment of the buffer zone of Limpopo National Park” in the framework of SECOSUD Phase II project
AY 2014/2015	Faculty of Engineering, Sapienza University of Rome	Professor for the “Groundwater Protection” module in the Second Level University Master in Management and Maintenance of Ecological Plants
10 June 2014	Ardhi University of Dar es Salaam (Tanzania)	“Groundwater management in Dar Es Salaam coastal aquifer under climate change pressure” in the framework of ACC-DAR project
AY 2013/2014	University of Rome “Tor Vergata”	Professor of the “Field tests for hydrogeology” course for the M007-F module (Recall of Applied Geology) of the second level University Master in Environmental techniques and controls (MUTECA)
19 September 2013	Ardhi University of Dar Es Salaam (Tanzania)	“Seawater intrusion monitoring” in the framework of ACC-DAR project
from AY 2001/2002 to AY 2009/2010	Faculty of Engineering, Sapienza University of Rome	Professor of the module “Risks and interventions on groundwater” in the Emergency Master
November 1997	620 COST ACTION Vulnerability and risk mapping in carbonatic karst aquifers-DG XII, European Commission	“Application of geochemical and isotopic method $^{87}\text{Sr}/^{86}\text{Sr}$ in hydrogeological characterization of carbonatic aquifers” - Invited Speaker

Part VI - Society memberships, Awards and Honors

Year	Title
2019 - current	Member of the National Association of Mining Engineers
1999 current	Member of the Italian Association of Applied Geology
1999 current	Member of the International Association of Hydrogeologists, and served as a member of the Advisory Board for the Italian Committee (from 1999 to 2011)
1998- current	Member of the International Association of Environmental Geology
1996 current	Member of the Italian Tunnel Association
1995-current	Member of the Association for Earth Resources and the Environment – Groundwater Section
1985-current	Member of the Executive Committee for Central Italy of the Hydrotechnical Association of Italy

Part VII – Main Editorial Activities

Year	Journal
Since 2018	Reviewer for Science of the Total Environment (Q1), Elsevier
Since 2018	Reviewer for Desalination and Water Treatment (Q2)
Since 2017	Reviewer for Groundwater for Sustainable Development (Q2), Elsevier

Since 2017	Reviewer for Arabian Journal of Geosciences (Q3), Springer
Since 2017	Reviewer for Ecohydrology and Hydrobiology (Q2), Elsevier
Since 2017	Reviewer for Journal of Hydrology (Q1), Elsevier
Since 2016	Reviewer for Environmental Earth Sciences (Q2), Springer
Since 2016	Reviewer for Geosciences (Switzerland) (Q2), MDPI
Since 2015	Reviewer for Water (Switzerland) (Q1), MDPI
Since 2013	Reviewer for Italian Journal of Groundwater
Since 2013	Member of the Editorial Board of the Italian Journal of Groundwater
2011 and 2015	Author of 2 editions of “Geologia Applicata”, CittaStudi Editor- De Agostini Group ¹
2011	Author with M.T. Coviello of “Processi di salinizzazione degli Acquiferi Costieri della Pianura Pontina”, Pitagora Editor
2007	Author with M. Rossi of “Idrogeologia del Sistema Acquifero della Pianura Pontina” S.E.L.C.A.

Part VIII – Collaboration with Universities and Research Institutions

Institut für Hydrogeologie u. Geothermie, Joanneum Research (Graz, Austria)
Institute of Geology (Zagreb, Croazia)
Institute of Nuclear Research of the Hungarian Academy of Sciences (Debrecen, Ungheria)
Department of Applied Geology, University of Karlsruhe (Karlsruhe, Germania)
Faculty of Geology, University of Athens (Atene, Grecia)
Ardhi University (Dar es Salaam, Tanzania)
Universidade Edouarde Modlane (Maputo, Mozambico)
Hellenic Society for the Protection of Nature (Atene, Grecia)
Institute of Mediterranean Forest Ecosystems, Hellenic Agricultural Organization (DEMETER) (Atene, Grecia)
University of Navrongo (Ghana)

Part IX – Patents and Technological Transfer

Year	Title
2018	No. Patent 102016000046289 “Hybrid seismic response mapping system” Deposit Date 05/05/2016. Publication Date 23/11/2018 (<i>Attachment 1</i>)
2017	Guidelines for technical and environmental tests for ceramic tile production with the addition of MSWBA (Municipal Solid Waste Bottom Ash), approved by the Lazio Region, the Government of the Waste Cycle Management, with Determination no. G13381 of 11 th November 2016 (<i>Attachment 2</i>)

¹ Up today they have been sold about 2.000 copies.

