

Giorgio Cassiani

Curriculum Vitae



Dati anagrafici

Luogo di nascita: Trieste
Stato civile: sposato, due figli
Nazionalità: italiana

Indirizzo lavorativo

Dipartimento di Geoscienze
Università degli Studi di Padova
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Posizione attuale

Professore Ordinario di Geofisica Applicata

Dipartimento di Geoscienze
Università di Padova

Esercita attività di ricerca e di insegnamento nel campo della geofisica applicata con particolare riferimento alle applicazioni ambientali, idrologiche e geotecniche.

Istruzione

- **Ph.D. in Civil and Environmental Engineering**, Settembre 1997, Duke University, U.S.A. *Argomento Tesi*: “Aquifer Characterization and Well Tests”. Modelli analitici e semianalitici per test da pozzo in acquiferi eterogenei. Tecniche di integrazione dati idrologici e geofisici.
- **Dottorato di Ricerca in Geofisica Applicata**, Ottobre 1996, Università di Trieste. *Argomento Tesi*: “Integrazione di dati geofisici nell’ingegneria ambientale”. Tecniche geofisiche di supporto alla caratterizzazione di acquiferi eterogenei per problemi ambientali.
- **Master of Science in Civil and Environmental Engineering**, Maggio 1995, Duke University, USA. *Argomento Tesi*: “Groundwater Pollution Remediation and Control - a Stochastic Framework for Utilization of Available Data”. Tecniche geostatistiche di integrazione dati idrogeologici e geofisici per un’accurata caratterizzazione idraulica di acquiferi eterogenei.
- **Laurea in Ingegneria Mineraria**, Aprile 1991, Università di Trieste, Votazione: 110/110 e lode con menzione. *Argomento Tesi*: “Vibrazioni in ambiente industriale: sicurezza ed interventi”. Acquisizione di dati vibrometrici in campo e modellistica ad elementi finiti del sistema sorgente - suolo - strutture.

Esperienza lavorativa

2006-2015 **Professore Associato in Geofisica Applicata**

Dipartimento di Geoscienze
Università di Padova

Attività di ricerca e di insegnamento nel campo della geofisica applicata con particolare riferimento alle applicazioni ambientali, idrogeologiche e di geologia applicata. In questo periodo è stato responsabile di 18 progetti finanziati di ricerca e conto terzi, tra cui 4 progetti collaborativi EU del 7° Programma Quadro in qualità di Work Package leader.

2001-2006 **Ricercatore in Geofisica Applicata**

Dipartimento di Scienze Geologiche e Geotecnologie
Università di Milano - Bicocca

Attività di ricerca e di insegnamento nel campo della geofisica applicata con particolare riferimento alle applicazioni ambientali, idrogeologiche e di geologia applicata.

Nel periodo 2001-2006 è stato coordinatore di 14 progetti di ricerca e conto terzi finanziati a livello locale e nazionale.

1999-2001**Lecturer (B) in Contaminant Hydrogeology,**

Department of Environmental Science, Lancaster University, Lancaster, UK.

Posizione a tempo indeterminato, equivalente a una posizione da Ricercatore Universitario. Attività di ricerca ed insegnamento nel campo dell'idrogeologia, con particolare riferimento a problemi di inquinamento del suolo e delle acque sotterranee. Co-direttore del Corso di Laurea in Environmental Management.

Nel periodo 1999-2001 è stato coordinatore e collaboratore di 3 progetti di ricerca finanziati a livello nazionale (UK - NERC).

1997-1999**Specialista Ambientale, ENI S.p.A. - Divisione Agip - Unità Geodinamica e Ambiente (GEDA), Via Emilia 1, S. Donato Milanese.**

Posizione a tempo indeterminato. Consulenza interna su tematiche ambientali: bonifiche, idrogeologia, geotecnica, sistemi di gestione ambientale.

1996-1997**Responsabile Studi e Ricerche, Azienda Servizi Pubblici (A.S.P.), Via Ciliegiole 43, 51100 Pistoia.**

Posizione a tempo indeterminato. Assistente del capo del servizio tecnico per lo sviluppo e la gestione di progetti nei campi della (i) produzione e distribuzione di acqua potabile; (ii) raccolta e trattamento delle acque reflue; (iii) raccolta e trattamento dei rifiuti solidi urbani (iv) pianificazione delle risorse idriche; (v) distribuzione del gas naturale.

1993-1996**Research Assistant, Dept. of Civil and Environmental Engineering, Duke University, USA.**

Assistente del coordinatore del progetto per lo studio del sito "Duke Forest Gate 11", contaminato da solventi organici. Caratterizzazione del sito con metodi idrogeologici e geofisici. Progettazione degli interventi di ripristino e loro ottimizzazione. Consulenze interne ed esterne (Organizzazione Mondiale della Sanità).

1992-1993**Borsista** presso l'Osservatorio Geofisico Sperimentale, Trieste.

Sviluppo di software di interpretazione sismica (in C e C++) nell'ambito del progetto della Comunità Europea "Joule", sottoprogetto: "Artificial Intelligence Techniques for Seismic Data Interpretation".

1991-1992**Collaboratore** presso l'Istituto di Miniere e Geofisica Applicata, Università di Trieste.

Ricerca nel campo della modellistica geotermica e organizzazione del database sismico e dei pozzi per la regione Friuli-Venezia Giulia.

Settori di ricerca

- (1) problematiche idrologiche ed idrogeologiche con particolare riferimento alla caratterizzazione di bacini idrografici e di versanti in frana dal punto di vista geologico ed idrologico, anche con l'utilizzo di tecniche geofisiche.
- (2) problematiche di caratterizzazione e gestione di siti contaminati, anche con l'utilizzo di tecniche geofisiche.
- (3) modellistica idrologica ed idrogeologica, con particolare riferimento alla assimilazione di dati di natura geofisica ed idrologica per la calibrazione dei modelli.
- (4) caratterizzazione geotecnica, anche tramite metodi geofisici, con particolare attenzione a rilevati arginali e dighe.
- (5) modellistica geo-meccanica, anche a grande scala, con particolare riguardo alle problematiche relative alla subsidenza.
- (6) caratterizzazione e mappatura dei suoli, per scopi agricoli ed ambientali, anche con metodi non invasivi, per l'ottimizzazione dell'uso delle risorse (acqua e nutrienti) e della distribuzione delle colture.
- (7) Applicazioni della geofisica a problematiche di esplorazione petrolifera, con particolare riguardo alla sismica in time-lapse e le sue interpretazioni geomeccaniche e fluidodinamiche.

Attività didattica

dal 2020

Coordinatore del Comitato Ordinatore del Corso di Laurea Magistrale in *Geophysics for Natural Risks and Resources*, Università degli Studi di Padova.

Docente del corso obbligatorio *Applied Geophysics* (9 crediti).

dal 2019

Insegnamento dei seguenti corsi presso il Dipartimento di Geoscienze, Università di Padova, in qualità di Professore Ordinario:

- *Geofisica Applicata* (6 crediti) del programma di studi della Laurea Magistrale in Geologia e Geologia Tecnica.
- *Geophysics for Engineering* (6 crediti) del programma di studi della Laurea Magistrale in Ingegneria Civile.

2017-2019

Professore a Contratto di Geofisica Applicata, Università di Trieste.

