

Curriculum Vitae et Studiorum - Ottobre 2018

DATI ANAGRAFICI E RESIDENZA

Luogo e data di nascita: Padova, 13 luglio 1965
Stato civile: sposato, due figli
Nazionalità: italiana
Residenza: Via T.U. Barbarani, 5 – 35124 Padova – Italia

INDIRIZZO LAVORATIVO

Dipartimento di Ingegneria Civile, Edile e Ambientale
Università degli Studi di Padova
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POSIZIONE ATTUALE

Professore associato, settore concorsuale 008/A1 – Idraulica, idrologia, costruzione idrauliche e marittime (SSD ICAR/02)
Dipartimento di Ingegneria Civile, Edile e Ambientale, Università degli Studi di Padova

ISTRUZIONE

- 1991: Laurea in Ingegneria Civile Idraulica, Università di Padova. Votazione: 110/110 e lode. Titolo della tesi: "Modellazione dell'evoluzione morfologica a lungo termine di lagune a marea", relatori prof. G. Di Silvio e prof. G. Gambolati
- Novembre 1992 - Ottobre 1994: Borsa di studio nell'ambito del progetto CNR "Sistema Lagunare Veneziano" svolta presso il Dip. di Metodi e Modelli Matematici per le Scienze Applicate, Università di Padova e avente come tematica lo "Sviluppo di un modello 3D agli elementi finiti per la simulazione della subsidenza antropica nella Laguna di Venezia". Supervisore: prof. G. Gambolati
- Novembre 1994 - Febbraio 1997: Borsa di studio nell'ambito del progetto EU CENAS "Study on the coastline evolution of the Eastern Po Plain due to sea level change caused by climate variation and to natural and anthropogenic land subsidence" svolta presso il Dip. di Metodi e Modelli Matematici per le Scienze Applicate, Università di Padova. Supervisore: prof. G. Gambolati

ESPERIENZA LAVORATIVA

- Dal 2017: co-responsabile dell'Accordo di Collaborazione Accademica (Memorandum d'Intesa) fra l'Università degli Studi di Padova e la Capital Normal University, Pechino (Cina)
- Dal 2009 al 2017: responsabile del Laboratorio di Calcolo Numerico del Dipartimento di Metodi e Modelli Matematici per le Scienze Applicate, poi Dipartimento di Ingegneria Civile, Edile e Ambientale, Università di Padova
- Dal 2002: ricercatore associato all'Istituto di Scienze Marine (ex-ISDGM) - CNR, Venezia (Italia)
- Settembre 2000 – Settembre 2018: personale tecnico-scientifico nelle categorie D2, EP1, EP2, EP3 e EP4 presso il Dipartimento di Metodi e Modelli Matematici per le Scienze Applicate e il Dipartimento di Ingegneria Civile, Edile e Ambientale, Università di Padova
- Luglio 1997 - Agosto 2000: Funzionario Tecnico a tempo determinato / indeterminato presso il Dipartimento di Metodi e Modelli Matematici per le Scienze Applicate, Università di Padova
- Settembre 1996 – Febbraio 1997: Stage presso Hydrodata S.p.A., Torino

SETTORI DI RICERCA

Tematiche di ricerca

- Sviluppo e applicazione di modelli numerici per la simulazione della risposta idrologica di sistemi acquiferi complessi
- Sviluppo e applicazione di modelli numerici per la simulazione degli effetti geomeccanici (subsidenza, rebound, fratture) indotti dal prelievo/iniezione d'acqua dal/nel sottosuolo
- Sviluppo e applicazione di modelli numerici per la simulazione degli effetti geomeccanici connessi alla produzione e stoccaggio di gas (CH₄, CO₂) in giacimenti profondi: subsidenza, integrità delle rocce di copertura, compattazione dei livelli produttivi, riattivazione di faglie, sismicità indotta, accoppiamento idro/meccanico con acquiferi in contatto idraulico
- Caratterizzazione idrologica, geomeccanica e morfologica finalizzata alla difesa e alla gestione sostenibile di zone costiere quali aree agricole con suoli torbosi, bacini di bonifica a scolo meccanico, ambienti a marea. Utilizzo di prove di campo e in laboratorio, invasive e non-invasive, e modellistica numerica per la quantificazione di: scambi di acque dolci - salate, emissioni in atmosfera di CO₂, sedimentazione e consolidazione naturale, subsidenza vs innalzamento medio mare, produttività dei terreni
- Caratterizzazione della compressibilità di mezzi porosi attraverso prove di laboratorio, log in pozzo, tecniche di assimilazione di misure superficiali ottenute con interferometria SAR di dati satellitari
- Sviluppo e applicazione di metodologie innovative per la quantificazione della subsidenza e di spostamenti localizzati attraverso l'integrazione di tecniche tradizionali e interferometria SAR di dati satellitari

