



Prof. Rajandrea SETHI

Group Leader

CURRICULUM VITAE

Rajandrea Sethi is Full Professor at the Department of Environment, Land and Infrastructure Engineering (DIATI) of the Polytechnic University of Torino (Politecnico di Torino). He graduated with honors in Environmental Engineering at the Politecnico di Torino where he obtained his Ph.D. in Environmental Geoengineering in 2004.

Prof. Sethi is the Head of the Groundwater Engineering Group and he is member of the Steering Committee of the Technology Transfer Office and of the Information Technology Committee of Politecnico di Torino.

His studies focus on environmental monitoring and modelling, flow and contaminant transport, colloidal transport in porous media, groundwater monitoring, development of novel environmental reclamation technologies, and environmental nanotechnologies.

He participated in the design and monitoring of the first permeable reactive barrier emplaced in Italy, and for ten years he has been responsible of the environmental monitoring of the groundwater system within the Project "MOSE" for the defence of the Venice Lagoon from high tides. In the framework of several projects funded by the Italian Government and four projects funded by the E.U. (FP7 AQUAREHAB, FP7 NANOREM, H2020 REGROUND, and Alpine Space GRETA projects), he has conducted research on the application and transport of micro- and nanoscale particles for the remediation of contaminated aquifer systems and on low enthalpy geothermal systems. In 2012 he was Official of the Italian delegation at a Senior officials meeting Carnegie Group (G8+5) at JRC in Brussels. From 2015 to 2019 he served as Head of the Environmental Engineering Department (70 professors, 30 staff members, 150 junior researchers) at Politecnico di Torino. During his mandate the Department received the qualification of Excellence by the Italian Ministry of Research and Education and a funding of 9 M€. He managed a budget of more than 4 M€/y. Among the several relationships with private industries and institutes he was responsible of the framework contract between Politecnico di Torino and ENI (2015-2019).

He teaches the course of Groundwater Engineering and he has thought several courses on environmental characterization, contaminant transport and modelling, aquifer remediation, fluid dynamics climate change and negative technologies at national and international institutions.

He has supervised more than 100 M.Sc. and 13 Ph.D. students. He serves as Associate Editor of Water Resources Research and he is author of more than 100 journal articles and of two textbooks of Groundwater Engineering edited by Springer. His Scopus H-index is 27 (32 on Scholar).

Rajandrea Sethi



Current position

In the Department of Environment, Land and Infrastructure Engineering (DIATI) of the Polytechnic University of Torino, he is:

- **Full Professor** (SC 08/A2, SSD ICAR03).
- **Head of the Groundwater Engineering Group** (www.polito.it/groundwater): 1 Assistant Prof., 2 Post Docs, 2 Ph.D. candidates.
- **Responsible of the Environmental Nanotechnology Laboratory.**
- Member of the **Steering Committee of the Technology Transfer Office** and of the **Information Technology Committee** of the Politecnico di Torino
- Member of the **Scientific Committee of the Excellence Project of the Environmental Engineering Department on Climate Change**

Work and research experience

2015-2019	Head of the Environmental Engineering Department, 70 Faculties, 30 Staff members, 150 junior researchers
2015-2019	Member of the Academic Senate of the Politecnico di Torino, Member of the Spin Off Commission
2016-present	Tenured Full Professor at DIATI (Department of Environment, Land and Infrastructure Engineering), Polytechnic University of Torino
2011-2016	Tenured Associate Professor at DIATI (Department of Environment, Land and Infrastructure Engineering), Polytechnic University of Torino
2004-2010	Tenured Assistant Professor at DIATI (Department of Environment, Land and Infrastructure Engineering), Polytechnic University of Torino
2001	Visiting scholar at Waterloo University (Canada)
2001 – 2004	Ph.D. student at the Graduate School of the Politecnico di Torino

