

# Giorgio Cassiani

## Curriculum Vitae

### Dati anagrafici

Luogo di nascita:

Stato civile:

Nazionalità:

### 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

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### 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.

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### 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.

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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).

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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.

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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.

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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).

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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".

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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

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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.

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**dal 2012**

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.

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**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.

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**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.

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**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.

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**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* (2<sup>nd</sup> year); obbligatorio per gli studenti del II anno del Bachelor.
- *ENV 351 - Project Appraisal for Environmental Management* (3<sup>rd</sup> 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

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**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.

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**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.

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- 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 Sassari, € 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. Damià 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** 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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- 2018-2020** **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: 40,000 NZ\$.

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**Altre attività****SERVIZIO PROFESSIONALE**

- **Membro a nomina MIUR del Consiglio di Amministrazione dell'OGS** – Istituto Nazionale di Oceanografia e Geofisica Sperimentale – 2015-2019.
- **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 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.
- **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).
- **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 di Hydrogeophysics (con David Hyndman ed Andreas Kemna) – American Geophysical Union AGU Fall Meeting – San Francisco, December 2005
- **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.

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- **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, 42<sup>nd</sup> *International IAH Congress “Aqua2015”*, Rome, September 13-18, 2015.
  - **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).
  - **Revisore scientifico per:**
    - 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)
  
- **Membro:**
  - 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.

### **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.
- **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.**, 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.
2. 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.
3. **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.
4. **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.
5. **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.
6. **Cassiani G.**, M. Putti, J. Boaga, L. Busato, D. Vanella, S. Consoli, 2016, Non-invasive



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- monitoring and modelling of the root active zones: progresses, caveats and outlook, *invited talk*, AGU Fall Meeting, San Francisco, 12-16 December 2016.
7. **Cassiani G.**, 2015, Geophysical techniques for hydrological and hydrogeological characterization, *keynote speech*, session Hydrogeophysics, remote sensing, and radar technologies: innovative tools and recent development, *42<sup>nd</sup> International IAH Congress "Aqua2015"*, Rome, September 13-18, 2015.
  8. **Cassiani G.**, 2015, Hydro-geophysical monitoring of roots and hyphoreic zone, *invited talk*, Workshop "Geophysics for the Characterization of the Critical Zone", *EAGE Near Surface Geoscience 2015*, September 6-10, 2015, Turin, Italy.
  9. **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.
  10. **G. Cassiani**, 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.
  11. Camporese 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.
  12. **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*, 74<sup>th</sup> EAGE Conference and Exhibition, Copenhagen, WP8: Fully Integrated Geomechanical Workflow: A Myth or a Fact?, 4 June 2012.
  13. **Cassiani G.**, N. Ursino, R. Deiana, G. Vignoli, J. Boaga, M. Rossi, M.T. Perri, M. Blaschek, R. Duttmann, 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.
  14. **Cassiani G.**, R. Deiana, M. Camporese, 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).
  15. **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

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for groundwater mapping.

16. **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.
17. **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, 72<sup>nd</sup> EAGE Conference & Exhibition incorporating SPE EUROPEC 2010, Barcelona, Spain, 14 - 17 June 2010.
18. **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.
19. **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.
20. 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.
21. Kemna A., **G. Cassiani**, T. Winchen, J.A. Huisman, and J. Vanderborcht, 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
22. **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.
23. **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 = 24; Scopus: H Index = 27; Google Scholar: H index = 31**

**Articoli su riviste internazionali e libri con revisione scientifica**

1. Flores Orozco A., A. Kemna, A. Binley and **G. Cassiani**, 2019, Analysis of time-lapse data error in complex conductivity imaging to alleviate anthropogenic noise for site characterization, *in press, Geophysics*.
2. Boaga J., F. Casarin, D. De Marchi, M.R. Valluzzi, **G. Cassiani**, 2019, 2016 Central-Italy earthquakes recorded by low cost MEMS distributed arrays, *in press, Seismological Research Letters*.
3. Busato L., J. Boaga, M.T. Perri, B. Majone, A. Bellin, **G. Cassiani**, 2019, Hydrogeophysical characterization and monitoring of the hyporheic and riparian zones: the Vermigliana Creek

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- case study, *Science of the Total Environment*, 648 (2019) 1105–1120, doi: 10.1016/j.scitotenv.2018.08.179.
4. Bossi G., S. Bersan, S. Cola, L. Schenato, F. De Polo, C. Menegazzo, J. Boaga, **G. Cassiani**, F. Donini, P. Simonini, 2019. Multidisciplinary analysis and modelling of a river embankment affected by piping (Book Chapter), *Lecture Notes in Civil Engineering*, Volume 17, 2019, Pages 234-244, Springer, 10.1007/978-3-319-99423-9\_22
  5. Song S., U. Tinivella, M. Giustiniani, S. Singhroha, S. Bünz, **G. Cassiani**, 2018, OBS Data Analysis to Quantify Gas Hydrate and Free Gas in the South Shetland Margin (Antarctica), *Energies*, 11, 3290; doi:10.3390/en11123290.
  6. Mary, B., Peruzzo, L., Boaga, J., Schmutz, M., Wu, Y., Hubbard, S. S., and **Cassiani, G.**, 2018, Small scale characterization of vine plant root water uptake via 3D electrical resistivity tomography and Mise-à-la-Masse method, *Hydrol. Earth Syst. Sci.*, doi: 10.5194/hess-2018-238.
  7. Boaga J., M. Ghinassi, A. D'Alpaos, G.P. Deidda, G. Rodriguez, **G. Cassiani**, 2018, Geophysical investigations unravel the vestiges of ancient meandering channels and their dynamics in tidal landscapes, *Scientific Reports*, Volume 8, Issue 1, Article number 20061, doi: 10.1038/s41598-018-20061-5.
  8. Perri M.T., P. De Vita, R. Masciale, I. Portoghese, G.B. Chirico and **G. Cassiani**, 2018, Time-lapse Mise-à-la-Masse measurements and modelling for tracer test monitoring in a shallow aquifer, *Journal of Hydrology*, 561, 461-477, doi: 10.1016/j.jhydro.2017.11.013
  9. Preti F., Guastini E., Penna D., Dani A., **Cassiani G.**, Boaga J., Deiana R., Romano N., Nasta P., Palladino M., Errico A., Giambastiani Y., Trucchi P., Tarolli P., 2018, Conceptualization Of Water Flow Pathways In Agricultural Terraced Landscapes, *Land Degradation & Development*, 29(3), 651-662, doi: 10.1002/ldr.2764.
  10. Vanella D., **G. Cassiani**, L. Busato, J. Boaga, S. Barbagallo, A. Binley, S. Consoli, 2018, Use of small scale electrical resistivity tomography to identify soil-root interactions during deficit irrigation, *Journal of Hydrology*, 556, 310-324, doi: 10.1016/j.jhydro.2017.11.025.
  11. Raffelli G., M. Previati, D. Canone, D. Gisolo, I. Bevilacqua, G. Capello, M. Biddoccu, E. Cavallo, R. Deiana, **G. Cassiani**, S. Ferraris, 2017, Local and plot scale measurements of soil moisture: an overview of different techniques applied in plain, hill and mountain experimental sites, *Water*, 9(9), 706, doi: 10.3390/w9090706.
  12. **Cassiani G.**, A. Brovelli, T. Hueckel, 2017, A strain-rate-dependent Modified Cam-Clay Model for the simulation of soil/rock compaction, *Geomechanics for Energy and the Environment*, 11, 42-51, doi: 10.1016/j.gete.2017.07.001.
  13. Haaken K., G.P. Deidda, **G. Cassiani**, A. Kemna, R. Deiana, M. Putti and C. Paniconi, 2017, Flow dynamics in hyper-saline aquifers: hydro-geophysical monitoring and modelling, *Hydrol. Earth Syst. Sci.*, Volume: 21 Issue: 3 Pages: 1439-1454, doi: 10.5194/hess-21-1439-2017.
  14. Rossi M., A. Brovelli, **G. Cassiani**, S. Johansson, T. Dahlin, 2017, Contribution of Stern Layer and Membrane Polarization to the Spectral Induced Polarization of Porous Media,

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- EAGE Near Surface Geoscience 2017*, September 3, 2017, Malmoe, Sweden.
15. Consoli S., F. Stagno, D. Vanella, J. Boaga, **G. Cassiani**, G. Rocuzzo, 2017, Partial root-drying irrigation in orange orchards: effects on water use and crop production characteristics, *European J. of Agronomy*, Volume 82, 190-202, doi: 10.1016/j.eja.2016.11.001.
  16. Rossi M., **G. Cassiani**, G. Vignoli, J. Irving, R. Deiana, A. Binley, 2017, Intricacies in the interpretation of Vertical Radar Profiling caused by borehole effects, *EAGE Near Surface Geoscience 2017*, September 3, 2017, Malmoe, Sweden.
  17. Busato L., J. Boaga, L. Peruzzo, M. Himi, S. Cola, S. Bersan, **G. Cassiani**, 2016, Combined geophysical surveys for the characterization of a reconstructed river embankment, *Engineering Geology*, Volume 211, pages 74-84, doi: 10.1016/j.enggeo.2016.06.023
  18. Petronio L., J. Boaga, **G. Cassiani**, 2016, Characterization of the Vajont landslide (North-Eastern Italy) by means of reflection and surface wave seismics, *Journal of Applied Geophysics*, 128, May 01, 2016, Pages 58-67, doi: 10.1016/j.jappgeo.2016.03.012
  19. **Cassiani G.**, J. Boaga, M. Rossi, G. Fadda, M. Putti, B. Majone, A. Bellin, 2016, Soil-plant interaction monitoring: small scale example of an apple orchard in Trentino, North-Eastern Italy, *Science of the Total Environment*, Vol. 543, Issue Pt B, pp. 851-861, doi: 10.1016/j.scitotenv.2015.03.113.
  20. **Cassiani G.**, J. Boaga, L. Busato, L. Peruzzo, M. Himi and A. Casas, 2016, Combined geophysical surveys for the characterization of a reconstructed river embankment, 22nd European Meeting of Environmental and Engineering Geophysics, Near Surface Geoscience 2016, Sept 4-8, 2016, Barcelona.
  21. Vignoli G., I. Gervasio, G. Brancatelli, J. Boaga, B. Della Vedova, **G. Cassiani**, 2016, Frequency-dependent multi-offset phase analysis of surface waves: an example of high resolution characterization of a riparian aquifer, *Geophysical Prospecting*, 64(1), 102-111, doi: 10.1111/1365-2478.12256
  22. Boaga J., S. Renzi, R. Deiana and **G. Cassiani**, 2015, Soil damping influence on seismic response analysis: a linear-equivalent Monte Carlo study, *Soil Dynamics and Earthquake Engineering*, Volume 79, December 01, 2015, Article number 4325, Pages 71-79, doi: 10.1016/j.soildyn.2015.09.002.
  23. Strobbia C.L., J. Boaga and **G. Cassiani**, 2015, Double-array refraction microtremors, *Journal of Applied Geophysics*, Volume 121, October 01, 2015, Pages 31-41, doi: 10.1016/j.jappgeo.2015.07.007
  24. Piccolroaz S., B. Majone, F. Palmieri, **G. Cassiani** and A. Bellin, 2015, On the use of spatially distributed, time-lapse micro-gravity surveys to inform hydrological modeling, *Water Resources Research*, 51(9), 7270-7288, doi: 10.1002/2015WR016994.
  25. Rossi M., G. Manoli, D. Pasetto, R. Deiana, S. Ferraris, C. Strobbia, M. Putti and **G. Cassiani**, 2015, Coupled inverse modeling of a controlled irrigation experiment using multiple hydro-geophysical data, *Advances in Water Resources*, 82,150-165, doi: 10.1016/j.advwatres.2015.03.008.
  26. **Cassiani G.**, J. Boaga, D. Vanella, M. T. Perri, S. Consoli, 2015, Monitoring and modelling