Indici Bibliometrici

- ISI WoS: H Index = 28, n. citazioni complessivo = 2007
- Scopus: H Index = 29, n. citazioni complessivo = 2462
- Google Scholar: H Index = 39, n. citazioni complessivo = 4573

ATTIVITA' DIDATTICA

- AA 2018-19: Idrologia IN03103732 (3CFU su 6)
- 2014: Lectures al Summer Course "Subsurface Hydrology, Geomechanics and Finite Elements " presso l'Indian Institute of Technology Bombay (India)
- 2006, 2007: lecturer presso HYDROAID - Water for Development Management Institute, Torino
- 2003, 2004, 2005: docente del corso "Tecniche numeriche per l'elaborazione dati geografici" all'interno del Master di Formazione Superiore "Telerilevamento e Sistemi Informativi per l'Analisi e Gestione Ambientale Territoriale", Università di Bologna
- a.a. 2002-2003, 2003-2004 2004-2005 2005-2006, 2006-2007, 2007-2008, 2008-2009: attività didattica integrativa nel corso "Bonifica dei Siti Contaminati" e "Idrologia sotterranea", Laurea Magistrale in Ingegneria Ambientale, Università di Padova (supporto alle lezioni, esercitazioni, ed esami)
- 2000: lecturer all'International Advanced School "L. da Vinci", CNR, Bologna
- 1998: lecturer al Training Course "Coastal Zone Monitoring and Management", UNESCO, Venezia

ATTIVITA' DI TUTORAGGIO

- 2006 - 2016: co-tutor di 3 tesi di Dottorato, Università di Padova (una tesi è stata premiata con l' Eni-Sclocchi Award 2016)
- 2012: co-tutor di 1 tesi di Dottorato, Università of Ferrara

- 2009: esaminatore esterno di 1 tesi di Dottorato in Sciences de l'Environnement, Universite Paul Cezanne Aix-Marseille III (France)
- 1995 - 2016: correlatore di 10 tesi di Laurea Magistrale, Università di Padova, Trieste, Bologna

SERVIZIO PROFESSIONALE

Affiliazioni

- dal 2018: membro del Gruppo Italiano di Idraulica
- dal 2017 al 2022: visiting professor al "Key Laboratory of Land Subsidence Monitoring and Prevention", Ministry of Land and Resources of China, Shanghai (Cina);
- dal 2017: membro dell'European Geosciences Union
- dal 2015: membro dello Steering Team "Regional Sea Level Change and Coastal Impacts" del "World Climate Research Programme"
- dal 2015: membro dell'International Society for Soil Mechanics and Geotechnical Engineering
- dal 2015: membro dell'Associazione Geotecnica Italiana
- dal 2015: vice-presidente dell'UNESCO "Working Group on Land Subsidence"
- dal 2014 al 2019: visiting researcher al "Key Laboratory of Earth Fissures Geological Disaster", Ministry of Land and Resources of China, Nanjing (Cina)
- dal 2013 al 2016: contatto per l'Università di Padova del programma PhD "GIONET - Copernicus Initial Operations – Network for Earth Observation Research Training", Marie Curie People Actions nell'ambito del 7th European Framework Programme
- dal 2010 al 2014: membro dell'UNESCO "Working Group on Land Subsidence"
- dal 2009: membro dell'American Geophysical Union