Education

- 2004 **PhD in Environmental Geoengineering** from Polytechnic University of Torino (Italy). Thesis title: "Zerovalent Iron Permeable Reactive Barriers: multispecies reactive transport modelling"
- 2000 **Master Degree (cum laude) in Environmental Engineering** from Polytechnic University of Torino (Italy). Thesis title: "Heat Generation and Transport from MSW Landfills to Aquifer Systems" (in Italian)



Prizes, awards and recognition

- 2015 Web of Science Highly Cited paper: Tosco T., Petrangeli Papini M., Cruz Viggi C., Sethi R. Nanoscale zerovalent iron particles for groundwater remediation: a review JOURNAL OF CLEANER PRODUCTION - Elsevier
- 2015 Web of Science Highly Cited and Hot paper: "Artificial neural network simulation of hourly groundwater levels in a coastal aquifer system of the Venice lagoon" by Taormina R., Chau K.-W., Sethi R. In: ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE
- 2015 Most cited Engineering Application of Artificial Intelligence Articles since 2010 for the paper: "Artificial neural network simulation of hourly groundwater levels in a coastal aquifer system of the Venice lagoon" by Taormina R., Chau K.-W., Sethi R. In: ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE
- 2012 Pubblication prize funded by the Politecnico di Torino
- 2012 Top paper for Water Air Soil Pollution (All fields), ISI Web of Knowledge for the paper: "Comparison Between Field Applications of Nano-, Micro-, and Millimetric Zero-Valent Iron for the Remediation of Contaminated Aquifers", WATER, AIR AND SOIL POLLUTION, pp. 13, 2010, ISSN: 1573-2932, DOI: 10.1007/s11270-010-0502-1 together with COMBA S., DI MOLFETTA A.
- 2011 Pubblication prize funded by the Politecnico di Torino
- 2011 "Top-50 most cited articles" appeared on Colloid and Interface Science (2008-2009) for the paper: "Reduced aggregation and sedimentation of zero-valent iron nanoparticles in the presence of guar gum", JOURNAL OF COLLOID AND INTERFACE SCIENCE, 2008, together with TIRAFERRI A., CHEN K.L, ELIMELECH M
- 2010 Recipient of the Young Scientists award, prize funded by the Politecnico di Torino
- 2010 Pubblication prize funded by the Politecnico di Torino
- 2009 Recipient of the Young Scientists award, prize funded by the Politecnico di Torino
- 2009 Pubblication prize funded by the Politecnico di Torino
- 2008 Recipient of the Young Scientists award, prize funded by the Politecnico di Torino
- 2008 Pubblication prize funded by the Politecnico di Torino
- 2001 Best Italian presentations at the 8th International Waste Management and Landfill Symposium, Sardinia 2001 for the paper: "Heat generation and transport from MSW landfill to groundwater", together with A. DI MOLFETTA



Courses taught at Politecnico di Torino:

- 2018-present *Climate and socioeconomical Changes* (Cambiamenti climatici e socioeconomici, in Italian), Bachelor Level, Politecnico di Torino (10h, 180 students)
- 2013-present *Flow, transport and filtration in porous media* (Flusso, trasporto e filtrazione in mezzi porosi 01QCLRM in English), PhD course (III level), Politecnico di Torino (8h, 15 students)
- 2012-present *"Nanotechnologies for groundwater remediation"* in *Physical Chemistry of Materials for nanotechnologies* (Chimica-fisica dei materiali per le nanotecnologie 01NUWKI in English) PhD course (III level), Politecnico di Torino (2h, 20 students)
- 2013-present *Groundwater Engineering* (*Ingegneria degli Acquiferi 05BHXNF*), Master of Science in Environmental Engineering, Politecnico di Torino (80h, 100 students)
- 2012-present *"Remediation technologies"* in the framework of *Hydraulics and vulnerability of aquifers* (*Idraulica e vulnerabilità degli acquiferi 01PFMQT*), Second level master in Water Engineering, Mondovì, Politecnico di Torino (60h, 10 students)
- 2012 "Transport of colloids and nanoparticles in saturated porous media for environmental remediation", Excellence Ph.D. Course "Two phase flow and transport in unsaturated soils and aquifer systems: theoretical and experimental aspects as relevant for geo-environmental applications" by Prof. Majid Hassanzadeh, G.Musso, R.Sethi. Politecnico di Torino, 29/06/12 (2h, 30 students)
- 2012 "Pumping tests – recent advances", in the framework of the Excellence Ph.D. Course: "Recent advances in hydraulic characterization of porous media: from concepts to the field" Dr. James J. Butler Jr. (Kansas Geological Survey) and R. Sethi. Politecnico di Torino, 30/03/12 (4h, 20 students)
- 2012 Fundamentals of groundwater engineering (Fondamenti di Ingegneria degli Acquiferi: parametri idrodinamici, trasporto di contaminanti, monitoraggio ambientale) and "Monitoring of the impacts of the Mose working sites on groundwater system of the Venice Lagoon" (Monitoraggio degli impatti dei cantieri del Mose sulla Falda idrica), Second level specializing Master Program in "Ingegneria della Sicurezza e Analisi dei Rischi", "Sistemi di gestione della sicurezza nelle attività industriali e di cantiere", Torino, 10/05/12 (3h, 20 students)
- 2011-2012 *Groundwater Engineering* (*Ingegneria degli Acquiferi 05BHXNF, 01BHXFL*), Master of Science in Environmental Engineering, Politecnico di Torino (80h, 50 students)
- 2010-2011 Associate instructor *Environmental Fluid Dynamics* (*Fluidodinamica Ambientale*), Master of Science in Environmental Engineering, Politecnico di Torino (30h, 40 students)
- 2009 "Colloidal and nanoparticle transport in saturated porous media", in the framework of the Excellence Ph.D. Course: "Conceptual and mathematical modeling of phenomena of transport in porous media" by Prof. Jacob Bear (TECHNION — Israel Institute of Technology Environmental and Water Resources Engineering, Faculty of Civil Engineering) and R. Sethi. Politecnico di Torino, 4/09/09 (2h, 35 students)



- 2007 – *Groundwater Engineering (Ingegneria degli acquiferi 01BHXFV)*, Master of Science in Civil Engineering, Mondovì, Politecnico di Torino (60h, 12 students)
- 2010 – *Subsurface Contaminant Transport Modeling (Modelli di trasporto degli inquinanti nel sottosuolo 01IPKGD)*, Master of Science in Environmental Engineering, Politecnico di Torino (50h, 50 students)
- 2004 – *Remediation of contaminated aquifer systems (Bonifica degli acquiferi contaminati 01IQAFV)*, Master of Science in Civil Engineering, Mondovì, Politecnico di Torino (50h, 35 students)
- 2003-
2004 *Environmental Monitoring (Tecnica del monitoraggio 01FKO)*, Master of Science in Land Protection Engineering, Politecnico di Torino (50h, 35 students)
- 2003-
2008 Associate instructor *Groundwater Engineering (Ingegneria degli Acquiferi)*, Master of Science in Environmental Engineering, Politecnico di Torino (30h, 60 students)
- 2003-
2008 Associate instructor *Advances in Groundwater Engineering (Complementi di Ingegneria degli Acquiferi)* Master of Science in Land Protection Engineering, Politecnico di Torino (30h, 40 students)
- 2001-
2003 Assistant instructor *Fate and Transport of Contaminants (Dinamica degli inquinanti)*, Master of Science in Environmental Engineering, Politecnico di Torino (20h, 40 students)
- 2000-
2002 Assistant instructor *Groundwater Engineering (Ingegneria degli Acquiferi)*, Master of Science in Environmental Engineering, Politecnico di Torino (20h, 60 students)
- 1999-
2000 Assistant instructor *Water and Wastewater Treatment Engineering (Ingegneria Sanitaria)*, Master of Science in Environmental Engineering, Politecnico di Torino (20h, 40 students)
- 1998-
1999 Assistant instructor *Applied Environmental Ecology (Ecologia Applicata Ambientale)*, Master of Science in Environmental Engineering, Politecnico di Torino (20h, 50 students)