- of soil-plant interactions: the joint use of ERT, sap flow and Eddy Covariance data to characterize the volume of an orange tree root zone, *Hydrol. Earth Syst. Sci.*, 19, 2213-2225, doi:10.5194/hess-19-2213-2015.
27. Camporese M., **G. Cassiani**, R. Deiana, P. Salandin and A. Binley, 2015, Coupled and uncoupled hydrogeophysical inversions using ensemble Kalman filter assimilation of ERT-monitored tracer test data, *Water Resources Research*, 51(5), 3277-3291, doi: 10.1002/2014WR016017.
  28. Manoli G., M. Rossi, D. Pasetto, R. Deiana, S. Ferraris, **G. Cassiani** and M. Putti, 2015, An iterative particle filter approach for coupled hydro-geophysical modeling and inversion of a controlled infiltration experiment, *Journal of Computational Physics*, pp 37-51, doi: 10.1016/j.jcp.2014.11.035
  29. Navarro-Ortega A., V. Acuña, A. Bellin, P. Burek, **G. Cassiani**, R. Choukr-Allah, S. Dolédec, A. Elozegi, F. Ferrari, A. Ginebreda, P. Grathwohl, C. Jones, P. Ker Rault, K. Kok, P. Koundouri, R. P. Ludwig, R. Merz, R. Milacic, I. Muñoz, G. Nikulin, C. Paniconi, M. Paunović, M. Petrovic, L. Sabater, S. Sabater, N. Th. Skoulikidis, A. Slob, G. Teutsch, N. Voulvoulis and Damià Barceló, 2015, Managing the effects of multiple stressors on aquatic ecosystems under water scarcity. The GLOBAQUA project, *Science of the Total Environment*, Vol. 504, pp. 3-9, doi: 10.1016/j.scitotenv.2014.06.081
  30. Perri M.T., P. De Vita, **G. Cassiani**, R. Masciale, I. Portoghese, G.B. Chirico, 2015, Quantitative interpretation of time-lapse MALM measurements during a saline tracer injection in an alluvial aquifer, Near Surface Geoscience 2015 - 21st European Meeting of Environmental and Engineering Geophysics2015, Pages 606-610, Turin, Sep 6-10, 2015.
  31. Perri M.T., J. Boaga, S. Bersan, **G. Cassiani**, S. Cola, R. Deiana, P. Simonini, S. Patti, 2014, River embankment characterization: the joint use of geophysical and geotechnical techniques, *Journal of Applied Geophysics*, Vol. 110, pp 5-22, doi: 10.1016/j.jappgeo.2014.08.012.
  32. Boaga J., A. D'Alpaos, **G. Cassiani**, M. Marani, M. Putti, 2014, Plant-soil interactions in salt-marsh environments: experimental evidence from electrical resistivity tomography (ERT) in the Venice lagoon, *Geophysical Research Letters*, Vol 41, pp.6160-6166, doi: 10.1002/2014GL060983.
  33. Ursino N., **G. Cassiani**, R. Deiana, G. Vignoli and J. Boaga, 2014, Measuring and Modelling water related soil – vegetation feedbacks in a fallow plot, *Hydrology and Earth System Sciences (HESS)*, doi:10.5194/hess-18-1105-2014.
  34. Boaga J., G. Vignoli, R. Deiana, **G. Cassiani**, 2014, The influence of subsoil structure and acquisition parameters on surface wave mode contamination, *Journal of Environmental and Engineering Geophysics*, v. 19, p. 87-99, doi:10.2113/JEEG19.2.87
  35. **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, 2014, Non-invasive characterization of the Trecate (Italy) crude-oil contaminated site: links between contamination and geophysical signals, *Environmental Science and Pollution Research*, Special Issue on "New approaches for low-invasive contaminated site

- 
- characterization, monitoring and modelling", vol. 21, issue 15, 8914-8931, doi: 10.1007/s11356-014-2494-7.
36. Petronio L., J. Boaga, **G. Cassiani**, 2013, Reflection seismic and surface wave analysis on complex heterogeneous media: The case of mount toc landslide In the vajont valley, Italian Journal of Engineering Geology and Environment, Volume 2013, Issue TOPIC 6, Pages 593-598, doi: 10.4408/IJEGE.2013-06.B-57.
  37. De Carlo L., M.T. Perri, M.C. Caputo, R. Deiana, M. Vurro and **G. Cassiani**, 2013, Characterization of the confinement of a dismissed landfill via electrical resistivity tomography and mise-à-la-masse, *Journal of Applied Geophysics*, 98 (2013) 1–10, doi: 10.1016/j.jappgeo.2013.07.010.
  38. Weill S., M. Altissimo, **G. Cassiani**, R. Deiana, M. Marani, M. Putti, 2013, Saturated area dynamics and streamflow generation from coupled surface–subsurface simulations and field observations, *Advances in Water Resources*, 59, 196-208, doi: 10.1016/j.advwatres.2013.06.007
  39. Tinivella U., M. Giustiniani, **G. Cassiani**, 2013, Geophysical methods for environmental studies (Editorial), *International Journal of Geophysics*, Volume 2013, Art. No. 950353, doi: 10.1155/2013/950353.
  40. Boaga J., **G. Cassiani**, C. L. Strobbia and G. Vignoli, 2013, Mode mis-identification in Rayleigh waves: ellipticity as a cause and a cure, *Geophysics*, 78(4), 1-12, doi: 10.1190/GEO2012-0194.1.
  41. Boaga J., M. Rossi and **G. Cassiani**, 2013, Monitoring soil-plant interactions in an apple orchard using 3D electrical resistivity tomography, Conference on Four Decades of Progress in Monitoring and Modeling of Processes in the Soil-Plant-Atmosphere System: Applications and Challenges, Naples, 19-21 June 2013; Series: Procedia Environmental Sciences Volume: 19, Pages: 394-402.
  42. Gervasio I., B. Della Vedova, **G. Cassiani**, E. Dazzan, R. Deiana, 2012, Characterization of Bagni di Lusnizza (Udine) sulphureous water resource by Integrated Geophysical Methods. Vol 53, *Bollettino di Geofisica Teorica ed Applicata*, doi: 10.4430/bgta0063.
  43. **Cassiani G.**, A. Brovelli, G. Vignoli and B. Plischke, 2012, A study of geomechanical effects on time-lapse seismics, 74th EAGE Conference and Exhibition Incorporating SPE EUROPEC 2012; Copenhagen; Denmark; 4 June 2012 through 7 June 2012.
  44. Kemna A., A. Binley, **G. Cassiani**, E. Niederleithinger, A. Revil, L. Slater, K. H. Williams, A. Flores Orozco, F.-H. Haegel, A. Hördt, S. Kruschwitz, V. Leroux, K. Titov, E. Zimmermann, 2012, An overview of the spectral induced polarization method for near-surface applications, *Near Surface Geophysics*, doi: 10.3997/1873-0604.2012027.
  45. **Cassiani G.**, N. Ursino, R. Deiana, G. Vignoli, J. Boaga, M. Rossi, M. T. Perri, M. Blaschek, R. Duttmann, S. Meyer, R. Ludwig, A. Soddu, P. Dietrich and U. Werban, 2012, Non-invasive monitoring of soil static characteristics and dynamic states: a case study highlighting vegetation effects, *Vadose Zone Journal*, Special Issue on SPAC - Soil-plant interactions from local to landscape scale, August 2012, V.11, vzj2011.0195, doi: 10.2136/2011.0195.

- 
46. Rossi M., **G. Cassiani** and A.M. Binley, 2012, A Stochastic Analysis Of Cross-Hole GPR Zero-Offset Profiles For Subsurface Characterization, *Vadose Zone Journal*, v. 11, issue 4, pp CP9-+, doi:10.2136/vzj2011.0078
  47. Boaga J., S. Renzi, G. Vignoli, R. Deiana and **G. Cassiani**, 2012, From surface wave inversion to seismic site response prediction: beyond the 1D approach, *Soil Dynamics and Earthquake Engineering*, doi:10.1016/j.soildyn.2012.01.001.
  48. Vignoli, G., **G. Cassiani**, M. Rossi, R. Deiana, J. Boaga and P. Fabbri, 2012, Geophysical characterization of a small pre-alpine catchment, *Journal of Applied Geophysics*, 80, 32-42, doi:10.1016/j.jappgeo.2012.01.007.
  49. Boaga J., G. Vignoli and **G. Cassiani**, 2012, Reply to Comment on “Shear wave profiles from surface wave inversion: the impact of uncertainty onto seismic site response analysis”, *Journal of Geophysics and Engineering*, 9, 244–246, doi:10.1088/1742-2132/9/2/244.
  50. Perri M.T., **G. Cassiani**, I. Gervasio, R. Deiana, A.M. Binley, 2012, A saline tracer test monitored via both surface and cross-borehole electrical resistivity tomography: comparison of time-lapse results, *Journal of Applied Geophysics*, 79, 6-16, doi: 10.1016/j.jappgeo.2011.12.011.
  51. Vignoli, G., R. Deiana and **G. Cassiani**, 2012, Focused inversion of Vertical Radar Profile (VRP) travel-time data, *Geophysics*, 77, No.1, H9-H18, doi: 10.1190/GEO2011-0147.1.
  52. Camporese M., **G. Cassiani**, R. Deiana and P. Salandin, 2011, Assessment of local hydraulic properties from electrical resistivity tomography monitoring of a three-dimensional synthetic tracer test experiment, *Water Resources Research*, 47, W12508, doi:10.1029/2011WR010528, 2011.
  53. Brovelli A. and **G. Cassiani**, 2011, Combined estimation of effective electrical conductivity and permittivity for soil monitoring, *Water Resources Research*, 47, W08510, doi:10.1029/2011WR010487.
  54. Boaga J., G. Vignoli and **G. Cassiani**, 2011, Shear wave profiles from surface wave inversion: the impact of uncertainty onto seismic site response analysis, *Journal of Geophysics and Engineering*, 8, 162-174, doi:10.1088/1742-2132/8/2/004.
  55. Strobbia, C. and **G. Cassiani**, 2011, Refraction Microtremors (ReMi): data analysis and diagnostics of key hypotheses, *Geophysics*, 76(3), MA11–MA20, doi:10.1190/1.3560246.
  56. Vignoli G., C. Strobbia, **G. Cassiani** and P. Vermeer, 2011, Statistical Multi-Offset Phase Analysis (sMOPA) for surface wave processing in laterally varying media, *Geophysics*, 76, U1, doi:10.1190/1.3542076.
  57. Scudiero E., R. Deiana, P. Teatini, **G. Cassiani** and F. Morari, 2011, Constrained optimization of spatial sampling in salt contaminated coastal farmland using EMI and continuous simulated annealing, *Spatial Statistics 2011: Mapping Global Change*, *Procedia of Environmental Sciences*, 7, 234-239, doi: 10.1016/j.proenv.2011.07.041
  58. Binley A.M, **G. Cassiani** and R. Deiana, 2010, Hydrogeophysics – Opportunities and Challenges, *Bollettino di Geofisica Teorica ed Applicata*, 51(4), 267-284.