Organizzazione conferenze e sessioni

- Co-convener della sessione "H4. Urban flooding and geo-hazard", MODSIM2017, 22th International Congress on Modelling and Simulation, Hobart (Australia), dicembre 2017
- Membro del Science Organizing Committee del "Int. WCRP/IOC Conference on Regional Sea Level Changes and Coastal Impacts", New York (USA), luglio 2017
- Co-convener della sessione "SE07 - Assessment of Land Subsidence processes in the world. The UNESCO Working Group on Land Subsidence", 2016 Mexican Geophysical Union's Annual Meeting, Puerto Vallarta (Messico), ottobre 2016
- Chair del "2nd International Workshop on Coastal Subsidence", Venezia (Italia), maggio 2016
- Co-organizer di "NISOLS 2015, 9th International Symposium on Land Subsidence", Nagoya (Giappone), novembre 2015
- Co-convener della sessione "Aquifers as subsurface reservoirs for drought management", 14th Int. Water System Distribution Analysis Conference, Bari (Italia), luglio 2014
- Co-convener della sessione "GM1.8: Land-level lowering of flat areas: monitoring and modelling of natural and human-induced processes and assessment of their impact", European Geoscience Union (EGU) General Assembly, Vienna (Austria), maggio 2014
- Co-convener della sessione "L10: Modelling human-induced land subsidence", MODSIM2013, 20th International Congress on Modelling and Simulation, Adelaide (Australia), dicembre 2013
- Co-convener della sessione "TS9.4/G5.4: Crustal faulting and deformation processes observed by InSAR, GPS and modelling techniques", European Geoscience Union (EGU) General Assembly, Vienna (Austria), aprile 2013

- Co-convener della sessione "NH33B: Land-Level Lowering in Flat Coastal Areas: Monitoring and Modeling of Natural and Man-Induced Processes", American Geophysical Union AGU Fall Meeting, San Francisco, dicembre 2012
- Membro del Scientific Advisory Board di "EISOLOS: 8th International Symposium on Land Subsidence", Queretaro (Messico), ottobre 2010
- Membro del Local Organizing Committee di "SISOLS 2000, 6th International Symposium on Land Subsidence", Ravenna (Italia), settembre 2010

Revisore scientifico per:

Advances in Mechanical Engineering; Advances in Water Resources; Catena; Coastal Engineering; Continental Shelf Research; Earth Surface Processes and Landforms; Engineering Geology; Environmental & Engineering Geoscience; Environmental Earth Sciences; Environmental Research Letters; European Journal of Environmental and Civil Engineering; Geomechanics for Energy and the Environment, Geomatics; Natural Hazards and Risk; Geomorphology; Geophysical Research Letters; Geosciences Journal; Geotechnique; Greenhouse Gases: Science and Technology; Ground Water; Hydrogeology Journal; Hydrology and Earth System Sciences; International Journal for Numerical and Analytical Methods in Geomechanics; Journal of Geodynamics; Journal of Geophysical Research – Earth Surface; Journal of Geophysical Research – Solid Earth; Journal of Hydrology; Journal of Marine Science and Engineering; Journal of Modern Transportation; Journal of Petroleum Science and Engineering; Journal of Scientific Research and Reports; Journal of Zhejiang University-SCIENCE A; Natural Hazards; Netherlands Journal of Geosciences; Oil & Gas Science and Technology; Pure and Applied Geophysics; Remote Sensing; Remote Sensing of the Environment; Science of the Total Environment; Scientific Reports; SPE Reservoir Evaluation & Engineering; Soil Use and Management; The Geological Society of America Bulletin; Transactions on Geoscience and Remote Sensing; Transport in Porous Media; Water; Water Resources Research

Peer review di progetti di ricerca per:

- NSF (National Science Foundation – USA)
- NERC (Natural Environment Research Council – UK)
- ANR (Agence Nationale de la Recherche – France)
- NWO (The Netherlands Organisation for Scientific Research – The Netherlands)
- CAS (Croatian Academy of Sciences – Croatia)