- *Idrogeologia e sfruttamento dei fluidi del sottosuolo* (9 crediti) del programma di studi della Laurea Magistrale in Ingegneria Civile e Ambientale.

2012-2019

Insegnamento dei seguenti corsi presso il Dipartimento di Geoscienze, Università di Padova, in qualità di Professore Associato e Professore Ordinario (dal 2015):

- *Geofisica Applicata Ambientale* (6 crediti) del programma di studi della Laurea Magistrale in Geologia e Geologia Tecnica.
- *Geofisica Applicata* (8 crediti) del programma di studi della Laurea Magistrale in Scienze e Tecnologie per l'Ambiente ed il Territorio.

Relatore di 10 tesi di laurea magistrale e di 3 tesi di laurea di primo livello. Tutor di 5 tesi di dottorato.

**dal 2008
al 2011**

Insegnamento dei seguenti corsi presso il Dipartimento di Geoscienze, Università di Padova, in qualità di Professore Associato:

- *Geofisica Applicata II* (5 crediti) del programma di studi della Laurea Magistrale in Geologia e Geologia Tecnica.
- *Geofisica Ambientale* (4 crediti) del programma di studi della Laurea Magistrale in Geologia e Geologia Tecnica.
- *Geofisica Applicata* (8 crediti) del programma di studi della Laurea Magistrale in Scienze e Tecnologie per l'Ambiente ed il Territorio.
- *Environmental Geophysics* (6 crediti) del programma di studi della Laurea Magistrale in Ingegneria Ambientale.

Relatore di 4 tesi di laurea specialistica e di 8 tesi di laurea di primo livello. Tutor di 3 tesi di dottorato.

2006-2008

Insegnamento dei seguenti corsi del programma di studi in Geologia e Geologia Tecnica presso il Dipartimento di Geoscienze, Università di Padova, in qualità di Professore Associato:

- *Geofisica Applicata II* (4 crediti)
- *Laboratorio di Geofisica Applicata I* (3 crediti)
- *Laboratorio di Geofisica Applicata II* (3 crediti)

Professore a contratto (a.a. 2006-2007) presso l'Università di Milano Bicocca per il corso di Geofisica Ambientale (5 crediti) della Laurea Specialistica in Scienze e Tecnologie Geologiche.

2001-2006 Insegnamento dei seguenti corsi (in affidamento gratuito) del programma di studi in Scienze Geologiche presso il Dipartimento di Scienze Geologiche e Geotecnologie, Università di Milano Bicocca, in qualità di Ricercatore Universitario:

- *Prospezioni Geofisiche* (1 modulo) – opzionale per gli studenti della laurea triennale e obbligatorio per gli studenti della laurea specialistica.
- *Geofisica Ambientale* (1 modulo) (dal 2004): opzionale per gli studenti della laurea specialistica del I e II anno.
- *Sismica Applicata* (1 modulo) (dal 2004): opzionale per gli studenti della laurea specialistica del II anno.

Relatore di 3 tesi di laurea vecchio ordinamento e di 7 tesi di laurea di primo livello, 12 tesi di laurea specialistica, e correlatore di 5 tesi di laurea vecchio ordinamento e di 4 tesi di laurea di primo livello.

1999-2001 Titolare dei seguenti corsi del programma di studi in Scienze Ambientali presso il Department of Environmental Science, Lancaster University, in qualità di Lecturer:

- *ENV 221 - Hydrogeology* (2nd year); obbligatorio per gli studenti del II anno del Bachelor.
- *ENV 351 - Project Appraisal for Environmental Management* (3rd year); opzionale per gli studenti del III anno del Bachelor.
- *ENV 434 - Contaminated Land and Remediation* (MSc course): obbligatorio per gli studenti del Master.

Relatore di 8 tesi di laurea di primo livello (Bachelor) presso il Department of Environmental Science e di una tesi di PhD (Lee Burberry).

Coordinamento e partecipazione a progetti di ricerca ed attività conto terzi

1992-93 Progetto di ricerca: **Artificial Intelligence Techniques for Seismic Data Interpretation**, O.G.S. Trieste, finanziato dalla Comunità Europea nell'ambito del progetto Joule. Coordinatore: Claudio Chiaruttini.

1994-95 Progetto di ricerca: **Duke Forest Gate 11 site: site investigation and remediation planning**, Duke University, USA, finanziato da Duke Medical Center, Coordinatore: Miguel A. Medina.

1996 Progetto di ricerca: **Groundwater Contamination by Organic Carcinogens: Health Risk Assessment and Remedial Measures**, Duke University, USA, finanziato dall'Organizzazione Mondiale della Sanità: Coordinatore: Miguel A. Medina.