Part X - Funding Information [grants as PI-principal investigator or I-investigator]

Year	Program Title	Institution	Position	Grant value (€ excluding VAT)
1997-2002	COST ACTION 620 <i>Vulnerability and risk mapping in carbonatic karstic aquifers</i>	DG XII, European Commission	I	- ²
1999-2002	COST ACTION 621 <i>Groundwater management of coastal karstic aquifers</i>	DG XII, European Commission	I	- ¹
2001	Data management model based on the continuous and discontinuous monitoring of chemical and physical parameters in the Cotilia Plain (Castel Sant'Angelo, Rieti)	Lazio Region	PI	25,822.84
2002	Definition of the Minimum Vital Outflow in the Peschiera River inside the Tiber River Basin, in the San Vittorino Plain (RI)	Lazio Region	PI	20,000.00
2002-2003	Analysis model for "risk sinkholes" in the San Vittorino Plain (RI)	Lazio Region	PI	15,000.00
2002-2004	Definition of the tools for drafting Sustainable Water Use Plans with respect to the hydrogeological structures of the Lepini, Ausoni, Aurunci, and Grande Mountains and the groundwater systems of the Pontina and Fondi plains in the Lazio Region	Lazio Regional Basin Authority	PI	206,583.000
2002-2004	Verification, updating, and final drafting of the proposal to update the General Regulatory Plan for the Water network in the Lazio Region ³	Lazio Region	PI	240,000.00
2003	Hydrogeological studies for the definition of operating tools of the Compatible Water Use Plan in the Southern Lazio Region	Lazio Region ABR2	PI	80,000.00
2003	Hydrogeological and Hydraulic assessment of the Forme d'Aquino basin, feeding Capo d'Acqua spring, in Castrocielo (FR), in the aim of its exploitation	Lazio Region	PI	109,000.00
2003-2004	Set up a data acquisition system for monitoring the hydrogeological budget of South Latium regional aquifers	Lazio Region Basins Authority	PI	80,000.00
2003-2009	Classification methodology for hydrogeological risk assessment and its application referred to Tiber River Valley inside the metropolitan area of Rome	Tiber River Basin Authority	PI	91,000.000
2004-2009	Study of flooding areas of the minor network and start-up of the revision of the hydrogeological risk assessment plan PS1 in the Middle Tiber Valley ⁴	Lazio Region and Tiber River Basin Authority	PI	252,315.42
2005	Hydrogeological assessment of the urban solid wastes landfill in Borgo Montello area (LT)	Ind.Eco. Srl	PI	30,000.00
2005	Hydraulic and geotechnical research aimed to ensure the environmental safety of dams	Regione Lazio DRAPC	PI	70,000.00
2006	Hydrogeological study for the protection of the Mazzoccolo Spring	Municipality of Formia (LT)	PI	10,000.00
2007	Hydrogeological risk assessment of a small river inside the municipal area	Municipality of Alatri	PI	8,000.00

² COST ACTION had no grant, ma only the budget for supporting meetings and short missions

³ Adopted by Latium Government on the 27/08/2006

⁴ Approved by the Scientific and technical Committee of Tiber River Basin Authority in December 2009