- 
59. Ludwig, R., A. Soddu, R. Duttmann, N. Baghdadi, S. Benabdallah, R. Deidda, M. Marrocu, G. Strunz, F. Wendland, G. Engin, C. Paniconi, F. Prettenthaler, I. Lajeunesse, S. Afifi, **G. Cassiani**, A. Bellin, B. Mabrouk, H. Bach, T. Ammerl, 2010, Climate-induced changes on the hydrology of mediterranean basins - a research concept to reduce uncertainty and quantify risk, *Fresenius Environmental Bulletin*, 19(10A), Sp. Iss. SI, 2379-2384.
  60. Monego. M., **G. Cassiani**, R. Deiana, M. Putti, G. Passadore and L. Altissimo, 2010, Tracer test in a shallow heterogeneous aquifer monitored via time-lapse surface ERT, *Geophysics*, Vol. 75, No. 4, WA61–WA73, doi: 10.1190/1.3474601.
  61. Brovelli A. and **G. Cassiani**, 2010, A combination of the Hashin-Shtrikman bounds aimed at modelling electrical conductivity and permittivity of variably saturated porous media, *Geophysical Journal International*, 180, 225-237, DOI: 10.1111/j.1365-246X.2009.04415.x.
  62. Zocatelli C., F. Verdecchia, **G. Cassiani**, R. Deiana, N. Praticelli, 2010, In situ compaction measurements via radioactive markers: an analysis of data precision, *Eisols 2010 (Eighth International Symposium on Land Subsidence)*, Land subsidence, associated hazards and the role of natural resources development, IAHS Publication, Vol. 339, pp 364-367.
  63. Altissimo M., Marani M., Weill S., **Cassiani G.**, Deiana R., Rossi M., Putti M., 2010, Hillslope controls on the hydrologic response from a coupled surface/subsurface model, *Proceedings of the XVIII International Conference on Computational Methods in Water Resources*, Barcelona, Spain, June 21-24, 2010, pp. 705-712.
  64. Werban U., T. Behrens, **G. Cassiani** and P. Dietrich, 2010, iSOIL: an EU project to integrate geophysics, digital soil mapping and soil science, *Proximal Soil Sensing*, Progress in Soil Science, Vol. 1, Part 2, 103-110, DOI: 10.1007/978-90-481-8859-8\_8, Springer.
  65. Vignoli G. and **G. Cassiani**, 2010, Identification of lateral discontinuities via multi-offset phase analysis of surface wave data, *Geophysical Prospecting*, 58, 389-413, DOI: 10.1111/j.1365-2478.2009.00838.x.
  66. Brovelli A. and **G. Cassiani**, 2010, Sensitivity of intrinsic permeability to electrokinetic coupling in shaly and clayey porous media, *Transport in Porous Media*, DOI 10.1007/s11242-009-9472-4.
  67. **Cassiani G.**, A. Godio, S. Stocco, A. Villa, R. Deiana, P. Frattini, M. Rossi, 2009, Monitoring the hydrologic behaviour of steep slopes via time-lapse electrical resistivity tomography, *Near Surface Geophysics*, special issue on Hydrogeophysics – Methods and Processes, p.475-486, doi: 10.3997/1873-0604.2009013.
  68. **Cassiani, G.**, A. Kemna, A. Villa, and E. Zimmermann, 2009, Spectral induced polarization for the characterization of free-phase hydrocarbon contamination in sediments with low clay content, *Near Surface Geophysics*, special issue on Hydrogeophysics – Methods and Processes, p. 547-562. doi: 10.3997/1873-0604.2009028.
  69. **Cassiani, G.**, S. Ferraris, M. Giustiniani, R. Deiana and C. Strobbia, 2009, Time-lapse surface-to-surface GPR measurements to monitor a controlled infiltration experiment, in press, *Bollettino di Geofisica Teorica ed Applicata*, Vol. 50, 2 Marzo 2009, pp. 209-226.
  70. Brovelli A. and **G. Cassiani**, 2008, Effective permittivity of porous media: a critical analysis

- of the Complex Refractive Index Model (CRIM), *Geophysical Prospecting*, 2008, 56, 715–727, DOI: 10.1111/j. 1365-2478.2008.00724.x.
71. Kästner M. and **G. Cassiani**, 2008, Model driven Soil Probing, Site Assessment and Evaluation - An overview on the EU Project ModelPROBE, Proceedings of the Consoil 2008 conference, Milan, June 3-6, 2008, Special Sessions, pp. 32-52.
  72. Werban, U., T. Behrens, **G. Cassiani** and P. Dietrich, Interactions between soil related sciences – Linking geophysics, soil science and digital soil mapping, Proceedings of the Consoil 2008 conference, Milan, June 3-6, 2008, Special Sessions, pp. 77-81.
  73. **Cassiani G.**, N. Fusi, D. Susanni and R. Deiana, 2008, Vertical Radar Profiles for the assessment of landfill capping effectiveness, *Near Surface Geophysics*, Vol. 6, 133-142, doi: 10.3997/1873-0604.2008010.
  74. Deiana R., **G. Cassiani**, A. Villa, A. Bagliani and V. Bruno, 2008, Calibration of a vadose zone model using water injection monitored by GPR and electrical resistance tomography, doi: 10.2136/vzj2006.0137 *Vadose Zone Journal*, Feb 25 2008: 215-226.
  75. 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, doi: 10.3997/1873-0604.2006030.
  76. Strobbia C. and **G. Cassiani**, 2007, Multi-layer GPR guided waves in shallow soil layers for the estimation of soil water content, *Geophysics*, Vol. 72, No. 4; p. J17–J29, 10.1190/1.2716374.
  77. **Cassiani, G.**, A.M. Binley and T.P.A. Ferré, 2006, Unsaturated zone processes, in *Applied Hydrogeophysics*, H. Vereecken et al. (eds.), Springer-Verlag.
  78. **Cassiani, G.**, V. Bruno, A. Villa, N. Fusi, A.M. Binley, 2006, A saline tracer test monitored via time-lapse surface electrical resistivity tomography, *Journal of Applied Geophysics*, 59, 244-259, doi: 10.1016/j.jappgeo2005.10.007.
  79. **Cassiani, G.**, C. Strobbia, M. Giustiniani, N. Fusi, G.B. Crosta, P. Frattini, 2006, Monitoring of hydrological hillslope processes via time-lapse ground-penetrating radar, *Bollettino di Geofisica Teorica ed Applicata*, Vol.47, No.1-2, March-June 2006, pp-125-144.
  80. Binley, A.M., L.D. Slater, M. Fukes and **G. Cassiani**, 2005, The relationship between frequency dependent electrical resistivity and hydraulic properties of saturated and unsaturated sandstone, *Water Resources Research*, Vol. 41, No. 12, W12417 <http://dx.doi.org/10.1029/2005WR004202>, 14 December 2005
  81. Brovelli, A., **G. Cassiani**, E. Dalla, F. Bergamini, D. Pitea and A.M. Binley, 2005, Electrical properties of partially saturated sandstones: a novel computational approach with hydro-geophysical applications, *Water Resources Research*, Vol. 41, No. 8, W08411, <http://dx.doi.org/10.1029/2004WR003628>, 17 August 2005.
  82. Pruiksma, J. H. Teunissen, F. Barends, B. Orlic, and **G. Cassiani**, 2005, Sensitivity analysis and model type evaluation for subsidence above offshore gas fields, Proceedings Seventh International Symposium On Land Subsidence (Sisols2005), Shanghai, China, October

- 
- 2005, pp. 65-78.
83. Hueckel T., **G. Cassiani**, J. H. Prevost and D. A. Walters, 2005, Field Derived Compressibility Of Deep Sediments Of North Adriatic, Proceedings Seventh International Symposium On Land Subsidence (Sisols2005), Shanghai, China, October 2005, pp. 35-49.
  84. **Cassiani G.**, L.F. Burbery and M. Giustiniani, 2005, A Note On In-Situ Estimates Of Sorption Using Push-Pull Tests, *Water Resources Research*, Vol. 41, No. 3, W03005, doi/10.1029/2004WR003382, 05 March 2005.
  85. **Cassiani G.** and A. M. Binley, 2005, Modeling Unsaturated Flow in a Layered Formation under Quasi-Steady State Conditions Using Geophysical Data Constraints, *Advances in Water Resources*, Vol. 28/5, 467-477.
  86. **Cassiani G.**, C. Strobbia and L. Gallotti, 2004, Vertical Radar Profiles For The Characterization Of Deep Vadose Zones, *Vadose Zone Journal*, Vol.3, 1093-1115.
  87. Dalla E., **G. Cassiani**, A. Brovelli, D. Pitea, 2004, Electrical conductivity of unsaturated porous media: pore-scale models and comparison with laboratory data, *Geophysical Research Letters*, Vol. 31, No.5, L05609 10.1029/2003GL019170 10 March 2004
  88. **Cassiani, G.**, E. Dalla, A. Brovelli, and D. Pitea, 2004, Pore-scale modeling of electrical conductivities in unsaturated sandstones. Proc. XV International Conference on Computational Methods in Water Resources, Chapel Hill, North Carolina, U.S.A., June 13-17, Vol.1, pp. 235-246.
  89. Christensen O., **G. Cassiani**, P.J. Diggle, P. Ribeiro and G. Andreotti, 2004, Statistical estimation of the relative efficiency of natural attenuation mechanisms in contaminated aquifers, *Stochastic Environmental Research and Risk Assessment*, 18, 339-350.
  90. Burbery L., **G. Cassiani**, G. Andreotti, T. Ricchiuto, K.T. Semple, 2004, Well test and stable isotope analysis for the determination of sulphate-reducing activity in a fast aquifer contaminated by hydrocarbons, *Environmental Pollution*, 129 (2), 321-330.
  91. Binley, A.M., **G. Cassiani** and P. Winship, 2004, Characterization of Heterogeneity in Unsaturated Sandstone using Borehole Logs and Cross Borehole Tomography, *SEPM (Society for Sedimentary Geology) Special Publication No.80, Aquifer characterization*, J. Bridge and D. W. Hyndman (eds), 176 p.
  92. Binley A.M., **G. Cassiani**, R. Middleton, and P. Winship, 2002, Vadose zone flow model parameterisation using cross-borehole radar and resistivity imaging, *Journal of Hydrology*, 267, 147-159.
  93. Slater L., R. Versteeg, A. Binley, **G. Cassiani**, R. Birken and S. Sandberg, 2002, A 3D ERT Study of Solute Transport in a Large Experimental Tank, *Journal of Applied Geophysics*, 49, 211-229.
  94. Hueckel T., **G. Cassiani**, F. Tao, A. Pellegrino, V. Fioravante, 2001. Aging Of Oil/Gas Bearing Sediments, Their Compressibility and Subsidence. *Journal of Geotechnical and Geoenvironmental Engineering*. Vol. 127(11), Pp. 926-938.
  95. **Cassiani G.** and C. Zoccatelli, 2000, Subsidence Risk in Venice and Nearby Areas, Italy,

- owing to Offshore Gas Fields: a Stochastic Analysis, *Environmental and Engineering Geoscience Journal*, Vol. VI. No.2, 115-128.
96. **Cassiani G.**, Z.J. Kabala and M.A. Medina, 1999, Flowing Partially Penetrating Well: a Solution of a Mixed-Type Boundary Value Problem, *Advances in Water Resources*, Vol. 23, 59-68.
  97. **Cassiani G.**, 1998, A New Method for the Interpretation of the Constant-Head Well Permeameter, *Journal of Hydrology*, Vol. 210(1-4), 11-20.
  98. **Cassiani G.** and Z.J. Kabala, 1998, Hydraulics of a Partially Penetrating Well: Solution to the Mixed Boundary Value Problem via Dual Integral Equations, *Journal of Hydrology*, Vol. 211(1-4), 100-111.
  99. **Cassiani G.** and G. Christakos, 1998, Analysis and Estimation of Natural Processes with Nonhomogeneous Spatial Variation Using Secondary Information, *Journal of Mathematical Geology*, Vol. 30, No.1, 57-76.
  100. **Cassiani G.**, G. Boehm, A. Vesnaver and R. Nicolich, 1998, A Geostatistical Framework for Incorporating Seismic Tomography Auxiliary Data into Hydraulic Conductivity Estimation, *Journal of Hydrology*, Vol. 206(1-2), 58-74.
  101. Kabala Z.J. and **G.Cassiani**, 1997, Well Hydraulics with the Weber-Goldstein Transforms, *Transport in Porous Media*, 29(2), 225-246.
  102. **Cassiani G.** and M.A. Medina, 1997, Incorporating Geophysical Auxiliary Data into Groundwater Flow Parameter Estimation, *Ground Water*, Vol. 35, 79-91.
  103. **Cassiani G.** and M.A. Medina, 1996, Two-Pump System for NAPL Free-Phase Recovery: Numerical Simulations of Downconing, *Hydrologic Science and Technology*, Vol.12 (1-4).
  104. **Cassiani G.**, W.H. Liu, M.A. Medina and T.L. Jacobs, 1995, Groundwater pollution remediation and control: The role of global optimizers and exploitation of available information. Proceedings of the conference Integrated Water Resources Planning For The 21st Century, Harvard University, pp. 690-693.
  105. Chiaruttini C., P.L. Bragato, and **G. Cassiani**, 1994, Seismic Reflection Interpretation as an Image Understanding Problem, *Journal of Seismic Exploration*, Vol.3, 53-68.