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- 1997-99 Progetto di ricerca: **Effects of non-linearities in the elasto-plastic soil behavior, spatial variabilities and property uncertainties on subsidence modeling, and interpretation of in-situ compressibility measurements**, Duke University, USA ed ISMES, Bergamo, finanziato da ENI-Agip Coordinatori: Tomasz Hueckel and Zbigniew J. Kabala.
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- 2001-2002 Progetto di ricerca: **Advanced Space and Time Random Field Analysis of Natural and Enhanced Bioattenuation in Contaminated Soil and Groundwater**, Lancaster University, UK, finanziato da Natural Environment Research Council (NERC) UK, GBP 25.000. Coordinatori: **Giorgio Cassiani**, Peter Diggle.
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- 2001-2003 Progetto di ricerca: **In-situ tests for biodegradation of petroleum hydrocarbons in groundwater**, Lancaster University, UK, finanziato da Natural Environment Research Council (NERC) UK, GBP 24.000. Coordinatori: **Giorgio Cassiani**, Kirk T. Semple.
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- 2002-2004 Progetto di ricerca: **Hydrological characterisation of partially saturated soils with the support of spectral induced polarisation measurements**, Lancaster University, UK, in collaborazione con Rutgers University (Lee Slater), NJ, USA, finanziato da Natural Environment Research Council (NERC) UK, GBP 97.300. Coordinatore: Andrew Binley.
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- 2002 Progetto conto terzi: **“Benchmarking subsidenza” per l’identificazione di tematiche di ricerca avanzata nel campo della previsione, monitoraggio e prevenzione della subsidenza ed i relativi interlocutori internazionali**, Università di Milano Bicocca, finanziato da ENI-Agip, € 15.000. Coordinatore: **Giorgio Cassiani**.
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- 2003 Progetto conto terzi: **Prove di compressibilità uniassiale con aging su campioni sabbiosi**, Università di Milano Bicocca, finanziato da ENI-Divisione E&P, € 25.000. Coordinatori: **Giorgio Cassiani** e Giovanni B. Crosta.
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- 2003 Progetto conto terzi: **Caratterizzazione della frana in località San Francesco, Bormio, con tecniche geologiche e geofisiche**, finanziato da Comune di Bormio. Coordinatore: Giovanni B. Crosta.
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- 2003 Progetto conto terzi: **Monitoraggio tramite tomografia geoelettrica della migrazione di un tracciante salino per la determinazione della connessione idraulica tra un acquifero superficiale ed uno profondo**, Università di Milano Bicocca, finanziato da Tribunale di Ferrara, € 21.600. Coordinatore: **Giorgio Cassiani**.
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- 2003-2005 Progetto di ricerca: **Approccio multidisciplinare alla valutazione della pericolosità di grandi frane**, Università di Milano Bicocca, Politecnico di Milano e Università di Trieste, finanziato nell’ambito MIUR-FIRB. Coordinatore: Giovanni B. Crosta.
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- 2004 Progetto conto terzi: **Analisi degli effetti della trasformazione della cava di Cassano da cava a secco a cava in falda. Valutazioni relative al possibile recupero**, Università di Milano-Bicocca, finanziato da Comune di Cassano d'Adda, € 13.300. Coordinatori: **Giorgio Cassiani** e Giovanni B. Crosta.
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- 2004 Progetto conto terzi: **Verifica dello stato di impermeabilizzazione presso il sito contaminato in località Secugnago, Lodi**, finanziato da Bresciani Costruzioni, € 8,000. Coordinatore: **Giorgio Cassiani**.
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- 2004-2006 **Progetto di ricerca: Polarizzazione indotta spettrale per l'identificazione di contaminanti organici nel sottosuolo**, Università di Milano Bicocca e Università di Torino, finanziato da MIUR-FIRB, € 80.000 (Totale nazionale € 100.000). Coordinatore nazionale: **Giorgio Cassiani**.
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- 2004-2006 Progetto conto terzi: **Realizzazione di studi legati alla modellizzazione di subsidenza**, Università di Milano Bicocca, finanziato da ENI-Divisione E&P, € 96.000. Coordinatore: **Giorgio Cassiani**.
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- 2004-2007 Progetto conto terzi: **Analisi della vulnerabilità della falda tramite metodi non invasivi, finanziato dal consorzio industriale Gorgonzola/Pessano con Bornago (MI)**, € 68.000. Coordinatore: **Giorgio Cassiani**.
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- 2005 Progetto conto terzi: **Misure GPR e idrauliche su discarica in località Dogaletto, Marghera (VE)**, finanziato da ENSR s.r.l, € 15.500. Coordinatore: **Giorgio Cassiani**
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- 2005 Progetto conto terzi: **Misure elettriche in foro per il monitoraggio delle operazioni di bonifica sul sito Carbochimica, Trento**, finanziato da Provincia Autonoma di Trento, € 7.000. Coordinatore: **Giorgio Cassiani**.
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- 2005-2008 **Progetto di ricerca: Ricostruzione e valorizzazione del paesaggio archeologico in ambiente costiero mediterraneo tramite tecnologie innovative non invasive**, Università di Cagliari, Politecnico di Torino, Università di Palermo, Conisma (consorzio nazionale inter-universitario delle scienze del mare), finanziato da MIUR-FIRB, € 650.000. Coordinatore nazionale: Gaetano Ranieri.
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- 2006-2007 **Progetto di ricerca: Studio, definizione ed analisi di modelli costitutivi che legano la risposta elettrica in corrente continua ed in polarizzazione indotta alla microstruttura fisica e chimica dei mezzi porosi multifase**, Università di Milano Bicocca e Università di Trieste, finanziato da MIUR-COFIN, € 30.000. Coordinatore nazionale: **Giorgio Cassiani**.
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- 2008-2009 **Integration of surface wave inversion and P wave tomography for the computation of static corrections in reflection seismics**, University of Padova and O.G.S. Trieste (A.Vesnaver, G. Rossi and G. Boehm), Italy. Funding from the University of Padova € 37,334. Principal investigator: **Giorgio Cassiani**.