Presentazioni ad invito a conferenze internazionali

- 2018: Conferenza "State of the Coast", New Orleans (USA), maggio 30 - giugno 1 - INVITED PANELIST
- 2017: Annual Meeting of the Mexican Geophysical Union (RAUGM), Puerto Vallarta (Messico), ottobre 22-27 - PLENARY SPEAKER
- 2017: International WCRP/IOC Conference "Regional Sea Level Changes and Coastal Impacts", New York (USA), luglio 14-17 - INVITED PANELIST in "Sea-Level Information Requirements to Support Coastal Management"
- 2017: International Workshop on Earth Fissures, Nanjing (China), aprile 13 - INVITED
- 2017: 1st International Symposium on Urban Geology, Shanghai (China), aprile 11-12 - INVITED
- 2013: GSA Annual Meeting, Denver (USA), ottobre 27-30 - INVITED
- 2013: 1st International Workshop on Coastal Subsidence, New Orleans (USA), novembre 19-21 - INVITED
- 2012: AGU Fall Meeting, San Francisco (USA), dicembre 3-7 - INVITED
- 2012: EGU - General Assembly, Vienna (Austria), aprile 22-27 - INVITED
- 2012: NAC11 - Nederlands Aardwetenschappelijk Congres, Veldhoven (Olanda), marzo 29-30 - KEYNOTE LECTURE
- 2010: Workshop OMC "Leveraging upstream know-how and capturing new business opportunities", Ravenna (Italia), aprile 23 - INVITED
- 2008: Geological Society of America, Join Annual Meeting, Houston (Texas), ottobre 5-9 - INVITED

Patecipazione con presentazione a conferenze internazionali

- 2018: EGU - General Assembly, Vienna (Austria), aprile 8-13
- 2017: MODSIM Int. Congress on Modelling and Simulation, Hobart (Tasmania), dicembre 4-8
- 2017: EGU - General Assembly, Vienna (Austria), aprile 23-28
- 2016: RAUGM - Mexican Geophysical Union's Annual Meeting, Puerto Vallarta (Messico), ottobre 30 – novembre 4
- 2016: International Conference on Geosciences and Geophysics, Orlando (USA), ottobre 6-7
- 2016: EUROCK 2016 "Rock Mechanics & Rock Engineering: From the Past to the Future", Cappadocia (Turchia), agosto 29-31
- 2015: AGU Fall Meeting, San Francisco (USA), dicembre 14-18
- 2015: NISOLS, 9th International Symposium on Land Subsidence, Nagoya (Giappone), novembre 15-19
- 2014: IAEG XII Congress "Engineering Geology for Society and Territory", Torino (Italia), settembre 15-19
- 2014: Water Distribution System Analysis conference, Bari (Italia), luglio 15-17
- 2014: EGU - General Assembly, Vienna (Austria), aprile 27 – maggio 2
- 2014: AAPG Europe - Induced Seismicity Conference, Londra (UK), febbraio 13-14
- 2013: 1st CIGR Inter-Regional Conference on Land and Water Challenges, Bari (Italia), settembre 10-14
- 2013: 5th Biot Conference on Poromechanics, Vienna (Austria), luglio 10-12
- 2013: Int. Conference "Four Decades of Progress in Monitoring and Modeling of Processes in the Soil-Plant-Atmosphere System: Applications and Challenges", Napoli (Italia), giugno 19-21
- 2013: EGU - General Assembly, Vienna (Austria), aprile 7-12
- 2013: 11th OMC Off-shore Mediterranean Conference, Ravenna (Italia), marzo 20-22
- 2012: 7th EUREGEO, EUropean congress on REgional GEOscientific cartography and Information systems, Bologna (Italia), giugno 12-15
- 2011: AGU Fall Meeting, San Francisco (USA), dicembre 5-9
- 2011: Wageningen Conference on Applied Soil Science "Soil Science in a Changing World", Wageningen (Olanda), settembre 18-22
- 2011: International Symposium on Computational Geomechanics, Dubrovnik (Croazia), aprile 27-29
- 2011: 10th OMC Off-shore Mediterranean Conference, Ravenna (Italia), marzo 23-25
- 2010: AGU Fall Meeting, San Francisco (USA), dicembre 13-17
- 2010: EISOLS, 8th International Symposium on Land Subsidence, Queretaro (Messico), ottobre 18-22
- 2010: XVII International Conference on Water Resources, Barcellona (Spagna), giugno 21-24
- 2009: Ravage of the Planet II, Cape Town (SudAfrica), dicembre 15-17
- 2008: LITTORAL 2008, 9th International Conference, Venezia (Italia), novembre 25-28
- 2008: XVII International Conference on Computational Methods in Water Resources, San Francisco (USA), luglio 3-10
- 2008: IAHR - Int. Groundwater Symposium, Istanbul (Turchia), giugno 18-20
- 2007: MODSIM2007 - Int. Congress on Modelling and Simulation, Christchurch (Nuova Zelanda), dicembre 3-7
- 2007: ENVISAT Symposium 2007, Montoux (Svizzera), aprile 23-27
- 2007: EGU - General Assembly, Vienna (Austria), aprile 15-20
- 2006: XVI International Conference on Computational Methods in Water Resources, Copenhagen (Danimarca), giugno 18-22
- 2005: 32nd Int. Geological Congress, Firenze (Italia), agosto 20-28