### **Abstract, atti di congressi ed articoli su riviste senza revisione scientifica**

1. **Cassiani G.**, B. Mary, D. Vanella, B.A. Galletta, S. Barbagallo, G.L. Cirelli, S. Consoli, 2018, Assessing The Extent Of Citrus Trees Root Apparatus Under Deficit Irrigation Through Geophysical Imaging, *AGU Fall Meeting*, Washington DC, 10-14 December 2018.
2. Busato L., B. Mary, M. Palladino, N. Romano, J. Boaga, **G. Cassiani**, 2018, Monitoraggio geofisico del dominio non saturo in un sito contaminato soggetto a bonifica, GNGTS – 37° Congresso Nazionale, Bologna, 19-21 novembre 2018.
3. Barone I., **G. Cassiani**, C. Strobbia, 2018, Multi-mode multi-offset phase analysis of surface

- 
- wave data, a new approach to extend MOPA to higher modes, GNGTS – 37° Congresso Nazionale, Bologna, 19-21 novembre 2018.
4. Boaga J., F. Donini, G. Bossi, S. Cola, P. Simonini, **G. Cassiani**, 2018, Indagini ERT a supporto della modellazione idrologica in opere arginali: un caso in Provincia di Bolzano, GNGTS – 37° Congresso Nazionale, Bologna, 19-21 novembre 2018.
  5. Mary B., J. Boaga, L. Busato, **G. Cassiani**, 2018, Soil geological settings characterisation of a contaminated in an urban context: assimilation of archives, geotechnical and geophysical data to identify a clay layer discontinuity, GNGTS – 37° Congresso Nazionale, Bologna, 19-21 novembre 2018.
  6. **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.
  7. Mary B., 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.
  8. Song S., U. Tinivella, M. Giustiniani, **G. Cassiani**, S. Bünz and S. Singhroha, 2018, OBS data analysis to characterize gas hydrate reservoir in South Shetland margin (Antarctic Peninsula), EGU General Assembly 2018, Vienna, 8-13 April 2018.
  9. Song S., U. Tinivella, M. Giustiniani, **G. Cassiani**, S. Bünz and S. Singhroha, 2018, Seismic velocity analysis to quantify gas hydrate and free gas from OBS data in the South Shetland margin (Antarctic), 80th EAGE Conference & Exhibition 2018, 11 - 14 June, 2018, Copenhagen, Denmark
  10. Boaga J., B. Mary, L. Peruzzo, M. Schmutz, Y. Wu, S.S. Hubbard, **G. Cassiani**, 2017, 3D electrical resistivity tomography and Mise-à-la-Masse method as tools for the characterization of vine roots, *AGU Fall Meeting*, New Orleans, 11-15 December 2017.
  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. Vanella D., **G. Cassiani**, L. Busato, J. Boaga, S. Consoli, 2017, Application of electrical resistivity tomography to monitor the soil-root interactions under deficit irrigation, GNGTS – 36° Congresso Nazionale, Trieste, 14-16 novembre 2017.
  13. Mary B., L. Peruzzo, J. Boaga, M. Schmutz, Y. Wu, S.S. Hubbard, **G. Cassiani**, 2017, Small

- 
- scale characterization of vine plant Root Water Uptake via 3D electrical resistivity tomography and Mise-à-la-Masse method: a case study in a Bordeaux Vineyard (France), GNGTS – 36° Congresso Nazionale, Trieste, 14-16 novembre 2017.
14. **Cassiani G.**, M. Giustiniani, R. Nicolich, P. Primiero, C. Strobbia, U. Tinivella, 2017, Reprocessing Of Old Regional Seismic Lines For New Geothermal Targets: The Case Of CROP-03, GNGTS – 36° Congresso Nazionale, Trieste, 14-16 novembre 2017.
  15. M. Rossi, A. Brovelli, **G. Cassiani**, S. Johansson, T. Dahlin, 2017, Contribution of Stern Layer and Membrane Polarization to the Spectral Induced Polarization of Porous Media, GNGTS – 36° Congresso Nazionale, Trieste, 14-16 novembre 2017.
  16. **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.
  17. Rossi M., **G. Cassiani**, G. Vignoli, J. Irving, R. Deiana, A. Binley, 2017, Intricacies in the interpretation of Vertical Radar Profiling caused by borehole effects, *EAGE Near Surface Geoscience 2017*, September 3, 2017, Malmoe, Sweden.
  18. Rossi M., A. Brovelli, **G. Cassiani**, S. Johansson, T. Dahlin, 2017, Contribution of Stern Layer and Membrane Polarization to the Spectral Induced Polarization of Porous Media, *EAGE Near Surface Geoscience 2017*, September 3, 2017, Malmoe, Sweden.
  19. **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.
  20. Mary B., L. Peruzzo, J. Boaga, M. Schmutz, Y. Wu, S.S. Hubbard, **G. Cassiani**, 2017, Small scale characterization of vine plant root zone via 3D electrical resistivity tomography and Mise-à-la-Masse method: a case study in a Bordeaux Vineyard, EGU General Assembly 2017, Vienna, 23-28 April 2017.
  21. **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.
  22. Boaga J., M. Ghinassi, A. D'Alpaos, G.P. Deidda, G. Rodriguez, **G. Cassiani**, 2016, Multi-frequency inversion of FDEM data for the study of ancient meandering channels in tidal landscapes, *AGU Fall Meeting*, San Francisco, 12-16 December 2016.
  23. Boaga J., L. Busato, M.T. Perri and **G. Cassiani**, 2016, Time-lapse ERT and DTS for seasonal and short-term monitoring of an alpine river hyporheic zone, EGU General Assembly 2016, Vienna, 17-22 April 2016.

- 
24. Flores Orozco A., A. Kemna, **G. Cassiani** and A. Binley, 2016, Improved site contamination through time-lapse complex resistivity imaging, EGU General Assembly 2016, Vienna, 17-22 April 2016.
  25. Vanella D., L. Busato, J. Boaga, **G. Cassiani**, A. Binley, M. Putti, and S. Consoli, 2016, Micro 3D ERT tomography for data assimilation modelling of active root zone, EGU General Assembly 2016, Vienna, 17-22 April 2016.
  26. Boaga J., L. Busato, D. Vanella, S. Consoli, A. Binley, **G. Cassiani**, 2015, Micro 3D ERT tomography for data assimilation modeling of active root zone, *AGU Fall Meeting*, San Francisco, December 2015.
  27. Perri M.T., P. De Vita, **G. Cassiani**, R. Masciale, I. Portoghese, G.B. Chirico, 2015, Use of time-lapse Mise-à-la-Masse measurements to monitor a saline tracer test: advantages and limitations, *AGU Fall Meeting*, San Francisco, December 2015.
  28. Boaga J., L. Busato, M.T. Perri and **G. Cassiani**, 2015, ERT and DTS time-lapse monitoring of an Alpine river hyporheic zone, GNGTS – 34° Congresso Nazionale, Trieste, 17-19 novembre 2015.
  29. Rossi M., J. Boaga, G. Vignoli, **G. Cassiani**, R. Romeo, L. Petronio, A. Affatato, A. Barbagallo, 2015, An example of surface wave analysis in a dismissed and heterogeneous coastal oil deposit, GNGTS – 34° Congresso Nazionale, Trieste, 17-19 novembre 2015.
  30. Romeo R., L. Petronio, A. Affatato, A. Barbagallo, R. Belletti, G. Boehm, J. Boaga, **G. Cassiani**, P. Paganini, M. T. Perri, D. Sorgo, M. Rossi, 2015, Geophysical investigations in a dismissed industrial site: ex-Esso (Trieste, Italy), GNGTS – 34° Congresso Nazionale, Trieste, 17-19 novembre 2015.
  31. Perri M.T., P. De Vita, **G. Cassiani**, R. Masciale, I. Portoghese, G.B. Chirico, 2015, On the reliability of time-lapse mise-à-la-masse measurements to monitor a saline tracer test: a case study in the Campania Region (Italy), GNGTS – 34° Congresso Nazionale, Trieste, 17-19 novembre 2015.
  32. G. Vignoli, I. Gervasio, G. Brancatelli, J. Boaga, B. Della Vedova, **G. Cassiani**, 2015, A novel frequency-dependent MOPA of surface wave: theory and applications, GNGTS – 34° Congresso Nazionale, Trieste, 17-19 novembre 2015.
  33. Deidda G.P., J. Boaga, M. Ghinassi, A. D'Alpaos, **G. Cassiani**, 2015, Venice salt marsh meander evolution via multi-frequency inversion of FDEM data, GNGTS – 34° Congresso Nazionale, Trieste, 17-19 novembre 2015.
  34. Busato L., J. Boaga, L. Peruzzo, G. Asta, S. Cola, P. Simonini, **G. Cassiani**, 2015, Study of a reconstructed river embankment through a combination of non-invasive geophysical methodologies, GNGTS – 34° Congresso Nazionale, Trieste, 17-19 novembre 2015.

- 
35. **Cassiani G.**, Metodi geofisici per scopi ambientali, *invited talk*, Società Italiana di Fisica, 101° Congresso Nazionale, Roma, 22 settembre 2015.
  36. **Cassiani G.**, 2015, Geophysical techniques for hydrological and hydrogeological characterization, *keynote speech*, session Hydrogeophysics, remote sensing, and radar technologies: innovative tools and recent development, *42<sup>nd</sup> International IAH Congress "Aqua2015"*, Rome, September 13-18, 2015.
  37. Perri M.T., P. De Vita, **G. Cassiani**, R. Masciale, I. Portoghese and G.B. Chirico, 2015, Quantitative Interpretation of Time-lapse MALM Measurements During a Saline Tracer Injection in an Alluvial Aquifer, *EAGE Near Surface Geoscience 2015*, September 6-10, 2015, Turin, Italy.
  38. **Cassiani G.**, 2015, Hydro-geophysical monitoring of roots and hyporeic zone, *invited talk*, Workshop "Geophysics for the Characterization of the Critical Zone", EAGE Near Surface Geoscience 2015, September 6-10, 2015, Turin, Italy.
  39. Vanella D., J. Boaga, M.T. Perri, S. Consoli and **G. Cassiani**, 2015, Modelling orange tree root water uptake active area by minimally invasive ERT data and transpiration measurements, EGU General Assembly 2015, Vienna, 12-17 April 2015.
  40. **Cassiani G.**, J. Boaga, L. Busato, M.T. Perri, M. Putti, B. Majone, A. Bellin, 2015, Time Lapse Electrical Resistivity Tomography and Distributed Temperature Measurements in the Hyporeic Zone of an Alpine River, EGU General Assembly 2015, Vienna, 12-17 April 2015.
  41. Vignoli G., I. Gervasio, G. Brancatelli, J. Boaga, B. Della Vedova and **G. Cassiani**, 2015, Use of frequency-dependent multi-offset phase analysis of surface waves for a riparian zone characterization, EGU General Assembly 2015, Vienna, 12-17 April 2015.
  42. Preti F., **G. Cassiani**, M. Caruso, A. Dani, A. Errico, E. Guastini, F. Preti, N. Romano, P. Trucchi, P. Tarolli, 2015, Agricultural terraces monitoring and modeling: a field survey in Chianti region, Firenze, Italy; Second Part, EGU General Assembly 2015, Vienna, 12-17 April 2015.
  43. Busato L., D. Vanella, J. Boaga, G. Manoli, M. Marani, M. Putti, S. Consoli, A. Binley and **G. Cassiani**, Identification of active root zone by data assimilation techniques: monitoring and modelling of irrigation experiments, EGU General Assembly 2015, Vienna, 12-17 April 2015.
  44. Boaga J., L. Busato, M.T. Perri, G. Strapazzon, D. Pasetto, M. Putti, K. Cano Paoli, B. Majone, A. Bellin, **G. Cassiani**, 2014, Time lapse Electrical Resistivity Tomography and Distributed Temperature measurements and modeling in the hyporeic zone of an alpine river, *AGU Fall Meeting*, San Francisco, December 2014.
  45. **Cassiani G.**, J. Boaga, D. Vanella, M.T. Perri, S. Consoli, 2014, Monitoring and Modelling



- 
- of Soil-Plant Interactions: the Joint Use of ERT, Sap flow and Eddy Covariance to Define the Volume of Orange Tree Active Root Zones, *AGU Fall Meeting*, San Francisco, December 2014.
46. Piccolroaz S., B. Majone, F. Palmieri, **G. Cassiani**, A. Bellin, 2014, Time-lapse distributed microgravità observations as a tool to inform hydrological models, *AGU Fall Meeting*, San Francisco, December 2014.
  47. **Cassiani G.**, 2014, Hydro-geophysical exploration for environmental applications: monitoring, modeling and beyond, *Lectio Magistralis, invited*, GNGTS – 33° Congresso Nazionale, Bologna, 25-27 novembre 2014.
  48. Busato L., J. Boaga, M.T. Perri, **G. Cassiani**, 2014, Time-lapse monitoring of the hyporheic zone of an alpine river using non-invasive methodologies, GNGTS – 33° Congresso Nazionale, Bologna, 25-27 novembre 2014.
  49. Boaga J., C. Strobbia, **G. Cassiani**, 2014, L-shaped array refractions microtremors (LeMi), GNGTS – 33° Congresso Nazionale, Bologna, 25-27 novembre 2014.
  50. **Cassiani G.**, S. Consoli, M.T. Perri, D. Vanella, J. Boaga, 2014, Monitoring of soil-plant interactions via geophysical methods, GNGTS – 33° Congresso Nazionale, Bologna, 25-27 novembre 2014.
  51. Boaga J., L. Busato, M.T. Perri, G. Strapazzon, A. Bellin, **G. Cassiani**, 2014, Time lapse Electrical Resistivity Tomography and Distributed Temperature measurements in the hyporheic zone of an alpine river, *Geological Society of America*, Annual Meeting, Vancouver, Canada, October 2014.
  52. Pasetto D., M. Putti, J. Boaga, **G. Cassiani**, M. Rossi, K. Canopoli, A. Bellin, 2014, SIR-based particle filters for coupled hydro-geophysical assimilation of water infiltration in unsaturated soil, *TERENO international 2014*, University of Bonn September 30- October 2, 2014.
  53. **Cassiani G.**, 2014, Minimally invasive methods for hydrological characterization, *invited, Interdisciplinary Workshop on Frontiers in Hydrology and Hydrogeoscience* 8-9 May 2014, Venice International University, Venice, Italy.
  54. Consoli S., **G. Cassiani**, J. Boaga, D. Vanella, M.T. Perri, 2014, The integration of 3D electrical resistivity tomography and ET flux measurements to characterize water mass balance in the soil-plant-atmosphere continuum, *EGU General Assembly 2014*, Vienna, 27 April -2 May 2014.
  55. **Cassiani G.**, M. Rossi, G. Manoli, D. Pasetto, R. Deiana, S. Ferraris, C. Strobbia, M. Putti, 2014, Quantitative hydro-geophysical monitoring and coupled modeling of a controlled irrigation experiment, *EGU General Assembly 2014*, Vienna, 27 April -2 May 2014.