2007-2008	Technical support to Latium Region in the application of DLgs. 112/1998, referred to dams and barrages, under its Administration and set up of a webgis aimed to their management.	Lazio Region	PI	201,145.00
2008	Feasibility study of a project for a waste-recycling plant containing gypsum in the field of gypsum-based building materials produced at the Casola Valsenio plant (RA)	BPB S.p.A.	PI	15,000.00
2008	Soil threshold values for some metals in the excavation area of the S8 basin of the urban wastesolid landfill in Borgo Montello area (LT)	Ind.Eco. Srl	PI	30,000.00
2008-2009	Coordination and drafting of the procedure for the Environmental and Strategic Evaluation of the Three-year Plan for the Coast	Lazio Region	PI	131,145.00
2008-2009	Interventions for the hydraulic safety of the transom on the Marta River in Lake Bolsena	Lazio Region	PI	310,000.00
2009	Hydrogeological risk assessment and safety intervention design of Interporto area	Interporto Centro Italia S.p.A.	PI	30,000.00
2009-2010	Coordination and drafting of procedures for the Environmental and Strategic Evaluation of the Land Reclamation and Irrigation Plan	Lazio Region	PI	55,000.00
2010	Overall assessment of the current status of the hydraulic risk zones in the metropolitan section of the Tiber river from Castel Giubileo to the mouth	Tiber River Basin Authority	PI	45,000.00
2011	Elaboration of hydrogeological reports with flow measurements and pluviometric assessments as per the requirements of the Province of Rome	ACEA Ato 2 S.p.A.	PI	70,000.00
2011	Hydraulic risk assessment of the Municipality of the Monterotondo Scalo	Romana Calcestruzzi SpA	PI	18,000.00
2011	Mathematical model of the Tiber river from Castel Giubileo to the mouth	ARDIS Lazio	PI	30,000.00
2011	Geological characterization of the excavation site involved in dredging sediments destined to complete the extension works of Molo 26 in Civitavecchia	Roman Ports Authority	PI	160,000.00
2011	Hydrogeological aspects relating to the supply of drinking water for the Preliminary Project of interventions for water purification in the Optimal Territorial Area 1 Lotto I, Viterbo	Lazio Region- Extraordinary Emergency Commissioner for drinking water contaminated from Arsenico	PI	98,000.00
2011-2013	Adapting to Climate Change in coastal Dar Es Salaam – DEVCO Project – European Commission	European Union – DG DevCo	PI after PI death	800,000.00
2012	Hydrogeological aspects relating to the supply of drinking water for the Preliminary Project of interventions for water purification in the Optimal Territorial Area 1 Lotto II, Viterbo	Lazio Region- Extraordinary Emergency Commissioner for drinking water contaminated from Arsenico	PI	98,000.00
2012	Study aimed at identifying the methods of treatment and/or the methodologies for laying material in the Fiumicino reclaimed crate	Roman Ports Authority	PI	140,000.00
2013	Hydrogeological model set up of the area Monti dell'Ortaccio, in Rome, with the	Co.La.Ri. S.p.A. su Ordinanza	PI	80,000.00