Short Courses Taught at National and International Institutions (title in English if taught in English):

- 35 "MNNMs: a modelling tool for nanoparticle transport in porous media" (short course), in the framework of the Interpore 2015 Conference, 21-22/05/2015, Padova
- 34 "Contaminant transport and groundwater remediation", Master program in Environmental and Civil Engineering, Ecole Centrale de Lyon (France), 8-11/02/2015
- 33 "Bonifica di acquiferi contaminati mediante nanoparticelle di ferro zerovalente". Second level specializing Master Program "Caratterizzazione e tecnologie per la bonifica dei siti inquinati". Università degli Studi di Roma La Sapienza, Roma, 5/09/2014



- 32 Short Course: "Transport of nanoparticles in porous media: modeling laboratory experiments", in the framework of the FP7 EU funded project NANOREM, 10-11/04/2014, Wien University, Austria
- 31 "*Ingegneria degli acquiferi, prove di caratterizzazione idrodinamica, analisi dello stato di contaminazione e caso studio di PRB ad Avigliana (TO)*", Master Science in "Ingegneria per la Sicurezza del Lavoro e dell'Ambiente", Università degli Studi dell'Insubria, 10/01/2014.
- 30 "*Progettazione, realizzazione e monitoraggio della prima PRB italiana a trincea continua*" Remtech training school - I edition, Remtech 2013, Ferrara, 19/09/2013
- 29 "*Micro e Nanoparticelle di ferro zerovalente per la bonifica dei siti inquinati*". Second level specializing Master Program "Caratterizzazione e tecnologie per la bonifica dei siti inquinati". Università degli Studi di Roma La Sapienza, Roma, 12/09/2013
- 28 "*Characterization of contaminated aquifer systems*", "Remediation of contaminated aquifers using Permeable Reactive Barriers". Vasile Alecsandri University, Bacau, Romania, 14-18/01/2013
- 27 "*Bonifica dei siti contaminati*" second level specializing Master Program "Tecnici della ricerca specializzati in nuove tecnologie per la difesa del territorio e la tutela dell'ambiente" PON01_01869, Università Mediterranea di Reggio Calabria, Reggio Calabria, 8-9/11/2013
- 26 "*Ingegneria degli acquiferi, prove di caratterizzazione idrodinamica, analisi dello stato di contaminazione e caso studio di PRB ad Avigliana (TO)*", Master Science in "Ingegneria per la Sicurezza del Lavoro e dell'Ambiente", Università degli Studi dell'Insubria, 15/11/12.
- 25 "Micro- and Nanoscale iron for groundwater remediation: laboratory testing and modelling" Helmholtz Zentrum München -Institut für Grundwasserökologie invited by Prof. Dr. Rainer Meckenstock. Munich, Germany, 28/02/12
- 24 "*Nanoparticelle di ferro zerovalente per la bonifica di falde contaminate: dalle prove di laboratorio alle applicazioni su scala reale*". Second level specializing Master Program "Caratterizzazione e tecnologie per la bonifica dei siti inquinati". Università degli Studi di Roma La Sapienza, Roma, 05/10/12
- 23 "*Transport of colloids and nanoparticles in saturated porous media for environmental remediation*", Excellence PhD Course "Two phase flow and transport in unsaturated soils and aquifer systems: theoretical and experimental aspects of relevance for geo-environmental applications" by Proff. Majid Hassanzadeh, G.Musso, R.Sethi. Politecnico di Torino, 29/06/12
- 22 "*Fondamenti di Ingegneria degli Acquiferi: parametri idrodinamici, trasporto di contaminanti, monitoraggio ambientale*" e "*Monitoraggio degli impatti dei cantieri del Mose sulla Falda idrica*", Second level specializing Master Program in "Ingegneria della Sicurezza e Analisi dei Rischi", "Sistemi di gestione della sicurezza nelle attività industriali e di cantiere", Torino, 10/05/12
- 21 "*Pumping tests – some recent advances*", in the framework of the Excellence Ph.D. Course: "Recent advances in hydraulic characterization of porous media: from