- 
56. Piccolroaz S., B. Majone, F. Palmieri, **G. Cassiani**, A. Bellin, 2014, On the use of distributed microgravity observations to inform hydrological models, EGU General Assembly 2014, Vienna, 27 April -2 May 2014.
  57. **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. JafarGandomi, 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.
  58. 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.
  59. **Cassiani G.**, J. Boaga, M. Rossi, A. D'Alpaos, G. Fadda, M. Putti, M. Marani, 2013, 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.
  60. Boaga J., S. Consoli, R. Papa, **G. Cassiani**, 2013, Soil-plant-atmosphere water balance via time-lapse 3D Electrical Resistivity Tomography and Eddy covariance measurements, AGU Fall Meeting, San Francisco, 9-13 December 2013.
  61. Perri M.T., J. Boaga, S. Bersan, S. Cola, **G. Cassiani**, R. Deiana, P. Simonini, S. Patti 2013, On the applicability of different geophysical techniques to river embankments characterization: a case study in Veneto Region (Italy), GNGTS – 32° Congresso Nazionale, Trieste, 19-21 novembre 2013.
  62. **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. JafarGandomi, G.P. Deidda, 2013, Non-invasive characterization a crude-oil contaminated site: links between contamination and geophysical signals, GNGTS – 32° Congresso Nazionale, Trieste, 19-21 novembre 2013.
  63. Boaga J., **G. Cassiani**, C. Strobbia and G. Vignoli, 2013, The impact of Rayleigh waves ellipticity in mode misidentification , GNGTS – 32° Congresso Nazionale, Trieste, 19-21 novembre 2013.
  64. Boaga J. M. Rossi and **G. Cassiani**, 2013, Time Lapse 3D Electrical tomography for soil-plant dynamics interactions, GNGTS – 32° Congresso Nazionale, Trieste, 19-21 novembre 2013.
  65. Boaga J., **G. Cassiani**, 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, *Geological Society of America*, Annual Meeting, Boulder, Colorado, October 2013.
  66. Perri M.T., J. Boaga, A. D'Alpaos, G. Cassiani, R. Deiana, P. Simonini and S. Patti, 2013,

- 
- River embankment characterization: and integrated approach using geophysical and geotechnical techniques, IX Forum Italiano di Scienze della Terra, Pisa, 16-18 settembre 2013.
67. Petronio L, Boaga J, **Cassiani G** (2013). Reflection Seismic and Surface wave analysis on complex heterogeneous media: the case of Mt Toc landslide in Vajont valley. In: Journal of Engineering Geology and Environment. In: Vajont 1963-2013: Thoughts and analyses after 50 years since the catastrophic landslide, convegno a Padova. *Italian Journal Of Engineering Geology And Environment*, ISSN: 1825-6635, doi: 10.4408/IJEGE.2013-06.B-57
  68. Haaken K., G.P. Deidda, **G. Cassiani**, A. Kemna, R. Deiana, M. Putti, C. Paniconi, 2013, Hydrogeophysical monitoring and modeling of freshwater injection in a hyper-saline aquifer, *NovCare 2013* (Novel Methods for Subsurface Characterization and Monitoring: From Theory to Practice) Leipzig, Germany, May 13-16, 2013.
  69. Manoli G., M. Rossi, D. Pasetto, P. Teatini, R. Deiana, S. Ferraris, M. Putti and **G. Cassiani**, 2013, Hydro-geophysical monitoring and stochastic inverse modeling of a controlled irrigation experiment, EGU General Assembly 2013, Vienna, 7-12 April 2013.
  70. Boaga J., M. Rossi, **G. Cassiani** and M. Putti, 2013, Time-lapse 3D electrical resistivity tomography to monitor soil-plant interactions, EGU General Assembly 2013, Vienna, 7-12 April 2013.
  71. Mazzalai L., J. Boaga, M. Rossi, S. Martin, **G. Cassiani**, A. Viganò, The geoelectrical survey: a powerful tool for the identification of fault zones, EGU General Assembly 2013, Vienna, 7-12 April 2013.
  72. Ursino N., **G. Cassiani**, R. Deiana, G. Vignoli and J. Boaga, 2013, Measuring and Modelling water related soil - vegetation feedbacks in a fallow plot, EGU General Assembly 2013, Vienna, 7-12 April 2013.
  73. Camporese 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, EGU General Assembly 2013, Vienna, 7-12 April 2013.
  74. Perri M.T., **G. Cassiani**, J. Boaga, M. Rossi, G. Vignoli, R. Deiana, N. Ursino, M. Putti, B. Majone, A. Bellin, M. Blaschek, R. Duttmann, S. Meyer, R. Ludwig, A. Soddu, P. Dietrich and U. Werban, 2012, Monitoring soil-vegetation interactions using non-invasive geophysical techniques, AGU Fall Meeting, San Francisco, 3-7 December 2012.
  75. Rossi M., G. Vignoli, **G. Cassiani**, R. Deiana, 2012, A comparison between zero-offset and vertical radar profiling GPR techniques with emphasis on problematic borehole effects, AGU Fall Meeting, San Francisco, 3-7 December 2012.
  76. Boaga J. **G. Cassiani**, C.L. Strobbia and G. Vignoli, 2012, Rayleigh waves ellipticity and

- 
- mode mis-identification in multi-channel analysis of surface waves, AGU Fall Meeting, San Francisco, 3-7 December 2012.
77. Majone B., F. Palmieri, A. Bellin, **G. Cassiani**, 2012, A comparison between hydrological model predictions and micro-gravity time-lapse distributed surveys, AGU Fall Meeting, San Francisco, 3-7 December 2012.
  78. **Cassiani G.**, J. Boaga, M.T. Perri, A. D'Alpaos, R. Deiana, 2012, Applicazione di tecniche geofisiche per il monitoraggio di sponde artificiali di contenimento. In: Abstract Volume, IX Workshop di Geofisica, Museo Civico di Rovereto, 14 dicembre 2012, Edizioni OSIRIDE, ISBN: 9788874982004.
  79. Boaga J., G. Vignoli, R. Deiana, **G. Cassiani**, 2012, Onde superficiali e contaminazione modale: dall'evidenza sperimentale alla verifica teorica. In Abstract Volume, IX Workshop di Geofisica, Museo Civico di Rovereto, 14 dicembre 2012, Edizioni OSIRIDE, ISBN: 9788874982004.
  1. Boaga J., G. Vignoli, **G. Cassiani**, 2012, The Rayleigh wave ellipticity influence on modes misidentification. In 31° Congresso Gruppo Nazionale di Geofisica della Terra Solida, ISBN: 9788890210136
  80. Blaschek M., S. Meyer, **G. Cassiani**, R. Deiana, R. Duttmann, R. Ludwig, U. Werban, 2012, Universal Cokriging of air-transformed soil separates at field scale using geophysical sensing data, Digital Soil Mapping Workshop of the German Soil Science Society, Tübingen, September 2012.
  81. **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*, 74<sup>th</sup> EAGE Conference and Exhibition, Copenhagen, WP8: Fully Integrated Geomechanical Workflow: A Myth or a Fact?, 4 June 2012.
  82. Brovelli A. and **G. Cassiani**, 2012, Contribution of Stern layer and membrane polarization to spectral induced polarization of variably saturated sandy soils, EGU General Assembly 2012, Session SSS4.1, Vienna, 22-27 April 2012.
  83. **Cassiani G.**, A. Binley, A. Kemna, A. Flores Orozco, E. Rizzo, R. Deiana, P. Dietrich, U. Werban, L. Zschornack, C. Leven-Pfister, G.P. Deidda and A. Brovelli, 2012, Non-invasive characterization of a crude-oil contaminated sites: complex links between contamination and geophysical signals, EGU General Assembly 2012, Session HS8.3.2, Vienna, 22-27 April 2012.
  84. Haaken K., G.P. Deidda, **G. Cassiani**, A. Kemna, R. Deiana, M. Putti, C. Paniconi, F. Schirru and M. Mura, 2012, Cross-hole ERT monitoring of freshwater injection in a hyper-saline aquifer, EGU General Assembly 2012, Session HS8.1.2, Vienna, 22-27 April 2012.
  85. Camporese M., **G. Cassiani**, R. Deiana, M.T. Perri, P. Salandin, 2012, An ensemble Kalman

- 
- filter approach to identify the hydraulic conductivity spatial distribution from electrical resistivity tomography time-lapse monitoring of three-dimensional tracer test experiments. EGU General Assembly 2012, Vienna, 22-27 April 2012.
86. **Cassiani G.**, N. Ursino, R. Deiana, G. Vignoli, J. Boaga, M. Rossi, M.T. Perri, M. Blaschek, R. Duttmann, 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.
  87. Gervasio I., B. Della Vedova, **G. Cassiani**, E. Dazzan, R. Deiana, 2011, Searching for optimum sulfurous water well sites using surface geophysical methods, AGU Fall Meeting, San Francisco, 5-9 December 2011.
  88. Perri M.T., **G. Cassiani**, I. Gervasio, R. Deiana, A. Binley, M. Camporese and P. Salandin, 2011, A saline tracer test monitored via both surface and cross-borehole electrical resistivity tomography, AGU Fall Meeting, San Francisco, 5-9 December 2011.
  89. **Cassiani G.** and A. Brovelli, 2011, Soil mapping using electro-magnetic methods: development of a unified constitutive model, AGU Fall Meeting, San Francisco, 5-9 December 2011.
  90. Deiana R., **G. Cassiani**, M. Rossi, G. Vignoli and A. Binley, 2011, Borehole GPR data inversion for hydro-geophysical applications, AGU Fall Meeting, San Francisco, 5-9 December 2011.
  91. Deiana R., **G. Cassiani**, G. Vignoli, J. Boaga, N. Ursino, M. Blaschek, R. Duttmann, S. Meyer, R. Ludwig, A. Soddu, P. Dietrich and U. Werban, 2011, Geophysical monitoring of soil static and dynamic characteristics, GNGTS – 30° congresso nazionale, Trieste, 14-17 novembre 2011.
  92. Rossi M., G. Vignoli, **G. Cassiani**, R. Deiana, A. Binley, 2011, A comparison between zop and vrp techniques: emphasis on possible guided waves in the vrp configuration, GNGTS – 30° congresso nazionale, Trieste, 14-17 novembre 2011.
  93. **Cassiani G.**, R. Deiana, M. Camporese and P. Salandin, 2011, Electrical resistivity tomography time-lapse monitoring of three-dimensional synthetic tracer test experiments, GNGTS – 30° congresso nazionale, Trieste, 14-17 novembre 2011.
  94. Gervasio I., G. Brancatelli, B. Della Vedova, J. Boaga, G. Vignoli, **G. Cassiani**, E. Forte, E. Dazzan, 2011, Caratterizzazione del sito test di turriaco mediante metodologie geofisiche integrate, GNGTS – 30° congresso nazionale, Trieste, 14-17 novembre 2011.
  95. Perri M.T., **G. Cassiani**, I. Gervasio, R. Deiana, A. Binley, 2011, A saline tracer test monitored via both surface and cross-borehole electrical resistivity tomography: comparison of time-lapse results, GNGTS – 30° congresso nazionale, Trieste, 14-17 novembre 2011.