- 2004: XV Int. Conference on Computational Methods in Water Resources, Chapel Hill (USA), giugno 13-17
- 2003: Workshop on Reservoir Storage of CO₂, Bergen (Norvegia), novembre 6-7
- 2003: 16th Engineering Mechanics Conference, ASCE, Seattle (USA), luglio 16-18
- 2003: 1st Int. Conference on Groundwater in Geological Engineering, Bled (Slovenia), settembre 22-26
- 2003: 6th Offshore Mediterranean Conference, Ravenna (Italia), marzo 26-28
- 2002: 2nd Biot Conference on Poromechanics, Grenoble (Francia), agosto 26-28
- 2002: XIV International Conference on Computational Methods in Water Resources, Delft (Olanda), giugno 23-28
- 2001: 1st Int. Conference on SaltWater Intrusion and Coastal Aquifers: Monitoring, Modeling and Management, Essaouira (Marocco), aprile 21-23
- 2000: SISOLS 2000, 6th International Symposium on Land Subsidence, Ravenna (Italia), settembre 25-29
- 2000: XIII International Conference on Computational Methods in Water Resources, Calgary (Canada), giugno 25-29
- 1999: International Symposium on Coupled Phenomena in Civil, Mining & Petroleum Engineering, Sanya (Cina), novembre 1-3
- 1996: XI International Conference on Computational Methods in Water Resources, Cancun (Messico), giugno 22-26
- 1995: FISOLS '95, 5th Int. Symposium on Land Subsidence, The Hague (Olanda), ottobre 16-20
- 1994: X International Conference on Computational Methods in Water Resources, Heidelberg (Germania), luglio 19-22

Premi

- 1994: Premio Internazionale "Paolo Gatto", Accademia Nazionale dei Lincei, Roma (Italia), per lo studio "Simulazione del sistema multi-acquifero Veneziano con un modello quasi 3-D agli elementi finiti"
- 2010: Menzione per la migliore "Geophysical Oral Presentation" a GeoCanada2010, Canadian Society of Exploration Geophysics. Titolo: "Advances in surface-groundwater modelling in lagoon environment with airborne electromagnetics and high resolution seismic: example from the Venice Lagoon"

Trasferimento tecnologico

Socio fondatore nel 2011 dello spin-off dell'Università di Padova "M3E S.r.l." (Mathematical Methods and Models for Engineering). Sito web: <http://www.m3eweb.it>