- concepts to the field" Dr. James J. Butler Jr. (Kansas Geological Survey) and R. Sethi. Politecnico di Torino, 30/03/12
- 20 "Ferro zerovalente e nano particolare nella bonifica di falde contaminate". Second level specializing Master Program "Caratterizzazione e tecnologie per la bonifica dei siti inquinati". Università degli Studi di Roma La Sapienza, Roma, 16/09/11
- 19 "Nanoparticelle di ferro per la decontaminazione di siti inquinati", Colloquia CRS4, Regione Sardegna Cagliari, 28/11/11
- 18 "Caratterizzazione e tecniche di bonifica – approfondimenti ed esempi", "Progettazione e realizzazione di Barriere reattive permeabili", "Interventi di messa in sicurezza: rimozione del prodotto libero, barriere idrauliche, impermeabilizzazioni", "Caratterizzazione di siti contaminati", In: "La bonifica di siti contaminati", ENI Corporate University and ITALGAS, Politecnico di Torino, 09-11/2010
- 17 "Construction and monitoring of the Italian zerovalent iron PRB", "Construction and monitoring of the Italian zerovalent iron PRB" "Nanoscale iron for groundwater remediation". Inaugural Ceremony of the Academic Year 2010, Vasile Alecsandri University, Bacau, Romania, 7/10/10.
- 16 "Ferro nanostrutturato per la bonifica di falde inquinate". Second level specializing Master Program "Tecnologie avanzate per la caratterizzazione ed il monitoraggio dei siti inquinati e processi innovativi in-situ per la loro bonifica". Università degli studi di Roma, Sapienza. CERI - Valmontone, 1/10/09
- 15 "Caratterizzazione di matrici ambientali contaminate e dinamica degli inquinanti". L'applicazione dell'analisi di rischio nella bonifica di siti inquinati, GEAM (Associazione Georisorse e Ambiente). Torino, 10-12/10/2009
- 14 "Fundamentals of Groundwater Engineering" e "Groundwater systems: main aspects and black box modelling with Artificial Neural Networks" with R. Taormina, DIMAT Talks, Politecnico di Torino, 7/04/09.
- 13 "Colloidal and nanoparticle transport in saturated porous media", Excellence PhD Course: "Conceptual and mathematical modeling of phenomena of transport in porous media" by Prof. Jacob Bear (TECHNION — Israel Institute of Technology Environmental and Water Resources Engineering, Faculty of Civil Engineering) and R. Sethi. Politecnico di Torino, 4/09/09
- 12 "Nanoparticelle di ferro per il trattamento di falde contaminate". INRIM, Istituto Nazionale di Ricerca Metrologica, Torino, 30/04/09.
- 11 "Groundwater Engineering" HYDROAID (Water for Development Management Institute), International Training Center - ILO (International Labour Organization), Torino, 17-19/11/08.
- 10 "Nanoscale iron for aquifer remediation". Tuebingen University - Mathematisch-Naturwissenschaftliche Fakultät invited by Prof. Peter Grathwohl, Germania, 08/06/07
- 9 "L'applicazione dell'analisi di rischio nella bonifica dei siti inquinati". GEAM (Associazione Georisorse e Ambiente). Torino 24/10/07