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- 2008-2011 **EU Framework Programme 7 Collaborative Project “ModelPROBE - Model driven Soil Probing, Site Assessment and Evaluation”** for Theme 6.3 Environmental Technologies, Call: ENV 2007, 3.1.2.2: Development of technologies and tools for soil contamination assessment and site characterisation, towards sustainable remediation. Co-Coordinator: Giorgio Cassiani (Coordinator Prof. Matthias Kaestner, UFZ Leipzig, Germany). Total funding from the European Commission € 3,397,609, of which € 290,981 for the Department of Geoscience, University of Padova (P.I. **Giorgio Cassiani**)
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- 2008-2011 **EU Framework Programme 7 Collaborative Project “iSOIL - Interactions between soil related sciences – Linking geophysics, soil science and digital soil mapping”** for Theme 6.3 Environmental Technologies, Call ENV.2007.3.1.2.1. Development and improvement of technologies for data collection in (digital) soil mapping, coordinator Dr. Peter Dietrich, UFZ Leipzig, Germany. Total funding from the European Commission € 3,420,623, of which € 210,183 for the Department of Geoscience, University of Padova (P.I. **Giorgio Cassiani**)
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- 2008-2009 **Advanced Analysis of Radioactive Marker Log Measurements for In Situ Compaction Evaluation**, Università di Padova, finanziato da Eni S.p.A.-Divisione E&P, Milano € 69,820. Principal Investigator: **Giorgio Cassiani**.
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- 2008-2009 **Tecniche idrogeofisiche non invasive per la caratterizzazione idrologica di versanti e bacini montani**, Università di Padova, Progetto di Ateneo dell’Università di Padova € 57,000. Principal investigator: **Giorgio Cassiani**.
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- 2008-2011 **Metodi idrogeofisici per la caratterizzazione dinamica dei sistemi idrologici**, Università di Padova, finanziato dalla Fondazione Cariparo, Padova, per una borsa di dottorato triennale, Principal Investigator: **Giorgio Cassiani**.
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- 2008-2011 **Fenomeni di trasporto nei bacini idrografici: teoria e sperimentazione idrologica e geofisica**, University of Padova, in collaborazione con il Dipartimento DMMMSA (Mario Putti), il Dipartimento IMAGE (Marco Marani) e l’OGS Trieste (Francesco Palmieri), finanziato da Fondazione Cariparo, Padova, €360,000; Principal Investigator: **Giorgio Cassiani**.
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- 2008-2010 **Misura sperimentale dei processi di interazione atmosfera-vegetazione-suolo e modellistica numerica della loro risposta ai cambiamenti climatici**, Università di Torino, CNR, Università di Padova e Università di Palermo, finanziato da MIUR-PRIN, € 31429 all’Università di Padova. Coordinatore nazionale: Stefano Ferraris (Unito), coordinatore unità di Padova: **Giorgio Cassiani**.
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- 2009-2010** **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**, Università di Padova, in collaborazione con DMMMSA Università di Padova (G. Gambolati) e Duke University (Tomasz Hueckel) finanziato da Eni S.p.A.- Divisione E&P, Milano. € 109,630 per il Dipartimento di Geoscienze, Università di Padova. Principal Investigator: **Giorgio Cassiani**.
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- 2010-2013** **EU Framework Programme 7 Collaborative Project “CLIMB: Climate Induced Changes on the Hydrology of Mediterranean Basins: Reducing Uncertainty and Quantifying Risk through an Integrated Monitoring and Modeling System”** for Theme 6.3 Environmental Technologies, Call ENV.2009.1.1.5.2. Hydro-geophysical techniques for catchment characterization aimed at the prediction of hydrological effects of climate changes in the Mediterranean area. Coordinator Prof. Ralf Ludwig, LMU Muenich, Germany. Total funding from the European Commission € 3,149,641, of which € 176,775 for the Department of Geoscience, University of Padova (P.I. **Giorgio Cassiani**), in collaboration with the DMMMSA Department (Mario Putti), the IMAGE Department (Marco Marani).
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- 2009** **Prospezione geoelettrica nell'area del campo pozzi Settolo (TV)**, Università di Padova, finanziato da Alto Trevigiano Servizi S.r.l., € 15000. Responsabile Scientifico: Rita Deiana.
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- 2009** **Acquisizione dati geofisici sul sito inquinato sul fronte mare dell'area costiera fra Punta Sottile e Punta Ronco**, in Comune di Muggia (TS), Università di Padova, finanziato da CIGRA (Centro Interdipartimentale per la Gestione e il Recupero Ambientale, Università degli Studi di Trieste, € 14500. Responsabile Scientifico: **Giorgio Cassiani**.
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- 2009-2012** **Processi geologici ed idrologici: monitoraggio, modellazione ed impatto nell'Italia Nord-orientale**, Progetto Strategico dell'Università di Padova, finanziato per € 1,500,000. Responsabile Scientifico: Rinaldo Genevois.
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- 2010** **Indagini geofisiche della discarica di Corigliano d'Otranto (Lecce, Puglia)**, finanziato da IRSA-CNR, Bari, € 10000, Responsabile Scientifico: Rita Deiana.
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- 2010-2011** **Indagini geofisiche della discarica di Scala Erre, Sassari**, finanziato dal Comune di Sassa € 27000, Responsabile Scientifico: **Giorgio Cassiani**.
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- 2013-2016** **Metodologie innovative per la gestione delle risorse idriche in scenari di incertezza idro-climatica**, Università di Trento, Università di Padova, Università di Napoli Federico II, Università di Modena e Reggio, Politecnico di Milano, Università Roma Tre, CNR-ISAC Torino, finanziato dal MIUR-PRIN per € 735000 - €106810 all'Università di Padova, coordinatore locale: **Giorgio Cassiani**.
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- 2013-2018 EU Framework Programme 7 Collaborative Project GLOBAQUA** “Managing the effects of multiple stressors on aquatic ecosystems under water scarcity”. Work programme topics addressed: ENV.2013.6.2-1 Water resource management under complex, multi stressor conditions. Coordinator Prof. Damia Barceló, Agencia Estatal Consejo Superior de Investigaciones Científicas (CSIC), Spain. Total funding from the European Commission € 7,590,588 of which € 195,281 for the Department of Geoscience, University of Padova (P.I. **Giorgio Cassiani**).
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- 2015-2017 Hydro-geophysical monitoring and modelling for the Earth's Critical Zone**, Università di Padova, Progetto di Ateneo dell'Università di Padova € 33,000. Principal investigator: **Giorgio Cassiani**.
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- 2016-2019 WASA: Water Saving in Agriculture: technological developments for the sustainable management of limited water resources in the Mediterranean area.** Progetto finanziato nell'ambito dello schema **EU FP7 ERANET-MED**, consorzio formato da 8 partner di 6 paesi (Italia, Portogallo, Marocco, Tunisia, Egitto e Turchia. Coordinatore: **Giorgio Cassiani**. Finanziamento totale € 450,000 (€40,000 all'Università di Padova).
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- 2017-2019 GEOCONS: Geophysical methods for the characterization of contaminated sites.** Progetto finanziato dal Programma di Cooperazione Scientifica e Tecnologica Italia-Israele (Scientific Track 2017). Cooperazione tra Università degli Studi di Padova e Technion, Haifa. Coordinatore: Matteo Camporese. Finanziamento totale € 200,000 (€100,000 all'Università di Padova).
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- 2018-2019** Progetto conto terzi: **Indagini non invasive finalizzate alla progettazione degli interventi di messa in sicurezza e bonifica presso il sito In.F.A. SpA, Aviano (PN)**, finanziato da IN.F.A. SpA , € 95.000. Coordinatore: **Giorgio Cassiani**.
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- 2018-2021 Enhanced Mitigation of Nitrate in shallow Groundwater project**, funded through the Institute of Environmental Science And Research Limited, New Zealand, P.I. Dr. Murray Close, collaborators Andrew Binley (Lancaster University) and **Giorgio Cassiani** (University of Padua). Funding to the University of Padua: 60,000 NZ\$.
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- 2019-2020** Progetto conto terzi: **Indagini non invasive finalizzate alla valutazione del confinamento della barriera fisica presso sito Eni Rewind S.p.A., Porto Marghera (VE)**, finanziato da Golder Associates Srl, € 23,000. Coordinatore: **Giorgio Cassiani**.
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- 2019-2021 ECZ-Dry: New technologies to monitor the Earth Critical Zone in water-limited ecosystems.** Project funded by Italy-Israel Scientific and Technological Cooperation Programme (Scientific Track 2018). Cooperation between University of Padua and the Hebrew University of Jerusalem. Project Coordinator: Giorgio Cassiani. Total funding to the University of Padua: € 99,980.

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- 2020-2021** Progetto conto terzi: **Monitoraggio non invasivo dei processi di degradazione di granaglie stoccate**, finanziato da Metalmont Srl tramite UNISMART, € **10,000**. **Coordinatore: Giorgio Cassiani.**
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- 2020-2023** **Geophysical Roots Observation for Water savING in arboriculture, viticulture and agronomy (GROWING)**, funded by Marie Skłodowska-Curie Individual Fellowships H2020 programme, Topic: MSCA-IF-2018 Type of action: MSCA-IF-GF (Global Fellowships), call H2020-MSCA-IF-2018. **Beneficiary: Benjamin Mary. Supervisor: Giorgio Cassiani.** Partner: Lawrence Berkeley National Laboratory, Geoscience Division, USA (Dr. Yuxin Wu). Total funding € 251002,56.
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- 2019-2021** **WATER mixing in the critical ZONE: observations and predictions under environmental changes – WATZON**, University of Padua, University of Turin, University of Naples Federico II, EURAC Bozen, Free University of Bozen, funded by MIUR-PRIN (2017SL7ABC), total funding € 581,580, P.I.: Marco Borga, University of Padua.
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- 2020** **Indagini non invasive sulla discarica di Burgesi (Otranto)**, finanziato tramite CNR IRSA, Bari, € 10,000. PI: **Giorgio Cassiani.**
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- 2022-2025** **RETURN (Multi-Risk sciEnce for resilientT commUNITies undeR a changiNg climate)**, funded as part of the Italian National Recovery and Resilience Plan (PNRR) funded by the EU. Role: participant in the Spoke 2 – VS2 – Ground Instabilities, responsible of Task T 2.5.2 - Complements for multiple hazard scenarios from other vertical Spokes. Specific funding approximately € 150000.
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- 2023-2025** **PRIN 2022 project Predictive Dynamics Of Microbiological Contamination Of Groundwater in the Earth Critical Zone And Impact On Human Health (Dy.Mi.Cr.On Project)**, Research Unit Leader (UNIPD) and leader of WP6. Total funding for UNIPD: € 38240.

Altre attività

SERVIZIO PROFESSIONALE

- **Presidente della Commissione di Abilitazione Scientifica Nazionale** 2021-2023, settore concorsuale 04/A4.
- **Membro a nomina MIUR del Consiglio di Amministrazione dell’OGS** – Istituto Nazionale di Oceanografia e Geofisica Sperimentale – 2015-2019.
- **Membro di Commissioni di Concorso** per posizioni da Professore Ordinario, Professore Associato, Ricercatore a tempo determinato di tipo A e B presso molte sedi universitarie italiane (Padova, Udine, Bari, Pisa, Palermo, Catania, Messina, Napoli, Firenze, Roma, Cosenza) ed enti

di ricerca (OGS, CNR): 2016-2024.