- 
96. Boaga J., R. Deiana, **G. Cassiani**, 2011, The influence of random soil damping on linear-equivalent seismic response analysis, GNGTS – 30° congresso nazionale, Trieste, 14-17 novembre 2011.
  97. Petronio L., J. Boaga, **G. Cassiani**, 2011, Reflection Seismic and Surface wave analysis on complex heterogeneous media: the case of Mt Toc landslide in Vajont valley, GNGTS – 30° congresso nazionale, Trieste, 14-17 novembre 2011.
  98. Deiana R., G. Cassiani, G.P. Deidda, M. Mura, F. Schirru, M.T. Perri, 2011,. Cross-hole electrical resistivity tomography under extreme electrical resistivity conditions. In: GNGTS – 30° convegno nazionale. p. 491-495, TRIESTE: Stella Arti Grafiche, Trieste, 14-17 novembre 2011
  99. Perri M.T., G. Cassiani, I. Gervasio, A.M. Binley, P. Salandin, 2011, A saline tracer test monitored via both surface and borehole electrical resistivity tomography: comparison of time lapse results and consideration on resolution and data use. In: GEOITALIA 2011. Torino, Italy, 19-23 September 2011
  100. **Cassiani G.**, R. Deiana, M. Camporese, P. Salandini, 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).
  101. Donnici S., Rizzetto F., Tosi L., Scudiero E., Morari F., Deiana R., **Cassiani G.**, Teatini P., 2011, Saltwater contamination in the Venice Lagoon margin, Italy. 1: the influence of the geomorphological setting; The Wageningen Conference on Applied Soil Science, September 18-22, 2011.
  102. Rossi M., **G. Cassiani**, R. Deiana, A. Binley, 2011, Stochastic analysis of cross-hole GPR data for subsurface characterization, EAGE Near Surface 2011 – 17<sup>th</sup> European Meeting of Environmental and Engineering Geophysics, Leicester, UK, 12-14 September 2011.
  103. **Cassiani G.**, 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.
  104. Rossi M., **G. Cassiani**, R. Deiana, A. Binley, 2011, Cross-hole GPR data for subsurface characterization, EAGE/SEG Research Workshop 2011, Towards a Full Integration from Geosciences to Reservoir Simulation, 1-3 September 2011, Trieste, Italy.
  105. Camporese M., **G. Cassiani**, R. Deiana, P. Salandin, 2011, Electrical resistivity tomography time-lapse monitoring of three-dimensional synthetic tracer test experiments: an Ensemble Kalman Filter approach to identify the hydraulic conductivity spatial distribution, EAGE/SEG Research Workshop 2011, Towards a Full Integration from Geosciences to Reservoir Simulation, 1-3 September 2011, Trieste, Italy.

- 
106. Brovelli A. and **G. Cassiani**, 2011, Constitutive models for the joint estimation of electrical conductivity and permittivity of variably-saturated soils, European Geosciences Union (EGU) General Assembly 2011, Vienna, 03 – 08 April 2011.
  107. **Cassiani G.**, M. Rossi, G. Vignoli, R. Deiana and A. Binley, 2011, Advances in borehole GPR data interpretation for hydrological purposes, European Geosciences Union (EGU) General Assembly 2011, Vienna, 03 – 08 April 2011.
  108. Caputo M.C., L. De Carlo, **G. Cassiani**, R. Deiana, 2011, Electrical methods for monitoring a site potentially contaminated by landfill leachate , European Geosciences Union (EGU) General Assembly 2011, Vienna, 03 – 08 April 2011.
  109. **Cassiani G.**, A. Binley, A. Kemna, A. Flores Orozco, E. Rizzo, V. Giampaolo, V. Bruno, R. Deiana, P. Dietrich, L. Zschornack, U. Werban and C. Leven-Pfister, 2011, Minimally invasive characterization of a hydrocarbon contaminated site: the Trecate example, European Geosciences Union (EGU) General Assembly 2011, Vienna, 03 – 08 April 2011.
  110. Gervasio I., B. Della Vedova, E. Dazzan, R. Deiana, **G. Cassiani**, 2010, Caratterizzazione della risorsa termale di bagni di Isonzo (udine) mediante indagini geofisiche integrate, GNGTS – 29° congresso nazionale, Prato, 26-28 ottobre 2010.
  111. Vignoli G., C. Strobbia, **G. Cassiani** and P. Vermeer, 2010, Statistical Multi-Offset Phase Analysis (sMOPA) for surface wave processing in laterally varying media, GNGTS – 29° congresso nazionale, Prato, 26-28 ottobre 2010.
  112. Vignoli G., R. Deiana, **G. Cassiani**, 2010, Sharp inversion of VRP travel-time data, GNGTS – 29° congresso nazionale, Prato, 26-28 ottobre 2010.
  113. Boaga J., S. Renzi, G. Vignoli, R. Deiana and **G. Cassiani**, 2010 The importance of a 2D approach in surface wave inversion: consequences on seismic site response analysis, GNGTS – 29° congresso nazionale, Prato, 26-28 ottobre 2010.
  114. Rossi M., **G. Cassiani** and A. Binley, 2010, Stochastic analysis of cross-hole GPR data for subsurface characterization, GNGTS – 29° congresso nazionale, Prato, 26-28 ottobre 2010.
  115. Dazzan E., B. Della Vedova, I. Gervasio, R. Deiana, **G. Cassiani**, 2010, indagini geofisiche integrate per la caratterizzazione ambientale di un sito costiero inquinato (muggia – TS), GNGTS – 29° congresso nazionale, Prato, 26-28 ottobre 2010.
  116. Perri M.T., **G. Cassiani**, R. Deiana, P. Fabbri, M. Ortombina, A. Liuzzo Scorpo, 2010, Monitoraggio ERT and EM di un test con tracciante in un acquifero di risorgiva, GNGTS – 29° congresso nazionale, Prato, 26-28 ottobre 2010.
  117. **Cassiani G.**, R. Deiana and M.C. Caputo, 2010, Geophysical methods to reduce uncertainty in the calibration of variably-saturated fractured rock models, IAHR International Groundwater Symposium to be held in Valencia, September 22-24, 2010.

- 
118. **Cassiani G.**, A. Binley, A. Kemna, A. Flores Orozco, E. Rizzo, V. Bruno, R. Deiana, H. El-Kaliouby, P. Dietrich, L. Zschornack and C. Leven, 2010, Integrated geophysical characterization of a hydrocarbon contaminated site, Near Surface 2010 – 16<sup>th</sup> European Meeting of Environmental and Engineering Geophysics Zurich, Switzerland, 6 - 8 September 2010.
  119. **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, 72<sup>nd</sup> EAGE Conference & Exhibition incorporating SPE EUROPEC 2010, Barcelona, Spain, 14 - 17 June 2010.
  120. Vignoli G., C. Strobbia, **G. Cassiani** and P. Vermeer, 2010, Lateral discontinuity localization and characterization by means of enhanced statistical multioffset phase analysis of surface waves, 72<sup>nd</sup> EAGE Conference & Exhibition incorporating SPE EUROPEC 2010, Barcelona, Spain, 14 - 17 June 2010.
  121. **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.
  122. Bevilacqua I., **G. Cassiani**, R. Deiana, D. Canone, and M. Previati, 2010, Hydrogeophysical monitoring of water infiltration processes, EGU General Assembly 2010, Vienna, 2-7 May 2010.
  123. **Cassiani, G.** and A. Brovelli, 2009, Improved understanding of the relationship between hydraulic properties and streaming potentials, AGU Fall Meeting, San Francisco, 14-18 December 2009.
  124. Deiana R., M. Camporese, **G. Cassiani** and P. Salandin, 2009, Impact of ERT data inversion uncertainty on the assessment of local hydraulic properties from tracer test experiments, AGU Fall Meeting, San Francisco, 14-18 December 2009.
  125. Boaga J., G. Vignoli e **G. Cassiani**, 2009, Rilevanza dei processi di inversione di modelli di Vs nella risposta sismica locale, GNGTS – 28° congresso nazionale, Trieste, 16-19 novembre 2009.
  126. Böhm G., G. Vignoli e **G. Cassiani**, 2009, Integrazione della tomografia dei tempi d'arrivo con l'inversione delle onde superficiali per la definizione di strutture superficiali, GNGTS – 28° congresso nazionale, Trieste, 16-19 novembre 2009.
  127. Casas A., R. Deiana, J.C. Tapias e **G. Cassiani**, 2009, Applicazioni della tecnica VRP per la valutazione della vulnerabilità di acquiferi in aree industriali, GNGTS – 28° congresso nazionale, Trieste, 16-19 novembre 2009.



- 
128. Deiana R., **G. Cassiani** e S. Ferraris, Monitoraggio idro-geofisico quantitativo di un esperimento di infiltrazione controllata, GNGTS – 28° congresso nazionale, Trieste, 16-19 novembre 2009.
  129. **Cassiani G.**, A.Godio, A.Arato, L.Sambuelli, S.Stocco, H.French, M. Kaestner, A.M.Binley, A.Kemna, A.Flores, E.Rizzo, R.Deiana, V.Bruno, V. La penna, 2009, ModelPROBE and SoilCAM: two EU FP7 projects aimed at a minimally invasive characterization of contaminated sites, GNGTS – 28° congresso nazionale, Trieste, 16-19 novembre 2009.
  130. Perri M.T., **G. Cassiani**, R. Deiana, M. Rossi, M. Camporese, P. Salandin, 2009, Indagine idrogeofisica finalizzata alla valutazione delle zone di rispetto dei pozzi in un acquifero alluvionale, GNGTS – 28° congresso nazionale, Trieste, 16-19 novembre 2009.
  131. Rossi M., G. Vignoli, **G. Cassiani** e R. Deiana, 2009, Caratterizzazione non invasiva di un bacino montano per scopi ideologici, GNGTS – 28° congresso nazionale, Trieste, 16-19 novembre 2009.
  132. Vignoli G. e **G. Cassiani**, 2009, Individuazione di disomogeneità laterali attraverso il Multi-Offset Phase Analysis di onde superficiali, GNGTS – 28° congresso nazionale, Trieste, 16-19 novembre 2009.
  133. **Cassiani, G.**, 2009, Metodi geofisici nella caratterizzazione e monitoraggio dei siti inquinati, invited talk, RemTech 2009, Convegno su Metodologie avanzate nella caratterizzazione dei siti inquinati, Ferrara, 24 Settembre 2009.
  134. M. Rossi, G. Vignoli, **G. Cassiani and R. Deiana**, 2009, Non Invasive Characterization of Small Mountain Catchment for Hydrological Purposes, EAGE Near Surface 2009, Dublin, September 7-9, 2009.
  135. **Cassiani G.** e R. Deiana, 2009, Idrogeofisica: tecniche non invasive a supporto della caratterizzazione idrologica ed idrogeologica del sottosuolo, Rovereto, 25 e 26 giugno 2009, Convegno: nuove frontiere per la geofisica applicata.
  136. **Cassiani, G.**, 2009, La caratterizzazione speditiva mediante metodi geofisici e tecniche “Direct Push”, invited talk, Milano, 21 Maggio 2009, Corso di Formazione ed Aggiornamento Professionale “Metodi avanzati di caratterizzazione e bonifica dei siti contaminati”, Provincia di Milano.
  137. Vignoli G. and **G. Cassiani**, 2009, Enhanced Multi-Offset Phase Analysis of surface wave data for detection of lateral heterogeneities, Workshop: Surface Wave Analysis for Exploring at Different Scales, 71<sup>st</sup> EAGE Conference and Exhibition, Amsterdam, June 2009.
  138. **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.
139. 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.
  140. **Cassiani G** e R. Deiana, 2008, Valutazione della vulnerabilità degli acquiferi tramite prove geofisiche nel non saturo, Atti del Workshop in Geofisica 7 dicembre 2007, Museo Civico di Rovereto, p.119-138.
  141. Camporese, M., **G. Cassiani**, R. Deiana and P. Salandin, 2008, Local hydraulic properties assessment from Electrical Resistivity Tomography monitoring of tracer test experiments, AGU Fall Meeting, San Francisco, 15-19 December 2008.
  142. 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
  143. **Cassiani G.**, A. Godio, S. Stocco, A. Villa, P. Frattini, M. Rossi, R. Deiana e G.B. Crosta, 2008, Studio della dinamica idrologica di versante tramite tomografia elettrica 3d ed irrigazione controllata, XXVII Congresso CNR-GNGTS, Trieste, 6-8 ottobre 2008.
  144. Deiana, R., **G. Cassiani**, M. Rossi, M. Monego, G. Passadore e L. Altissimo, 2008, Monitoraggio elettrico ad alta risoluzione per lo studio delle proprietà di trasporto in un acquifero superficiale, XXVII Congresso CNR-GNGTS, Trieste, 6-8 ottobre 2008.
  145. **Cassiani G.**, A. Godio, S. Stocco, A. Villa, P. Frattini, M. Rossi, R. Deiana and G.B. Crosta, 2008, A study of hillslope hydrologic dynamics using irrigation tests and time-lapse 3d electrical resistivity tomography, Extended Abstract, EAGE-Near Surface 2008, Krakow, Poland, September 15-17, 2008.
  146. Kästner M. and **G. Cassiani**, 2008, Model driven Soil Probing, Site Assessment and Evaluation - An overview on the EU Project ModelPROBE, Consoil 2008 conference, Milan, June 3-6, 2008.
  147. Kemna A., **G. Cassiani** and A. Binley, 2008, Recent developments of geophysical methods for site assessment and monitoring, Consoil 2008 conference, Milan, June 3-6, 2008.
  148. Werban, U., T. Behrens, **G. Cassiani** and P. Dietrich, Interactions between soil related sciences – Linking geophysics, soil science and digital soil mapping, Consoil 2008 conference, Milan, June 3-6, 2008.
  149. **Cassiani G.**, 2008, Soil parameters and geophysical parameters – Application of multi-parameter constitutive laws, Consoil 2008 conference, Milan, June 3-6, 2008.