- 8 "Nanotecnologie e ambiente: Ferro nanoscopico per la bonifica di acquiferi contaminate". GEAM (Associazione Georisorse e Ambiente), Politecnico di Torino, 27/03/07
- 7 "Groundwater Engineering". HYDROAID (Water for Development Management Institute), International Training Center - ILO (International Labour Organization), Torino 29-31/10/07.
- 6 "Applicazione su scala reale di una barriera reattiva permeabile a ferro zerovalente". ARPA short course. Torino, 26/09/2006
- 5 "Processing Modflow (PMWIN) Groundwater modeling short course". HYDROAID (Water for Development Management Institute), International Training Center - ILO (International Labour Organization), Torino 18/05/06
- 4 "Tecniche per la caratterizzazione di siti contaminati." Gruppo Scientifico Italiano Studi e Ricerche (GSISR) Bonifica di siti contaminati. Caratterizzazione e tecnologie di risanamento. Milano 13/02/2006.
- 3 "Caratterizzazione di siti contaminati ai sensi del D.M. 471/99". Ordine dei Geologi (Association of Professional Geologists) della Provincia di Torino. In: Strumenti di caratterizzazione idrogeologica per la bonifica di siti contaminati. Torino, 09/05/05.
- 2 "Characterization and remediation of contaminated aquifers". HYDROAID (Water for Development Management Institute). Brasilia (Brasil), 13-14/10/05.
- 1 "Groundwater modeling course: Visual Modflow and Winflow". HYDROAID (Water for Development Management Institute), International Training Center – ILO (International Labour Organization), Torino 19-21/07/03

On average 1-15h, 10-150 attendants/course

Exhibitions:

1. He participated to the design of the Exhibition "Rocce Cristalli and Meteoriti" at Politecnico di Torino. [Link](#)
2. He was involved in the Exhibition "Underwater" by Daniela Berta and Andrea Lerda at Filatoio di Caraglio. [Link](#)

Organizing activities and service:

- 23 2015 Elected Director of the University Senate of the Politecnico di Torino.
- 22 2015 Elected Head of the Department of Environment, Land, and Infrastructure Engineering (DIATI), Politecnico di Torino.



- 21 2015-present Member of the Steering Committee of the Doctoral School in Civil and Environmental Engineering, Politecnico di Torino
- 20 2014-present Member of the Spin-off Committee of the Politecnico di Torino
- 19 2014-present: Coordinator: LICPAT: "Laboratori di Innovazione, Consulenza tecnica e Progettazione per l'Ambiente e il Territorio". Attività integrativa 4 CFU. Master of Science in Environmental Engineering, Politecnico di Torino
- 18 2014-present Member of the Steering Committee of the Technology Transfer Laboratory (Laboratorio Interdipartimentale per il Trasferimento Tecnologico) of the Politecnico di Torino
- 17 2014-present Member of the Mathematical Engineering Program Committee, Politecnico di Torino
- 16 2013-2015: Member of the Resource Management Commission (Commissione Risorse) of DIATI Department
- 15 2013: Member of the Committee for the review/exclusion of the candidates for the Board of Directors (Consiglio di Amministrazione) of the Politecnico di Torino
- 14 2013-2015 Member of the Steering Committee of the Doctoral School in Environmental Engineering, Politecnico di Torino
- 13 2012-present Member of the Focus Group for Gap Analysis for the European Charter for Researchers and the HR Excellence in Research accreditation of the Politecnico di Torino
- 12 2012-present Member of the Job Orientation Committee of the Environmental Engineering Program, Politecnico di Torino
- 11 2010-2014 Member of the Board of the Doctoral School in Environment and Built Environment, Politecnico di Torino
- 10 2009-2010 Member of the Research Committee of University Senate of the Politecnico di Torino
- 9 2009-2010 Elected Member of the University Senate of the Politecnico di Torino.
- 8 2008-2010 Member of the Orientation and Study Committee of the Master Program in Environmental Engineering, Politecnico di Torino.
- 7 2008-2010 Member of the Internationalization Committee of the Master Program in Environmental Engineering, Politecnico di Torino.
- 6 2008-present Member of the Information Technology Committee of the Environmental Engineering Department, Politecnico di Torino.
- 5 2008-present Member of the Internationalization Committee of the Environmental Engineering Department, Politecnico di Torino.
- 4 2008-2010 Member of the Committee for the Strategic Planning of Mondovì Headquarters, Politecnico di Torino.
- 3 2008-present Responsible of the Environmental Nanotechnology Lab. of the Politecnico di Torino. The lab is equipped with the instrumentation for particle size



analysis, rheological tests, zeta-potential, colloidal transport in saturated porous media.