- **Membro della Commissione di Abilitazione Scientifica Nazionale** 2016-2018, settore concorsuale 04/A4 – Commissione Parallela.
- **Membro affiliato a CNR-IMAA (Istituto di Metodologie per l'Analisi Ambientale)**, 2015-2017, Tito Scalo, Potenza, Italy.
- **Membro affiliato a CNR-IRSA (Istituto di Ricerca Sulle Acque)**, 2018-2020, Bari, Italy.
- **Membro associato a OGS** (Istituto Nazionale di Oceanografia e Geofisica Sperimentale), dal 2023.
- **Membro dell'Hard Science Team** of the TESI (Trieste Encounters on Science and Innovation) PRE-ESOF and *ESOF (EuroScience Open Forum) Organizing committee*, 2018-2020.
- **Membro dell'American Geophysical Union (AGU) Hydrogeophysics Technical Committee** (<http://www.hydrogeophysics.org>) 2005-2013.
- **Member of the Editorial Board of *Scientific Reports***, Nature Portfolio, since 2023.
- **Associate Editor** della rivista *Near Surface Geophysics*, EAGE.
- **Associate Editor** della rivista *Bollettino di Geofisica Teorica e Applicata* (OGS, Trieste).
- **Associate Editor** della rivista *SERRA* (Stochastic Environmental Research & Risk Assessment), Springer-Verlag (2001-2011).
- **Associate Editor** della rivista **Remote Sensing** (MDPI) dal 2020.
- **Associate Editor**, 'Critical Zone' Section, della rivista *Frontiers in Water*.
- **Membro del comitato scientifico** della rivista **Acque Sotterranee**.
- **Membro del comitato organizzatore**, NATO-Advanced Research Workshop "Soils and groundwater contamination: Improved risk assessment based on integrated hydrogeological and geophysical methods", St Petersburg, Russia, 25-31 July 2004.
- **Membro del Comitato Scientifico**, 21st European Meeting of Environmental and Engineering Geophysics Near Surface Geoscience 2015, Turin.
- **Co-convener** della sessione Freshwater-seawater dynamics in coastal zones: advancing science and technology for a sustainable management, ESOF2020, Trieste, 2 settembre 2020.
- **Co-convener** della sessione di Hydrogeophysics (con David Hyndman ed Andreas Kemna) – American Geophysical Union AGU Fall Meeting – San Francisco, December 2005

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- **Co-convener** della sessione di Hydrogeophysics (con Alberto Bellin e Klaus Holliger) – American Geophysical Union AGU Fall Meeting – San Francisco, December 2007
 - **Co-convener** della sessione “Hydrogeophysics: From non-invasive site characterization to improved process understanding” (con J.A. Huisman P. Dietrich ed H. K. French) – European Geoscience Union (EGU) General Assembly 2012, Vienna 22-27 April 2012.
 - **Co-convener** della sessione SSS9.9 “Instrumented Catchments and Demonstration Areas: the scientific and social impact of research through experiments and modelling about water and soil”– European Geoscience Union (EGU) General Assembly 2015, Vienna 12-17 April 2015.
 - **Co-convener**, Geophysics for the Critical Zone, Workshop at the 21st European Meeting of Environmental and Engineering Geophysics Near Surface Geoscience 2015, Turin.
 - **Convener** della sessione: Hydrogeophysics, remote sensing, and radar technologies: innovative tools and recent development, *42nd International IAH Congress “Aqua2015”*, Rome, September 13-18, 2015.
 - **Co-convener** della sessione speciale “Advanced ground-based technologies for assessing vadose zone properties and processes”, *IEEE International Workshop on Metrology for Agriculture and Forestry (MetroAgriFor)*, Napoli, 24-26 October 2019.
 - **Co-convener** of session Hydrogeophysics: a tool for hydrology, ecology, agronomy and beyond, European Geoscience Union (EGU) General Assembly 2021, virtual, 28 April 2021.
 - **Chair** della sessione di Civil Engineering all’ EAGE Near Surface 2008 Conference in Kraków, Poland, September 15-17, 2008.
 - **Co-organizer** della sessione speciale 9 (SpS 9) at the CONSOIL 2008 conference, Milan, June 3-6 2008: “From low to non-invasive site assessment and characterization: Model Driven Soil Probing, Site Assessment and Evaluation (EU project ModelPROBE)” M. Kästner (UFZ, Germany), G. Cassiani (University of Padua, Italy), M. Petrangeli Papini (University of Rome, Italy).
 - **Membro del comitato scientifico**, EAGE/SEG Research Workshop 2011, Towards a Full Integration from Geosciences to Reservoir Simulation, 1-2 September 2011, Trieste, Italy.
 - **Esaminatore esterno** tesi di dottorato: Michela Giustiniani (Università di Trieste, 2005), Giulio Vignoli (Università di Ferrara, 2006), Umberta Tinivella (Università di Trieste, 2006), Alessandro Brovelli (Università di Milano Bicocca, 2006), Majken Looms (University of Copenhagen, 2007); Marta Castagna (Università di Trento, 2008), Michael Van Schoor (Lancaster University, 2009), Ilaria Coscia (ETH Zurich, 2011), Lakam Mejus (Lancaster University, 2015), Valeria Cascone (Sapienza Università di Roma, 2018).
 - **Revisore scientifico** per:
 - Science

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- Scientific Reports
 - Geophysics
 - Journal of Applied Geophysics
 - Geophysical Research Letters
 - Mathematical Geology
 - Water Resources Research
 - Advances in Water Resources
 - Journal of Hydrology
 - Hydrological Processes
 - Surveys in Geophysics
 - Bulletin of Volcanology
 - Engineering Geology
 - Near Surface Geophysics
 - Vadose Zone Journal
 - Journal of Geophysical Research
 - Journal of Environmental and Engineering Geophysics
 - Hydrological Processes
 - Computers and Geoscience
 - Environmental Science and Technology
 - Hydrogeology Journal
 - Rendiconti Lincei
 - Fresenius Environmental Bulletin
 - Hydrology and Earth System Sciences (HESS)
 - Geophysical Journal International
 - Geoderma
 - EAGE Near Surface Meetings 2007, 2008, 2009, 2010, 2011
- **Peer review di progetti di ricerca per:**
 - NSF (National Science Foundation – USA)
 - DFG (German Science Foundation)
 - NERC (Natural Environment Research Council), UK
 - ISF (Israel Science Foundation)
 - FNR (Fonds National de la Recherche, Luxembourg)
 - FNRS (Fonds National de la Recherche Scientifique, Belgium)
 - MIUR (Ministero dell’Istruzione, Università e Ricerca)
 - NCSTE - National Center of Science and Technology Evaluation – Kazakhstan
 - LCS - The Latvian Council of Science
 - FNR - Luxembourg, Fonds National de la Recherche
- **Membro di società scientifiche:**
 - American Geophysical Union (dal 1996)
 - European Geoscience Union (dal 1999)
 - European Association of Geoscientists and Engineers (dal 2005)

ATTIVITA' DI CONSULENZA

- **Segretario scientifico** dell’ International Scientific Committee on Land Subsidence, formato da

Enzo Boschi (INGV, IT), Khalid Aziz (Stanford University, USA), Jean Prevost (Princeton University, USA), Tomasz Hueckel (Duke University, USA), Frans Barends (Geodelft, NL) e Berend Scheffers (NITG-TNO, NL), finanziato da ENI-Divisione E&P, 2002-2006.