PROGETTI E CONVENZIONI DI RICERCA**Referente di progetto o responsabile di WP**

2018	Safe operational bandwidth of gas storage reservoirs <u>Finanziamento:</u> State Supervision of Mines, Ministry of Economic Affairs of The Netherlands
2017-2019	Progetto SOLMEF: Simulazioni numeriche di un test di laboratorio a grande scala per lo studio dello sviluppo di fessurazioni in bacini sedimentari subsidenti <u>Finanziamento:</u> Key Laboratory of Earth Fissures Geological Disaster, Ministry of Land and Resources, Geological Survey of Jiangsu Province (Cina)
2016-2017	Progetto SOLVE: Modellazione agli elementi finiti dei processi di dinamica verticale (consolidazione naturale e sedimentazione) di strutture barenicole <u>Finanziamento:</u> CORILA - CORILA - Consorzio per il coordinamento delle ricerche inerenti al sistema lagunare di Venezia
2016-2017	Review of the NAM Long Term Subsidence Study phase 2 (LTS2) in The Netherlands <u>Finanziamento:</u> State Supervision of Mines, Ministry of Economic Affairs of The Netherlands
2016	Sviluppo di modelli stocastici per la simulazione fluidodinamica e geomeccanica applicati allo studio della subsidenza nell'area di Pechino <u>Finanziamento:</u> Università di Padova; Capital Normal University (Cina)
2015-2019	Mechanisms, Monitoring and Modeling Earth Fissure generation and Fault activation due to subsurface Fluid exploitation (M3EF3) <u>Finanziamento:</u> UNESCO - IGCP (http://www.igcp641.org/)
2014	Applicazione di modellistica numerica tridimensionale per la simulazione dei processi geomeccanici indotti dallo sovra-sfruttamento delle risorse idriche in aree urbane. Il caso di Shanghai <u>Finanziamento:</u> Università di Padova; Nanjing University (Cina)
2012-2014	IMPROWARE - Innovative Means to PROtect water Resources in the Mediterranean coastal areas through re-injection of treated water (http://www.improware.eu/) <u>Finanziamento:</u> European Union, Sustainable Water Integrated Management Programme
2012-2014	WATER RE-BORN - Artificial Recharge: Innovative Technologies for the Sustainable Management of Water Resources (http://www.warbo-life.eu/) <u>Finanziamento:</u> European Union, LIFE+ (Environment Policy and Governance)
2011	Modellistica numerica per la simulazione dello sfruttamento di risorse idriche sotterranee e della conseguente subsidenza in sistemi acquiferi caratterizzati da parametri geomeccanici ad elevata variabilità <u>Finanziamento:</u> Coordinación de la Investigación Científica (Messico)
2009-2010	ERA_INTE - Sviluppo di un Modello Digitale di Elevazione del suolo dell'area costiera veneta per mezzo della tecnica ERS - ENVISAT cross-interferometry <u>Finanziamento:</u> Consorzio di bonifica Adige-Bacchiglione; Magistrato alle Acque di Venezia
2009-2010	La laguna di Venezia nel quadro dei cambiamenti climatici, delle misure di mitigazione ed adattamento e dell'evoluzione degli usi del territorio. La mitigazione mediante sollevamento antropico <u>Finanziamento:</u> CORILA - Consorzio per il coordinamento delle ricerche inerenti al sistema lagunare di Venezia; Magistrato alle Acque di Venezia
2008-2010	Piano degli interventi per il recupero morfologico della Laguna di Venezia <u>Finanziamento:</u> CORILA - Consorzio per il coordinamento delle ricerche inerenti al sistema lagunare di Venezia; Magistrato alle Acque di Venezia

Partecipazione al gruppo di ricerca

2017	Studio geomeccanico nella concessione Alfonsine Stoccaggio finalizzata alla modellizzazione della subsidenza e alla valutazione dell'impatto dei cicli di stoccaggio sul regime di funzionamento della rete scolante superficiale <u>Finanziamento:</u> Stogit SpA
2016	Modellazione dei processi geomeccanici indotti dallo stoccaggio di gas naturale previsto nell'ambito