- 
150. **Cassiani, G.**; Crosta, G.B.; Franco, D.; Frattini, P.; Godio, A.; Stocco, S.; Villa, A., 2008, Monitoring steep slopes hydrological behaviour through controlled infiltration test, EGU General Assembly 2008, Vienna, 13-18 April 2008.
  151. Sauer, U.; Werban, U.; Behrens, T.; **Cassiani, G.**; Boruvka, L.; Carizzoni, M.; Dietrich, P. Interactions between Soil related Sciences – Linking Geophysics, Soil Science and Digital Soil Mapping (solicited), EGU General Assembly, Vienna, 13-18 April 2008.
  152. Fielitz, D.; Kemna, A.; Zimmermann, E.; Glaas, W.; **Cassiani, G.**; Vereecken, H., 2008, Model response curves and surveying aspects in crosshole MMR, EGU General Assembly, Vienna, 13-18 April 2008.
  153. Kemna, A., D. Fielitz, **G. Cassiani** and E. Zimmermann, 2008, 2.5D MMR-Modellierung auf kompakten Gittern, Annual Meeting of the German Geophysical Society, Freiberg, March 2008.
  154. Fielitz, D.; Kemna, A.; Zimmermann, E.; Glaas, W.; **Cassiani, G.**; Vereecken, H., 2008, Aspects in crosshole MMR surveying, Annual Meeting of the German Geophysical Society, Freiberg, March 2008.
  155. **Cassiani G.**, R. Deiana, A. Villa, V. Bruno e A. Kemna, 2007, Monitoraggio non invasivo del flusso idrico nel non saturo: questioni relative al bilancio di massa in esperimenti controllati di iniezione d'acqua, XXVI Congresso CNR-GNGTS, Roma, 13-15 novembre 2007.
  156. Giustiniani M., **G. Cassiani**, S. Ferraris e R. Deiana, 2007, Misure GPR da superficie in time lapse per il monitoraggio di test di irrigazione, XXVI Congresso CNR-GNGTS, Roma, 13-15 novembre 2007.
  157. **Cassiani G.**, A. Villa, A. Kemna e E. Zimmermann, 2007, Misure di polarizzazione indotta spettrale per la caratterizzazione dei mezzi porosi multifase, XXVI Congresso CNR-GNGTS, Roma, 13-15 novembre 2007.
  158. Godio A e **G. Cassiani**, 2007, Analisi di dati georadar in foro per la caratterizzazione della zona non satura, XXVI Congresso CNR-GNGTS, Roma, 13-15 novembre 2007.
  159. Villa A., R. Deiana, V. Bruno, **G. Cassiani**, 2007, The characterization of the vadose zone to determine aquifer vulnerability by means of cross-hole geophysical methods, Geitalia 2007, Rimini, Italy, September 2007.
  160. **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.
  161. Villa A., A. Brovelli, **G. Cassiani** and N. Fusi, 2007, Quantitative monitoring of moisture

- 
- content changes using micro-CT imaging techniques, EGU General Assembly 2007, Vienna, 15-20 April 2007.
162. **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.
  163. Deiana R., **G. Cassiani**, A. Villa, A. Bagliani e V. Bruno, 2006, Misure ERT e GPR cross-hole per la stima di vulnerabilità di un acquifero in sabbie/ghiaie, XXV Congresso CNR-GNGTS, Roma, novembre 2006.
  164. **Cassiani G.** e A. Brovelli, 2006, Modelli dielettrici per mezzi porosi: analisi di sensitività e sviluppo di nuove relazioni, XXV Congresso CNR-GNGTS, Roma, novembre 2006.
  165. **Cassiani, G.**, 2006. Aquifer Characterization and Monitoring, Proceedings of the short Training Course (I) on “Groundwater Management in the Framework of Integrated Water Resources Management IWRM” organized by the Italian Ministry for the Environment (IMET), UNESCO and The Regional Center for Training and Water Studies (RCTWS-Egypt) in Cairo, Egypt, May 2006.
  166. Brovelli A. and **G. Cassiani**, 2006, Linking soil properties to permittivity data: beyond the refractive index model, XVI Computational Methods in Water Resources conference in Copenhagen, June 19-22 2006.
  167. **Cassiani G.**, R. Deiana, A. Villa, V. Bruno, A. Bagliani, M. Miorali and N. Fusi, 2006, A water injection experiment in the vadose zone: the use and value of non invasive cross-hole data for model calibration, XVI Computational Methods in Water Resources conference in Copenhagen, June 19-22 2006.
  168. **Cassiani G.** and C. Strobbia, 2005, GPR guided waves for the estimation of water content in shallow soil layers, AGU Fall Meeting, San Francisco, 5-9 December 2005.
  169. **Cassiani G.**, R. Deiana, A. Villa e V. Bruno, 2005, Stima di vulnerabilità di un acquifero in sabbie/ghiaie tramite misure GPR ed ERT cross-hole, , XXIV Congresso CNR-GNGTS, Roma, novembre 2005.
  170. Strobbia C. e **G. Cassiani**, 2005, Guide d’onda GPR multistrato per la stima del contenuto idrico negli strati superficiali del sottosuolo, XXIV Congresso CNR-GNGTS, Roma, novembre 2005.
  171. Plischke, B. and **G. Cassiani**, 2005, A Finite Element Analysis Of The Local Geomechanical Behavior Of Rock Close To A Marker-Equipped Borehole: Effects Of Drilling, Completion And Reservoir Depletion, Proceedings Seventh International Symposium On Land Subsidence (Sisols2005), Shanghai, China, October 2005.
  172. **Cassiani G.**, R. Deiana, A. Villa and B. Vittorio, 2005, Monitoring of water flow in the

- 
- vadose zone, 11th EEGS-EAGE Meeting, Palermo, Italy, September 4-7, 2005.
173. Bena E., A. Canto, **G. Cassiani**, G. De Bacco, A. Godio and C. Strobbia, Test site for aquifer cross-hole investigation for environmental purposes, , 11th EEGS-EAGE Meeting, Palermo, Italy, September 4-7, 2005.
  174. **Cassiani G.**, C. Strobbia, M. Giustiniani, N. Fusi, G.B. Crosta and P. Frattini, 2005, Hydrological characterization of mountain slopes via guided GPR waves, EGU II Annual Meeting, Vienna, April 2005.
  175. Brovelli, A., E. Dalla, **G. Cassiani** and D. Pitea, 2005, Numerical investigation of geo-electrical relationships in porous media, EGU II Annual Meeting, Vienna, April 2005.
  176. Ranieri, G., **G. Cassiani**, A. Godio and P. Buscarinu, 2005, Possible use of electric and electromagnetic methods for the investigation of eutrophic phenomena, EGU II Annual Meeting, Vienna, April 2005.
  177. **Cassiani, G.**, M. Giustiniani, C. Strobbia, N. Fusi, G.B. Crosta and P. Frattini, 2004, Surface GPR time-lapse monitoring of hillslope processes, paper H34D-02, AGU Fall Meeting, San Francisco, 13-17 December 2004.
  178. Brovelli, A., **G. Cassiani**, E. Dalla, F. Bergamini, D. Pitea and A.M. Binley, 2004, Numerical modeling of surface and water phase contributions to the electrical properties of partially saturated sandstones, paper H34A-08, AGU Fall Meeting, San Francisco, 13-17 December 2004.
  179. Binley, A.M., M. Fukes, L. Slater and **G. Cassiani**, 2004, Spectral Induced Polarization of Saturated and Unsaturated Triassic Sandstone, paper H21G-06, AGU Fall Meeting, San Francisco, 13-17 December 2004.
  180. **Cassiani, G.**, M. Giustiniani, C. Strobbia, N. Fusi, G.B. Crosta and P. Frattini, 2004, Monitoraggio di processi di versante mediante time-lapse GPR, XXIII Congresso CNR-GNGTS, Roma, 14-16 dicembre 2004.
  181. **Cassiani G.**, A. Canto and E. Bena, 2004, Monitoraggio geoelettrico di un test di fratturazione idraulica con un tracciante salino, XXIII Congresso CNR-GNGTS, Roma, 14-16 dicembre 2004.
  182. Godio A., **G. Cassiani**, G. DeBacco, C. Strobbia and A. Canto, 2004, Indagini elettriche ed elettromagnetiche per uno studio di fattibilità di una attività estrattiva: caso di studio, Simposio Internazionale di Ingegneria Sanitaria Ambientale, Taormina, 23-26 giugno 2004
  183. **Cassiani G.**, N. Fusi, A. Godio, G.B. Crosta, P. Frattini, 2004, Time-Lapse Monitoring of Slope Processes via Non Invasive Methods, EGU I Annual Meeting, Nice, April 25-30, 2004.

- 
184. **Cassiani G.** and C. Strobbia, 2004, Analysis of time-lapse vertical radar profiles to extract lithological and hydrological information, EGU I Annual Meeting, Nice, April 25-30, 2004.
  185. Bena E., A. Godio and **G. Cassiani**, 2004, Saline tracer experiments monitored by time-lapse cross-hole ERT for ground water flow model calibration, EGU I Annual Meeting, Nice, April 25-30, 2004.
  186. **Cassiani G.** and A.M. Binley, 2003, Constraining Vadose Zone Models on Moisture Content Data Derived from Cross-Hole Radar, H21F-05, abstract AGU Fall Meeting, Dec 2003.
  187. Ranieri G., **G. Cassiani**, A. Godio, G. Morelli, 2003, Possibilità di identificazione di fenomeni di eutrofizzazione tramite misure elettriche, XXII Congresso CNR-GNGTS, Roma, 18-20 Novembre 2003.
  188. **Cassiani, G.**, V. Bruno, A. Villa, N. Fusi, 2003, Monitoraggio geoelettrico di un test con tracciante salino, XXII Congresso CNR-GNGTS, Roma, 18-20 Novembre 2003.
  189. **Cassiani, G.**, C. Strobbia, L. Gallotti, 2003, Profili Radar Verticali (VRP) per la caratterizzazione del non saturo, XXII Congresso CNR-GNGTS, Roma, 18-20 Novembre 2003.
  190. **G. Cassiani**, L. Gallotti, V. Ventura, G. Andreotti, 2003, Vertical Radar Profile Monitoring of the Vadose Zone Dynamics and Oscillating Water Table, Extended Abstract, 9th EEGS-ES Meeting In Prague, Czech Republic, August 31- September 4, 2003.
  191. **G. Cassiani**, L. Gallotti, V. Ventura, G. Andreotti, 2003, Vertical radar profiles for the calibration of unsaturated flow models under dynamic water table conditions, abstract EGU-AGU-IUGG XXVIII General Assembly, Nice, April 2003.
  192. **G. Cassiani**, E. Dalla, A. Brovelli, D. Pitea and A.M. Binley, 2003, pore-scale modelling of electrical and hydraulic properties of a semi consolidated sandstone under unsaturated conditions, abstract EGU-AGU-IUGG XXVIII General Assembly, Nice, April 2003.
  193. P. Winship, A.M. Binley and **G. Cassiani**, 2003, Characterising unsaturated flow processes using cross-borehole radar and resistivity, The Permo-Triassic Sandstone meeting, EIGG-Geological Society, London, 29 January 2003
  194. **Cassiani, G.**, A.M. Binley, P. Winship, 2002, L'identificazione dei parametri del flusso nel non saturo sulla base di misure radar cross-hole in formazioni stratificate, XXI Congresso CNR-GNGTS, Roma, 19-21 Novembre 2002.
  195. **Cassiani G.**, A. Godio, G. DeBacco, C. Strobbia, 2002, Indagine elettrica ed elettromagnetica in un sito contaminato da idrocarburi, XXI Congresso CNR-GNGTS, Roma, 19-21 Novembre 2002.