- **Consulente Tecnico d'Ufficio** (CTU) per cause civili presso il Tribunale di Milano (2019-2024) e **Consulente Tecnico di Parte** (CTP) per cause penali (Tribunale di Brescia – 2023-24) e per contenziosi amministrativi (TAR FVG – 2018) in ambito di contenzioni in materia ambientale.

ATTIVITA' DI DISSEMINAZIONE SCIENTIFICA

- **Lecturer** al Training Course su "Groundwater Management in the Framework of Integrated Water Resources Management IWRM" organizzato dall'UNESCO al The Regional Center for Training and Water Studies (RCTWS) in Cairo, Egitto, Maggio 2006.
- **Lecturer** al FIVA PhD course on Hydrogeophysics, 15-17 June 2006, University of Copenhagen, Denmark.
- **Lecturer** al FIVA PhD course on Hydrogeophysics, 9-12 August 2010, University of Copenhagen, Denmark.
- **Lecturer** at the Seismic Microzonation course (II edition), University of Pavia, Italy, May 29-30 2007.
- **Lecturer** at the Master de l'Agua, Institut de Recerca de l'Agua, Universitat de Barcelona, Giugno 2008, Settembre 2009, Giugno 2011 e Giugno 2012.
- **Lecturer** at the course "Advanced methods of characterization and remediation of contaminated sites", Provincia di Milano and Università La Sapienza di Roma, May 2009.
- **Lecturer** del Master di II livello su "Caratterizzazione e tecnologie per le bonifica dei siti contaminati", Università La Sapienza di Roma, 2011, 2012, 2013, 2014, 2015, 2016, 2018, 2019
- **Lecturer** al Master su "Caratterizzazione e uso sostenibile del territorio (CUS-RT)", Università di Trieste, Polo di Gorizia (2010 e 2011).
- **Lecturer** alla Rose School - Centre for Post-Graduate Training and Research in Earthquake Engineering and Engineering Seismology – Pavia, Italy - Course of Applied Geophysics.
- **Lecturer** al corso "Characterization of contaminated sites via geophysical and direct push methods", Ordine degli Ingegneri di Padova, July 2011.
- **Relatore** alla giornata di studio "Le indagini geofisiche – le linee guida dell'Associazione delle Società di Geofisica (ASG)", Centro di GeoTecnologie, San Giovanni Valdarno, 18 maggio 2012.

- **Relatore** al corso di aggiornamento “La bonifica dei siti inquinati in Lombardia”, 10-12 dicembre 2012, FAST, Milano.
- **Relatore** al corso di aggiornamento “Rifiuti nelle bonifiche”, 7-8 maggio 2014, FAST, Milano.
- **Relatore** al workshop INTERCORE (INnovative TEchnologies foR CONTaminated soil and land REmediation): Tecnologie dirette ed indirette per la caratterizzazione ed il monitoraggio di siti contaminati – Determinazione dei parametri sito specifici propedeutici all’analisi di rischio, 5-6 giugno, 2014, Policoro (Matera).
- **Relatore di seminari** presso:
 - Master in Gestione Ambientale (MEDEA), Scuola Eni Enrico Mattei (1998);
 - Corso di Perfezionamento Post-Universitario su Bonifica e Controllo dell’ambiente: bonifica dei siti contaminati, organizzato da Università degli Studi di Trento e Provincia Autonoma di Trento, 9° e 10° edizione (2001-2003);
 - Università di Trieste (1998, 1999, 2002, 2004);
 - CRS4 Cagliari (2001);
 - International School of Applied Geophysics, 12th Course, Application of Geophysical Methods to Hydrogeological Problems, , Centro Ettore Majorana, Erice: 12 - 18 April 2003;
 - Jülich Forschungszentrum GmbH, Germania (2004);
 - International School of Applied Geophysics, 13th Course, Application of Geophysical Methods to Hydrogeological Problems, Centro Ettore Majorana, Erice: 29/09-3/10/2006;
 - Institut des sciences et technologies de l’environnement, Station No. 2, Ecole Polytechnique Fédérale de Lausanne (EPFL) (2007);
 - Departamento de Geoquímica, Petrología y Prospección Geológica, Facultad de Geología, Universidad de Barcelona (2008).

Presentazioni ad invito a conferenze internazionali

1. **Cassiani G.**, L. Peruzzo, M. Censini, B. Mary, V. Iván, 2024, Non-invasive monitoring of plant root activities in the framework of the Earth’s Critical Zone and soil-plant-atmosphere interactions, *invited talk*, EGU General Assembly 2024, Session: ITS3.14/BG8.36 – Biogeophysics: Environmental Monitoring for the Circular Economy, Net Zero, and Contaminants of Concern, 14-19 April 2024.
2. **Cassiani G.**, I. Barone, M. Pavoni, J. Boaga, R. Deiana, 2023, Characterization and monitoring at a site of interest for archaeological and cultural heritage using seismic, electrical and electromagnetic methods, from surface and cross-hole, *invited talk*, The International Meeting for Applied Geoscience & Energy (SEG/AAPG IMAGE’23), Special Session on Long Term Geophysical Monitoring of Near Surface Processes, 27 Aug–1 Sept 2023, Houston, Texas.
3. **Cassiani G.**, J. Boaga, I. Barone, L. Peruzzo, B. Mary, V. Iván, 2023, The “true” meaning of Hydrogeophysics: integration of geophysical data with hydrological modeling,

INTRUSION 2023, 3-5 July 2023, Bari, Italy.