	aim of evaluating the environmental impact of the project for the new urban solid wastes landfill of Rome.	del Commissario Straordinario per l'Emergenza dei Rifiuti nella Provincia di Roma		
2014-present	Environmental Monitoring Plan in ante-operam phase related to the realization of the catchment project from the Pertuso Spring to the Ceraso booster plant	ACEA Ato 2 S.p.A.	I	720,000.00
2015	Definition of the reference chemical values for some analytes in subterranean groundwater the area of insertion of the landfill for non-hazardous waste in Cerreto in the municipality of Roccasecca (FR)	MAD Mediterranea S.r.l.	PI	13,000.00
2015	Improving Water Cycle Management in Temeke, Dar es Salaam (Tanzania)	Sapienza University of Rome	PI	8,500.00
2016	Protocol for technical and environmental tests for ceramic tiles production with addition of MSWBA (Municipal Solid Waste Bottom Ash) ⁵	SaxaGres S.p.A.	PI	8,000.00
2016	Preliminary planning of the hydrogeological safety of Fosso la Valle in the Municipality of Cantalice (RI)	Municipality of Cantalice (RI)	PI	14,000.00
2016	New treatment technologies for natural arsenic enriched groundwater	Sapienza University of Rome	PI	10,000.00
2016- present	SECOSUD Phase II project, called "Conservation and equitable use of biological diversity in the SADC region (Southern African Development Community)	Department of Environmental Biology (DBA) – Sapienza University of Rome	I	60,000.00
2017	Studies and research for the development of assessment methods and mitigation of seismic risk of buildings	Municipality of Rieti	PI	132,960.00
2017	Environmental characterization of the site for the location of the landfill for non-hazardous waste in the Casoni area in the municipality of Chieti	Ind. Eco.S.p.A.	PI	13,000.00
2017- present	Lake Bracciano as a drinking water resource: ecological and hydrogeological aspects - environmental consequences due to the maintenance of withdrawals from the Lake	ACEA Ato 2 S.p.A	I	180,000.00
2018	Final report on the application of the Protocol for technical and environmental tests for ceramic tile production with the addition of MSWBA(Municipal Solid Waste Bottom Ash), and approved by the Lazio Region (Determination n. G13381), on three cycles of experimentation to be carried out at a distance of one week from each other	SaxaGres S.p.A.	PI	20,000.00
2018	Hydrogeological and geochemical study of the results of the groundwater monitoring in the area involved in the construction of the Arcisate - Stabio railway line	RFI S.p.A.	PI	38,000.00
2018-present	High Scientific Consultant for Remediation of contaminated sites	Leonardo Global Solutions S.p.A.	PI	20,000.00

⁵ Approved by Waste solid Cycle Area of Latium Region with n. G13381 Act 11/08/2017

2018- present	LIFE17 NAT/GR/000511 “Restoration, management and valorization of PRIority habitats of MEDiterranean coastal areas”	Department of Environmental Biology (DBA) – Sapienza University of Rome	I	307,000.00
2018- present	CoReIIV Project: Remote control for the security of water infrastructure in vulnerable areas	Lazio Region (Key Enabling Technologies – KETs)	I	749,063.34
2018- present	Scientific and technical support activities aimed at a designing a saltwater intrusion monitoring system in the 25 Ponti area (Formia, LT)	Acqualatina S.p.A.	PI	35,000.00
2018- present	Scientific and technical support activities aimed at defining a methodology to estimate and measure the flow rates supplied by the Capodacqua di Spigno Spring	Acqualatina S.p.A.	PI	35,000.00

Part XI – Thesis advisor

Year	1 st cycle Degree		2 nd cycle Degree	
	Supervisor	Advisor	Supervisor	Advisor
from A.Y. 1995/1996 to present	37	2	79	73

Part XII– Research Activities

Author of **160** papers on international and Italian journals and proceedings (*Attachment 3*).

Product type	Number
Indexed National Journal	9
Indexed International Journal	17
Indexed Conference Proceedings	13
Indexed Books [scientific]	4
Non Indexed National Conference Proceedings	14
Non Indexed International Conference Proceedings	53
Non Indexed National Journal	25
Non Indexed International Journal	13
Books [scientific]	10
Other Type	2

Keywords	Brief Description
Aquifers research on different geological scenarios	In the last twenty years, I have studied aquifers in different geological scenarios and in different climatic conditions. I started dealing with karst aquifers, alluvial aquifers and coastal aquifers, outcropping in central and south Italy, to better plan their exploitation, according to Law 183/89, referring to groundwater sustainable exploitation as for the Latium Waterworks Regional Plan drafting. Among these activities, I addressed my attention to the characterization of coastal aquifers of South Italy and the South Latium Region, gaining much experience in investigating and managing these typical aquifers (50 ⁶ , 53, 55, 56, 58, 60, 65 , 71, 80, 82, 101 , 119, 131, 151). I was a permanent member of the Working Group IV “Aquifers engineering” of the COST ACTION 621 <i>Groundwater management of coastal karstic aquifers</i> (48). Within the framework of the CNR-GNDCI activities, I cooperate with Research line 4, dealing with the characterization of the Maiella Aquifer, a strategic groundwater resource (36, 37, 38, 39). From 2007 to 2008 my experience has been applied to aquifers in desert scenarios, such as the SSAS, South Sahara Aquifer System. In cooperation with Tunis University, Civil Engineering Faculty, we created a numerical model to forecast artesian release and recharging in the Tunisian part. It involved the study of a very large fractured aquifer, with a focus on the section underlying the area of Rijm Matoug (63, 67, 70, 81). From 2011 to 2014, due to the experience gained working on coastal aquifers in the South Latium Region I have been involved in the ACC-DAR project, during which I dealt with groundwater management in the coastal aquifer of Dar Es Salaam Coastal plan, which is an alluvial coastal aquifer, with major issues regarding overexploitation and, consequently, seawater intrusion (79, 87, 88 , 100, 107, 113 , 114 , 123, 134, 137, 143, 146). Recently I have been involved in SECOSUD activities, as Senior Hydrogeologist, with the task of contributing to better understanding hydrogeological assessment in the Limpopo National Park, aimed at biodiversity conservation (140, 147, 149, 152, 160). All these activities involved testing different