- del programma di esercizio del campo di Sabbioncello, con una valutazione dell'eventuale sismicità indotta
Finanziamento: Stogit SpA
- 2015 Modellazione dei processi geomeccanici indotti dallo stoccaggio di gas naturale previsto nell'ambito del programma di esercizio del campo di Fiume Treste, con una valutazione dell'eventuale sismicità indotta
Finanziamento: Stogit SpA
- 2014 Modellazione dei processi geomeccanici indotti dallo stoccaggio di gas naturale previsto nell'ambito del programma di esercizio del campo di Bordolano, con una valutazione dell'eventuale sismicità indotta
Finanziamento: Stogit SpA
- 2013-2015 Valutazione dell'influenza della depressurizzazione delle argille sull'andamento temporale e sull'entità degli spostamenti superficiali associati allo sviluppo di giacimenti
Finanziamento: Eni
- 2013-2014 Modello numerico agli elementi finiti per lo studio dello stato tensionale profondo e dell'attivazione di faglie nei campi di stoccaggio di Settala, Sergano e Minerbio
Finanziamento: Stogit SpA
- 2012-1016 RITMARE - The Italian research for the sea
Finanziamento: Consiglio Nazionale delle Ricerche
- 2012-2013 Modellazione dei processi geomeccanici derivanti dallo stoccaggio di gas naturale nel campo di Minerbio
Finanziamento: STOGIT S.p.A.
- 2012 Modello di subsidenza antropica prodotta dalla coltivazione del giacimento di Dosso degli Angeli
Finanziamento: Eni E&P
- 2011-2013 Data assimilation of SAR-based measurements for geomechanical characterization (Progetto DAG)
Finanziamento: Eni E&P
- 2011-2012 Fresh- saltwater in high-value coastlands: from the hydrogeophysical/geochemical characterization of the present interactions to the modeling quantification of the expected effects of climate changes.
Finanziamento: CONICET (Argentina); Consiglio Nazionale delle Ricerche
- 2010-2013 CARBOSTOP - Valutazione degli effetti della conversione di aree agricole soggette a subsidenza del Consorzio di bonifica Adige-Bacchiglione in SRF (Short Rotation Forestry): riduzione dell'emissione di CO₂ e sviluppo di una catena produttiva locale per la produzione di energia da legname
Finanziamento: Ministero per le Politiche Agricole Alimentari e Forestali
- 2010-2012 GEO-RISK: Processi geologici ed idrologici: monitoraggio, modellazione ed impatto nell'Italia Nord-orientale
Finanziamento: Università di Padova
- 2010-2011 ZEPT (Zero Emission Porto Tolle): Geomechanical modelling of CO₂ storage
Finanziamento: ENEL S.p.A.
- 2010-2011 Movimenti della Laguna di Venezia: misurazione delle componenti naturali e antropiche per mezzo della tecnica Interferometric Point Target Analysis (IPTA) utilizzando le immagini Cosmo-SkyMed
Finanziamento: ASI - Agenzia Spaziale Italiana
- 2010 Modellazione dei processi geomeccanici derivanti dallo stoccaggio di gas naturale nel campo di Ripalta
Finanziamento: STOGIT - SAIPEM S.p.A.
- 2010 Studio previsionale della subsidenza con modello a elementi finiti della subsidenza attesa dalla coltivazione del campo di Longanesi
Finanziamento: Eni - PADANA S.p.A.
- 2009-2011 Studi e analisi della qualità dei dati da markers in pozzo per il monitoraggio e revisione dei metodi e dei modelli e per la stima del coefficiente di compattazione da markers
Finanziamento: Eni E&P
- 2009-2010 Assessing vertical movements of natural tidal landforms and anthropogenic structures at the Venice Lagoon inlets