4. **Cassiani G.**, B. Mary, J. Boaga, I. Barone, V. Ivan, 2021, Geophysical imaging of the root zone: methods, implications and outlook, *Keynote Speech*, Special Session on advanced geophysical imaging of plant-soil interactions, EAGE Near Surface Geoscience Conference & Exhibition 2021, Bordeaux, France, August 29- September 2, 2021.
5. **Cassiani G.**, 2021, The Role of a Priori Knowledge in Geophysical Inversion: the Link to the Physical Processes, to Be Imaged, in MS0 Advances in Regularization for Inverse Problems in Geoscience - Part I of II, SIAM Conference on Mathematical & Computational Issues in the Geosciences (GS21), *invited presentation*, June 21-24, 2021 (Virtual Conference).
6. Binley A., L. Burbery, **G. Cassiani**, R. Mellis. M. Finnemore, T. Sarris, 2020, Denitrifying permeable reactive barriers for groundwater remediation: Barrier design and assessment using resistivity imaging and solute transport modelling, *invited presentation*, AGU Fall Meeting, 7-11 December 2020.
7. **Cassiani G.**, 2020, Freshwater-seawater dynamics in coastal zones: advancing science and technology for a sustainable management: geophysical methods, ESOF2020, Trieste, 2 September 2020.
8. **Cassiani G.**, 2019, Near surface geophysics for environmental applications: monitoring, modeling and beyond, *Keynote speech*, SEG-EAGE Geophysical Aspects of Smart Cities Workshop, Singapore, December 10-12, 2019.
9. **Cassiani G.**, J. Boaga, D. Vanella, S. Consoli, L. Peruzzo, Y. Wu, S.S. Hubbard, M. Schmutz, B. Mary, 2018, The role of small-scale non-invasive monitoring of root systems in the improvement of water use strategies for agriculture, *keynote speech*, Managing Water Scarcity in River Basins, Innovation and Sustainable Development, 4-6 October 2018, Agadir, Morocco.
10. B. Mary, L. Peruzzo, J. Boaga, M. Schmutz, Y. Wu, S.S. Hubbard, **G. Cassiani**, 2018, The use of hydro-geophysical monitoring for the identification of root-water-uptake patterns: ERT and MALM experiments in a vineyard, *invited talk*, EGU General Assembly 2018, Session 'Hydrogeophysics for the critical zone', Vienna, 8-13 April 2018.
11. **Cassiani G.**, J. Boaga, L. Busato, M.T. Perri, 2017, Characterization and monitoring of the riparian and hyporheic zones, *invited talk*, GELMON 2017, Fourth International Workshop on Geoelectrical Monitoring, Vienna, November 22-24, 2017.
12. **Cassiani G.**, 2017, Challenges of data integration in near surface geophysics applications, *invited talk*, SEG 4th International Conference on Engineering Geophysics (ICEG), Al Ain, UAE, October 10, 2017.
13. **Cassiani G.**, 2017, Hydrocarbon contamination geophysical signatures: field examples, *invited talk*, EAGE Near Surface Geoscience 2017, workshop on Geophysics for mapping

- and monitoring of contaminated ground and buried waste, September 3, 2017, Malmoe, Sweden.
14. **Cassiani G.**, M. Putti, J. Boaga, L. Busato, D. Vanella, S. Consoli, 2016, Non-invasive monitoring and modelling of the root active zones: progresses, caveats and outlook, *invited talk*, *AGU Fall Meeting*, San Francisco, 12-16 December 2016.
 15. **Cassiani G.**, 2015, Geophysical techniques for hydrological and hydrogeological characterization, *keynote speech*, session Hydrogeophysics, remote sensing, and radar technologies: innovative tools and recent development, *42nd International IAH Congress "Aqua2015"*, Rome, September 13-18, 2015.
 16. **Cassiani G.**, 2015, Hydro-geophysical monitoring of roots and hypohereic zone, *invited talk*, Workshop "Geophysics for the Characterization of the Critical Zone", *EAGE Near Surface Geoscience 2015*, September 6-10, 2015, Turin, Italy.
 17. **Cassiani G.**, 2014, Hydro-geophysical exploration for environmental applications: monitoring, modeling and beyond, *Lectio Magistralis*, *invited*, GNGTS – 33^o Congresso Nazionale, Bologna, 25-27 novembre 2014.
 18. **Cassiani G.**, A. Binley, A. Kemna, M. Wehrer, A. Flores Orozco, R. Deiana, J. Boaga, M. Rossi, P. Dietrich, U. Werban, L. Zschornack, A. Godio, A. JafarGamdomi, G.P. Deidda, 2013, Non-invasive characterization of the Trecate (Italy) crude-oil contaminated site: links between contamination and geophysical signals, *invited talk*, *AGU Fall Meeting*, San Francisco, 9-13 December 2013.
 19. **Cassiani G.**, J. Boaga, M. Rossi, A. D'Alpaos, G. Fadda, M. Putti, M. Marani, 2012, Time-lapse ERT for the monitoring of soil-plant interactions in the root zone, *invited talk*, *AGU Fall Meeting*, San Francisco, 9-13 December 2013.
 20. Campoprese M., A. Binley, **G. Cassiani**, R. Deiana and P. Salandin, 2013, Coupled vs. uncoupled hydrogeophysical inversion via ensemble Kalman filter assimilation of ERT-monitored tracer test data, *invited talk*, *AGU Fall Meeting*, San Francisco, 9-13 December 2013.
 21. **Cassiani G.**, A. Brovelli, G. Vignoli, B. Plischke, U. Tinivella, 2012, Geo-mechanics contribution to time-lapse seismics: an integrated approach using full-waveform simulations, *invited talk*, *74th EAGE Conference and Exhibition*, Copenhagen, WP8: Fully Integrated Geomechanical Workflow: A Myth or a Fact?, 4 June 2012.
 22. **Cassiani G.**, N. Ursino, R. Deiana, G. Vignoli, J. Boaga, M. Rossi, M.T. Perri, M. Blaschek, R. Duttman, S. Meyer, R. Ludwig, A. Soddu, P. Dietrich and U. Werban, 2012, Geophysical mapping of soil static characteristics and monitoring of soil dynamic states: an example on agricultural land, *invited talk*, *EGU General Assembly 2012*, Session SSS5.15 Vienna, 22-27 April 2012.
 23. **Cassiani G.**, R. Deiana, M. Campoprese, P. Salandin, G. Vignoli, M. Rossi and M.T. Perri,

- 2011, Hydro-Geophysical techniques for groundwater characterization: the link between measurements and modeling, *invited talk*, Geological Society of America, Annual Meeting in Minneapolis (9–12 October 2011).
24. **Cassiani G.**, R. Deiana, J. Boaga, G. Vignoli, M. Rossi, M.T. Perri, V. Bruno, 2011, Introduction to the concept of hydrogeophysics and case studies, *invited talk*, GEOITALIA 2011, Torino, Italy, September 19-24, 2011, Worskhop W11: Airborne EM for groundwater mapping.
 25. **Cassiani G.**, A. Brovelli, R. Deiana, G. Vignoli, F. Morari, E. Scudiero, P. Teatini, M. Carizzoni, P. Dietrich and U. Werban, 2011, Static and dynamic aspects of non-invasive monitoring of soil characteristics and conditions: implications for precision agriculture, *invited talk*, AGRI-SENSING 2011: International Symposium on Sensing in Agriculture in Memory of Dahlia Greidinger, February 21-24, 2011, at the Technion – Israel Institute of Technology in Haifa, Israel.
 26. **Cassiani G.**, A. Binley, A. Brovelli, R. Deiana, P. Dietrich, A. Flores, A. Kemna, E. Rizzo and U. Werban, 2010, Static and dynamic aspects of near surface characterization through physics-based integration of GPR, ERT, SIP and SP data in the time-lapse mode, *invited talk*, Workshop: Multidisciplinary, Integrated Approaches in Near-surface Geophysics–Novel Developments, Benefits and the Road Ahead, 72nd EAGE Conference & Exhibition incorporating SPE EUROPEC 2010, Barcelona, Spain, 14 - 17 June 2010.
 27. **Cassiani G.**, R. Deiana, J. Boaga, G. Vignoli, M. Rossi, M. Marani, M. Putti, M. Altissimo, A. Bellin, O. Cainelli, 2010, Hydro-geophysics for hillslope hydrology, *invited*, EGU General Assembly 2010, Vienna, 2-7 May 2010.
 28. **Cassiani, G., 2009**, Hydro-geophysics: the non invasive characterization of the shallow subsurface, *invited talk*, *NovCare 2009* International Conference (Novel Methods for Subsurface Characterization and Monitoring: From Theory to Practice), May 13-16, 2009, Leipzig, Germany.
 29. Deiana R., **G. Cassiani**, A. Bellin, O. Cainelli, M. Rossi, P. Frattini, 2008, An example of hydrogeophysical characterization of hillslope hydrology, *invited talk*, *AGU Fall Meeting*, San Francisco, 15-19 December 2008.
 30. Kemna A., **G. Cassiani**, T. Winchen, J.A. Huisman, and J. Vanderborght, 2008, On the characterization of soil structure and state from spectral IP responses”, *invited talk*, *EEGS NSGS Workshop on Induced Polarization: Research and Recent Advances in Near Surface Applications*, 14 Nov 2008 SEG Annual Meeting, Las Vegas, Nevada, USA
 31. **Cassiani G.**, R. Deiana and A. Kemna, 2007, Mass balance and anisotropy issues in the geophysical monitoring of controlled water injection experiments in the vadose zone, *invited*, EGU General Assembly 2007, Vienna, 15-20 April 2007.
 32. **Cassiani G.**, R. Deiana and A. Kemna, 2006, Non invasive monitoring of water flow in the vadose zone: the issue of mass balance in controlled tracer injection experiments,