- 
196. **Cassiani, G.**, A.M. Binley and P. Winship, 2002, Constraining Vadose Zone Flow Model Parameterisation Using Gamma Ray Borehole Logs And Zero-Offset Cross-Hole Radar Profiles, abstract EGS XXVII General Assembly, Nice, April 2002.
  197. **Cassiani, G.** and M. Giustiniani, 2002, In Situ Estimates Of Sorption Via Small-Scale Push-Pull Tests: Modelling Issues, abstract EGS XXVII General Assembly, Nice, April 2002.
  198. Binley A.M. ,**G. Cassiani**, R. Middleton e P. Winship, 2001, Tomografia radar e di resistività elettrica per la determinazione dei parametri di flusso nel non saturo, XX Congresso CNR-GNGTS, Roma, Novembre 2001.
  199. Binley, A.M., **G. Cassiani**, R. Middleton and P., Winship, 2001, Hydraulic Parameterisation Aided by Cross-Borehole Radar and Resistivity Imaging, EEGS-ES 2001 Meeting, Birmingham, UK, September 5, 2001.
  200. Giustiniani, M., **G. Cassiani** and A.M. Binley, 2001, Use of Borehole Geophysical Data for Stochastic Characterisation of a Sandstone Aquifer, EEGS-ES 2001 Meeting, Birmingham, UK, September 5, 2001.
  201. Hueckel T., F. Tao, **G. Cassiani** and A. Pellegrino, 2001, Chemical softening and hardening of geomaterial in situ, Computer Methods and Advances in Geomechanics, Desai et al.(eds), Balkema, Rotterdam.
  202. Middleton R., A. Binley, **G. Cassiani** and P. Winship, 2001, Cross Borehole 3-D Electrical Resistivity Tomography as a Source of Auxiliary Information for Unsaturated Flow Models, abstract EGS XXVI General Assembly, Nice, March 2001.
  203. Slater, L, R. Versteeg, A. Binley, **G. Cassiani**, R. Birken and S. Sandberg; 2000; Hydrogeological interpretation of solute transport from 3D electrical imaging; abstract AGU Fall Meeting, Dec 11-15, 2000.
  204. Hueckel T., F. Tao, **G. Cassiani** and A. Pellegrino, 2000, Sediment Compressibility Evolving During Aging: Experiments And Reactive Plasticity Model, Proceedings Sixth International Symposium On Land Subsidence (Sisols2000), Ravenna, September 2000.
  205. Palozzo W., **G. Cassiani**, G. Brighenti, C. Zocatelli, 2000, Three Dimensional Simulation of Subsidence caused by gas production in the Barbara Gas Field and Comparison with Field Data, Proceedings Sixth International Symposium On Land Subsidence (Sisols2000), Ravenna, September 2000.
  206. **Cassiani G.** and C. Zocatelli, 2000, Towards a Reconciliation between Laboratory and In-situ Measurements of Soil and Rock Compressibility, Proceedings Sixth International Symposium On Land Subsidence (Sisols2000), Ravenna, September 2000.
  207. **Cassiani G.** and K.Beven, 2000, Uncertainty Assessment of a Screening Model for Petroleum Hydrocarbon Natural Attenuation, abstract EGS XXV General Assembly, Nice, April 2000.
  208. **Cassiani G.**, 1999, Criteria of Permissibility for Multiple Non-Homogeneous Random

- 
- Fields, Geostats-UK Meeting, Leicester, November 22, 1999.
209. Ferraris F., **G.Cassiani**, C.Gallo and A.Godio, 1999, Sensitivity of models for unsaturated zone pathways recognition, Workshop on Testable stochastic features of subsurface flow and transport, Monte Verita, Svizzera, 25 ottobre 1999.
  210. Hueckel, T., F. Tao, **G. Cassiani** and A. Pellegrino, 1999, Reactive Plasticity for Geological Materials with a Double Structure Evolving During Aging, Constitutive Laws for Engineering Materials, 4th Int. Conference, RPI, Troy, NY, USA, July 1999.
  211. Barnaba P.F. and **G. Cassiani**, 1999, Situazione idrogeologica e proposte di interventi sulla falda acquifera nella zona di San Donato Milanese, Acque Sotterranee, n.2, Fascicolo 62, 43-48.
  212. **Cassiani, G.**, G. Dossena and C. Zocatelli, 1998, L'approccio ENI-Agip al problema della subsidenza, atti Geofluid 98, Piacenza, 31-44.
  213. Bevilacqua, N., **G. Cassiani**, P. Macini and E. Mesini, 1998, Misure di compattazione nel sottosuolo mediante marker radioattivi: tecniche ed applicazioni in Adriatico, atti Geofluid 98, Piacenza, 77-92.
  214. **Cassiani, G.** and C. Zocatelli, 1998, Gas Extraction and Risk of Subsidence: the Case of the Northern Adriatic Gas Fields, Technical Issues, Society of Petroleum Engineers, Fourth International Conference on Health, Safety and Environment in Oil and Gas Exploration and Production, 7-10 June 1998, Caracas, Venezuela.
  215. **Cassiani G.**, C. Zocatelli and A. Pellegrino, 1998, Program aims to prevent subsidence due to offshore gas production, World Oil, April 1998.
  216. Kabala Z.J., **G. Cassiani**, N.C. Ruud, 1996, Flowing Partially Penetrating Well with an Infinitesimal Skin, poster, A.G.U. Fall Meeting, San Francisco, CA.
  217. Ferraris S. and **G. Cassiani**, 1996, Field Evaluation of the Spatial Variability of Surface Water Content and Saturated Hydraulic Conductivity, Quaderni di Geologia Applicata, 3-2, 77-86.
  218. **Cassiani, G.**, W.H. Liu, M.A. Medina and T.L. Jacobs, 1995, Groundwater Pollution Remediation and Control: The Role of Global Optimizers and Exploitation of Available Information, Proc. ASCE Water Resources Planning and Management Div., annual meeting, Boston.
  219. Chiaruttini, C., **G. Cassiani**, V. Roberto and P.L. Bragato, 1993, A Distributed Architecture for a Geophysical Interpretation System, Proc. of EUROCaip'93, Aberdeen, Scotland.
  220. Chiaruttini, C., P.L. Bragato, **G. Cassiani**, C. De Cillia, S. Persoglia and V. Roberto, 1993, Artificial Intelligence Techniques in the Interpretation of Seismic Data, E.A.E.G. 55th



---

meeting and technical exhibition, Stavanger, Norway.

221. Della Vedova, B., I. Marson, R. Nicolich, R. Marzona, **G. Cassiani** and F. Palmieri, 1992, Le risorse termali di Lignano e Grado, *Ricerca Territorio e Sviluppo*, n.4, p.40-50.
222. **Cassiani, G.**, C. Chiaruttini and C. De Cillia, 1992, Analisi automatica di facies sismica, Atti XI convegno nazionale GNGTS, CNR, Rome, Italy.
223. Della Vedova, B., I. Marson, R. Nicolich, R. Marzona, **G. Cassiani** and F. Palmieri, 1991, Metodologie geofisiche per la valutazione di risorse geotermiche a bassa entalpia: Lignano S. e Grado (Litorale Friuli-Venezia Giulia), Atti X convegno nazionale GNGTS, CNR, Rome, Italy.
224. **Cassiani, G.**, R. Linari, and R. Nicolich, 1991, Vibrazioni indotte dall'uso di esplosivi e da attività industriali: sicurezza ed interventi, Atti X conv. nazionale GNGTS, CNR, Rome, Italy.

### **Libri, capitoli di libri e rapporti.**

1. **Cassiani G.**, J. Boaga, I. Barone, M.T. Perri, G.P. Deidda, G. Vignoli, C. Strobbia, L. Busato, R. Deiana, M. Rossi, M. C. Caputo, L. De Carlo, 2018, Ground Based Remote Sensing of the Shallow Subsurface: Geophysical Methods for Environmental Applications, in: *Remote Sensing of Geomorphology*, Paolo Tarolli and Simon Mudd (Eds), Elsevier.
2. Kaestner M., M. Braeckvelt, G. Doberl, **G. Cassiani**, M. Petrangeli Papini, C. Leven-Pfister, D. Van Ree, 2012, Model-driven soil probing, site assessment and evaluation: guidance on technologies, *University of Rome La Sapienza Press*, Rome, Italy.
3. Werban U., T. Behrens, **G. Cassiani** and P. Dietrich, 2010, iSOIL: an EU project to integrate geophysics, digital soil mapping and soil science, Proximal Soil Sensing, Progress in Soil Science, Vol. 1, Part 2, 103-110, DOI: 10.1007/978-90-481-8859-8\_8, Springer.
4. Vereecken H., A. Binley, **G. Cassiani**, I. Kharkhordin, A. Revil, K. Titov (eds), 2006, Applied Hydrogeophysics, *Springer-Verlag*, Berlin.
5. Dalla E., A. Brovelli, D. Pitea, **Cassiani, G.**, 2003, A new pore-scale approach to investigate electrical properties of soils, in *Science and supercomputing at Cineca*, 2003 Report.
6. Connell L.D and **G. Cassiani**, 2001, The Estimation of Aquifer Hydraulic Properties through Well Testing, in: Barry DA and Parlange JY, Transport Models in Soils: Surface and Subsurface Hydrology: Mathematical Models for Subsurface Water Flow, *The Encyclopaedia of Life Support Systems*, UNESCO and EOLSS Publishers Co. Ltd, UK
7. **Cassiani, G.**, 1998, Multiple Intrinsic Random Fields Criteria of Permissibility, *Research*

---

*Reports on the Stochastic Analysis of Environmental Systems*, No SM/3.98, Dept. of Environmental Science and Engineering, Univ. of North Carolina-Chapel Hill.

8. Medina, M.A. and **G. Cassiani**, 1996, Groundwater Contamination by Organic Carcinogens: Detection, Modeling, Health Risk Assessment and Remedial Measures, report to Urban Environmental Health, Division of Operational Support in Environmental Health, *World Health Organization*, Geneva, Switzerland.
9. **Cassiani, G.** and W.H Liu, 1995, Duke Forest Gate 11 site: modeling and optimal remediation design, *report to Duke Medical Center, Dept. of Environmental Safety*, Duke University, Durham, NC, USA.
10. **Cassiani, G.**, 1995, Criteria of Permissibility for Generalized Covariances and Intrinsic Co-kriging, *Research Reports on the Stochastic Analysis of Environmental Systems*, No SM/5.95, Dept. of Environmental Science and Engineering, Univ. of North Carolina-Chapel Hill.
11. Kemme, Th., Vasak, S., Ritsema, I., Geel, K., Lutgert, J., Bragato, P.L., Brancolini, G., De Cillia, C., Rebesco, M., Polonia, A., Chiaruttini, C., **Cassiani, G.**, Roberto, V., 1994, Integration of Methods for Reservoir Characterization using Artificial Intelligence Techniques, in Helbig, K. (Ed.), *Modeling of the Earth for Oil Exploration*.

#### Note

**Si autorizza l'utilizzo dei dati personali ai sensi del D.Lgs 196/2003**

**Padova, 1 settembre 2019**

**Giorgio Cassiani**