	<u>Finanziamento:</u> DLR - German Aerospace Center
2009-2010	INLET_NET - Monitoraggio degli spostamenti verticali del litorale veneziano con la tecnica Interferometric Point Target Analysis (IPTA) <u>Finanziamento:</u> Consorzio Venezia Nuova - Magistrato alle Acque di Venezia
2009	Identificazione di siti utilizzabili per la sequestrazione geologica della CO ₂ nel bacino dell'Alto Adriatico <u>Finanziamento:</u> ENEL S.p.A.
2008-2010	An integrated monitoring and management approach of hydrologic processes in coastal ecosystems for the understanding of the relation between continental and marine waters in the Yantai, China, and in the Venice (North Adriatic Sea), Italy <u>Finanziamento:</u> Consiglio Nazionale delle Ricerche; Chinese Academy of Sciences
2008-2010	Analisi dell'architettura dei depositi Plio-Pleistocenici sottostanti la Laguna di Venezia: sviluppo di una base dati per gli interventi di difesa di Venezia, in particolare per un progetto di fattibilità del sollevamento della città <u>Finanziamento:</u> Consiglio Nazionale delle Ricerche
2008-2009	Monitoraggio della subsidenza a Venezia attraverso TerraSAR-X <u>Finanziamento:</u> DLR - German Aerospace Center
2008	Modellazione dei processi geomeccanici derivanti dallo stoccaggio di gas naturale nel campo di Sergnano <u>Finanziamento:</u> SnamProgetti S.p.A.
2007-2008	Modellazione dei processi geomeccanici derivanti dallo stoccaggio di gas naturale nel campo di Settala <u>Finanziamento:</u> SnamProgetti S.p.A.
2006-2007	INLET - Utilizzo dell'interferometria differenziale SAR per il monitoraggio dei movimenti verticali del litorale veneziano <u>Finanziamento:</u> Servizio Informativo - Magistrato alle Acque di Venezia
2006-2007	Studio previsivo con modello ad elementi finiti della subsidenza attesa dalla coltivazione del campo di Regina <u>Finanziamento:</u> Eni S.p.A. - Divisione E&P
2005-2006	Analisi multi-scala dell'efflusso di CO ₂ da suoli agricoli e simulazione della loro distribuzione eterogenea per la quantificazione e il controllo delle emissioni in atmosfera <u>Finanziamento:</u> Università di Padova
2004-2007	Programma GHG: Modellazione dei processi geomeccanici derivanti dal confinamento di gas serra in giacimenti di gas naturale depletati o di stoccaggio <u>Finanziamento:</u> SnamProgetti S.p.A.
2004-2006	Applicazione di metodologie sismiche innovative ad altissima risoluzione sui bassi fondali per lo studio del sottosuolo lagunare veneziano <u>Finanziamento:</u> CORILA - Consorzio per il coordinamento delle ricerche inerenti al sistema lagunare di Venezia
2004-2006	Efflussi d'acqua sotterranea in Laguna di Venezia e loro quantificazione attraverso isotopi naturali e tomografia geo-elettrica <u>Finanziamento:</u> CORILA - Consorzio per il coordinamento delle ricerche inerenti al sistema lagunare di Venezia
2002-2003	Studio per la modellizzazione previsionale della subsidenza antropica sui campi a gas dell'Adriatico Settentrionale con modello numerico FEM e confronto col risultato del modello Geertsma <u>Finanziamento:</u> Eni S.p.A. - Divisione E&P
2002	Benchmarking Subsidenza: identificazione di tematiche di ricerca avanzata nel campo della previsione, monitoraggio e prevenzione della subsidenza ed i relativi interlocutori internazionali, <u>Finanziamento:</u> Eni S.p.A. - Divisione E&P
2001-2003	VOSS (Venice Organic Soil Subsidence): Studio modellistico-sperimentale della subsidenza dei terreni torbosi e previsione dell'evoluzione altimetrica della zona Sud-Orientale del bacino scolante della Laguna di Venezia in relazione alle variazioni climatiche (http://voss.dmsa.unipd.it/index.html) <u>Finanziamento:</u> CORILA - Consorzio per il coordinamento delle ricerche inerenti al sistema lagunare

- di Venezia
- 2001-2003 VENICE: Subsidence monitoring service in the Lagoon of Venice for Regional Administrative and Water Authorities
Finanziamento: ESA - Agenzia Spaziale Europea
- 2001-2002 Sequestrazione geologica della CO₂: sviluppo di modelli numerici e simulazioni in reservoir della Pianura Padana orientale
Finanziamento: Università di Padova
- 1999-2001 Studio modellistico dei meccanismi di deformazione della matrice rocciosa rilevabile in giacimenti a gas con la tecnica dei marker radioattivi ed applicazione ai pozzi profondi del litorale e dell'offshore Adriatico
Finanziamento: Eni S.p.A. - Divisione E&P
- 1999-2001 ISES: Intrusione salina e subsidenza nel bacino scolante in Laguna di Venezia
Finanziamento: Magistrato alle Acque di Venezia, Provincia di Padova, Provincia di Venezia, Adige-Consorzio di Bonifica Adige-Bacchiglione
- 1997-1998 Studio di affidabilità di dati di compressibilità finalizzato all'analisi di impatto ambientale causato dalla produzione di idrocarburi
Finanziamento: Ministero dell'Ambiente
- 1997-1998 Realizzazione di un modello matematico previsivo degli eventuali effetti di subsidenza connessi alla coltivazione di giacimenti di idrocarburi in Alto Adriatico
Finanziamento: Ministero dell'Ambiente
- 1994-1997 CENAS: Study on the coastline evolution of the Eastern Po Plain due to sea level change caused by climate variation and to natural and anthropogenic land subsidence (<http://cenas.dmsa.unipd.it/index.html>)
Finanziamento: EU - Environment Programme 1990-1994
- 1992-1994 Sistema Lagunare Veneziano: Sviluppo di modelli 3D agli elementi finiti per la simulazione della subsidenza a Venezia
Finanziamento: Consiglio Nazionale delle Ricerche
- 1992-1993 Sviluppo di modelli numerici per lo studio del rischio di subsidenza causata dallo sviluppo di giacimenti naturali di gas on-shore e off-shore nell'area di Ravenna
Finanziamento: Comune di Ravenna

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