invited talk, *AGU Fall Meeting*, San Francisco, 11-15 December 2006.

AFFILIAZIONI PROFESSIONALI

- **Ingegnere**, dal 1991

PREMI

- **Medaglia d'oro "Armando Norinelli"** come "Miglior lavoro in geofisica applicata", Università di Padova e CNR-GNGTS, 1991.
- **Premio di laurea "Antonio Chelleris"**, Università di Trieste, 1992.
- **Certificate in Hydrology**, Center for Hydrological Studies, Duke University, 1997.
- **EAGE Mintrop Award** (co-autore) per il miglior articolo del 2007 in *Near Surface Geophysics* per Deiana R., G. Cassiani, A. Kemna, A. Villa, V. Bruno and A. Bagliani, 2007, An experiment of non invasive characterization of the vadose zone via water injection and cross-hole time-lapse geophysical monitoring, *Near Surface Geophysics*, Vol 5, 3 June 2007, 183-194.
- **AGLC Award "Licio Cernobori" 2014** (as co-author) for the best paper presented by a young researcher at the 33rd GNGTS congress, for the paper "L-shaped array refraction microtremors (LEMI)" by J. Boaga, C. Strobbia e G. Cassiani
- **Geomechanics for Energy and the Environment, Certificate for Excellence in Reviewing**, 2018.

BREVETTI

Boaga J. e **G. Cassiani**, 2013, brevetto "Geofono ad infissione multi-orientabile per l'acquisizione della componente del moto verticale ed orizzontale del suolo", Università di Padova.

Boaga J., G. Censini e **G. Cassiani**, 2018, proposta di brevetto "Pozzetti alettati ad infissione per indagini di micro tomografia elettrica 3d applicati alla fisiologia vegetale", Università di Padova.

Pubblicazioni

Indici bibliometrici

ISI WoS: H Index = 36; Scopus: H Index = 39; Google Scholar: H Index = 47

Articoli su riviste internazionali e libri con revisione scientifica

1. Fuggi A., S. Re, G. Tango, S. Del Gaudio, A. Brovelli, **G. Cassiani**, 2024, Assessment of earthquake location uncertainties for the design of local seismic networks, in press, *Earthquake Science*.

2. Blanchy G., P. Mclachlan, B. Mary, M. Censini, J. Boaga, **G. Cassiani**, 2024, Comparison of multi-coil and multi-frequency frequency domain electromagnetic induction instruments, *Front. Soil Sci. - Sec. Pedometrics*, Vol. 4, doi: 10.3389/fsoil.2024.1239497
3. Carrera A., I. Barone, M. Pavoni, J. Boaga, N. Dal Ferro, **G. Cassiani**, F. Morari, 2024, Assessment of different agricultural soil compaction levels using shallow seismic geophysical methods, *in press, Geoderma*.
4. Barone I., V. Cascone, A. Brovelli, G. Tango, S. Del Gaudio, **G. Cassiani**, 2024, Shear-wave velocity structure derived from seismic ambient noise recorded by a small reservoir monitoring network, *Geophysical Prospecting*, doi: 10.1111/1365-2478.13486.
5. Mary B., V. Iván, F. Meggio, L. Peruzzo, G. Blanchy, C. Chou, B. Ruperti, Y. Wu, **G. Cassiani**, 2023, Imaging of the active root current pathway under partial root-zone drying 2 stress: A laboratory study for *Vitis vinifera*, *Biogeosciences*, doi: 10.5194/bg-2023-58.
6. Mary B., A. Sottani, J. Boaga, I. Camerin, R. Deiana, **G. Cassiani**, 2023, Non-invasive investigations of closed landfills: An example in a karstic area, *Science of the Total Environment*, 905, 167083, doi: 10.1016/j.scitotenv.2023.167083.
7. Sgarabotto A., E. Bellizia, A. Finotello, A. D'Alpaos, S. Lanzoni, J. Boaga, **G. Cassiani**, M. Ghinassi, 2023, Reconstructing sediment distributions in meandering river deposits through a simplified numerical modeling approach with applications to the Holocene deposits of the Venetian Plain (Italy), *in press, The Geological Society, London, Special Publications*, 540, doi: 10.1144/SP540-2022-220.
8. Bellizia E., J. Boaga, P. Mozzi, **G. Cassiani**, A. D'Alpaos, A. Finotello, M. Ghinassi, 2023, Impact of morpho-sedimentary heterogeneities on the evolution of coastal meandering rivers (Brenta River, Italy), *Geomorphology*, Volume 437, 15 September 2023, 108797, doi: 10.1016/j.geomorph.2023.108797.
9. Barone I., **G. Cassiani**, A. Ourabah, J. Boaga, M. Pavoni, R. Deiana, 2023, Integrating controlled-source and ambient noise seismic measures for archaeological prospection: The Scrovegni Chapel case, *Geophysical Journal International*, 232 (3), 1944–1956, doi: 10.1093/gji/ggac432
10. Carrera A., M. Longo, I. Piccoli, B. Mary, **G. Cassiani**, F. Morari, 2022, Assessment of hydrological impacts of different agricultural practices using shallow geophysical methods, *Remote Sensing*, 14, 6243. <https://doi.org/10.3390/rs14246243>
11. Mary B., L. Peruzzo, Y. Wu and **G. Cassiani**, 2022, Advanced potential field analysis applied to Mise-à-la-Masse surveys, *Journal of Geophysical Research – Solid Earth*, 127, e2022JB024747, doi: 10.1029/2022JB024747.
12. Rani P. and **G. Cassiani**, 2022, Tracking contaminant transport using time-lapse geophysics: A review on applications of electrical methods, *Water Security*, 17 (2022) 100127, doi: 10.1016/j.wasec.2022.100127.

13. Barone I., **G. Cassiani**, A. Ourabah, J. Boaga, M. Pavoni, R. Deiana, 2022, Surface wave tomography using dense 3D data around the Scrovegni Chapel in Padua, Italy. *Scientific Reports*, 12, 11806, doi: 10.1038/s41598-022-16061-1.
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Note

Il sottoscritto dichiara, sotto la propria responsabilità, che quanto sopra affermato corrisponde a verità.

Si autorizza il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali".

Padova, 18 aprile 2024

Giorgio Cassiani