⁶ Number is referred to list of publications, included in *Attachment 3*. In block letters publications selected for evaluation, included in Part XVI– Selected Publications, with a different numeration.

	and innovative methods for aquifer recharge estimation, also in comparison with water demand, and quality assessment of groundwater related to the geological features of aquifers, and their exploitation for different purposes.
Groundwater flow	My role in groundwater flow research has mostly been addressed to the application of environmental tracers, referred especially to karst and/or coastal aquifers. I started with karst aquifers of Apulia, where the $^{87}\text{Sr}/^{86}\text{Sr}$ ratio has been tested to better understand groundwater flow inside these aquifers (20, 21, 22, 25, 28, 29). Then I applied the $^{87}\text{Sr}/^{86}\text{Sr}$ ratio in some karst aquifers of the Latium Region, where, more recently, I created an Mg based model to estimate Pertuso spring discharge (127, 130, 141, 145) and a model $^{18}\text{O}/^{16}\text{O}$ and $^2\text{H}/\text{H}$ ratios have been tested for groundwater recharge areas identification (57, 76, 94, 157). In some case histories, I experimented temperature, coupled with electric conductivity (30, 39), as environmental tracers of groundwater flow with particular attention to fractured and karst aquifers.
Aquifers vulnerability and Risk assessment	This theme has been part of my research activity since 1995, and am the invited permanent expert in Working Group III of 620 COST ACTION “ <i>Vulnerability and risk mapping in carbonatic karstic aquifers</i> ” (46). I tested different vulnerability assessment methods to almost every aquifer I have investigated in my research project, usually supported by GIS, sometimes introducing and experimenting innovative solutions (27, 34, 37, 42, 49, 51, 62, 95, 115, 116, 135, 148).
Management and protection of aquifers from contamination	This subject has been the main focus of my last fifteen years’ of research activity, when I tested the experience gained in environmental tracing of aquifers to environmental characterization of potentially contaminated aquifers, but also investigating techniques. In this field, I focused my attention on the application of isotopes and geochemical elements, such as Boron isotopes and rare earth elements as tools to distinguish groundwater contamination from their natural enrichment. Finally, part of my interest has been devoted to contaminant diffusion in heterogeneous porous media (90, 91, 98, 105, 111, 120, 121, 128, 129, 136, 138, 139, 144, 154, 155, 158, 159).

Part XIII – Summary of Scientific Achievements

Product type	Number	Data Base	Start	End
Papers [international]	17	Scopus	2009	present
Papers [national]	9	Scopus	2007	2018
Books [scientific]	17	Scopus	1995	2018
Total	43	Scopus	1995	present

Total Impact Factor	32.842 (IF relative to the publication year, from InCites Journal Citation Reports)
Average Impact Factor per Product	32.842/17=1.93 (IF relative to the publication year, from InCites Journal Citation Reports)
Total Citations	160 (Scopus)
Average Citations per Product	3.72
Hirsch (H) index	7 (Scopus)
Normalized H index*	0,304
Number of publications as first or last author <= 3 authors	24

*H index divided by the academic seniority.