- 2 2007-2012 Member of the Board of the Doctoral School in Environment and Land, Politecnico di Torino
- 1 2004-present Member of the Environmental Engineering Program Committee, Politecnico di Torino

Chairman/scientific committees:

- 18 2019-2010: Scientific committee of "Conversazioni in Biblioteca". 10 talks on the relationships between environmental engineering and humanism.
http://www.diati.polito.it/focus/conversazioni_in_biblioteca/quarto_ciclo
- 17 2019: Scientific committee of "Conversazioni in Biblioteca". 11 talks on the relationships between environmental engineering and humanism.
http://www.diati.polito.it/focus/conversazioni_in_biblioteca/terzo_ciclo
- 16 2018: Scientific committee of "Conversazioni in Biblioteca: Ambiente e...". 5 talks on the relationships between environmental engineering and humanism.
http://www.diati.polito.it/focus/conversazioni_in_biblioteca/secondo_ciclo
- 15 2017: Scientific committee of "Conversazioni in Biblioteca: Ambiente e...". 5 talks on the relationships between environmental engineering and humanism.
http://www.diati.polito.it/focus/conversazioni_in_biblioteca/primo_ciclo
- 14 2016: Organizing committee. "Design, Construction and controls of soil improvement systems", Torino geotechnical Conference. XXIV Edition. February 25th-26th, 2016
- 13 2015 Chairman: "Innovative reagents for in-situ reactive zones", REMTECH 2015, Ferrara
- 12 2015 – present: Member of the scientific committee of REMTECH – Remediation Technologies, Bonifiche dei Siti Contaminati e Riqualificazione del Territorio. Ferrara.
- 11 2013 – External Peer Reviewer, Rannis – Icelandic Research Fund
- 10 2013 President of the scientific and organizing committee and chairman: Symposium "Membranes for liquid separation and water treatment: environmental applications and future perspectives", S.M.A.T. Torino, 10-11/10/2013
- 9 2013 Excellence Ph.D. course "Membrane-based water separation processes: theory and applications for a sustainable future" by Prof. Menachem Elimelech and Dr. Alberto Tiraferrri. Politecnico di Torino, 7-9/10/13
- 8 2012-2013: Chair of the Virtual Conference Organizing Committee in the framework of the InterPore Annual Meeting and Conference that will be hold in Prague, 21-23 May 2013
- 7 2012 Excellence Ph.D. course "Two phase flow and transport in unsaturated soils and aquifer systems: theoretical and experimental aspects of relevance for geo-



environmental applications" by Proff. Majid Hassanzadeh, G.Musso, R.Sethi. Politecnico di Torino, 29/06/12

- 6 2012 – Excellence Ph.D. course "Recent avances in hydraulic characterization of porous media: from concepts to the field" Dr. James J. Butler Jr. (Kansas Geological Survey). Politecnico di Torino, 30/03/12
- 5 2012 – chairman: 1st European Symposium on Remediation Technologies and their Integration in Water Management Comprising: 5th European Conference on Permeable Reactive Barriers & Reactive Zones (PRB/RZ-2012) September 25-26, 2012 Barcelona, Spain
- 3 2010 President of the scientific Committee and chairman: "Geothermal Energy for sustainable development: the necessity of a multidisciplinary approach"- Convegno GEAM presso Electrotechnical National Institute Corso Massimo D'Azeglio, 42 - Torino February 9th, 2010
- 2 2009 - Excellence Ph.D. course "Conceptual and mathematical modeling of phenomena of transport in porous media" by Prof. Jacob Bear (TECHNION — Israel Institute of Technology Environmental and Water Resources Engineering, Faculty of Civil Engineering). Politecnico di Torino, 4/09/09
- 1 2007 – Chairman: "3rd International Symposium on Permeable Reactive Barriers", ECOMONDO - Rimini, 8-9 nov. 2007.

Forensics:

- 2014 Technical expert (CTU) for the Impianto di Bonifica di Alice Castello. Tribunale di Vercelli (R.G. 1500/2013)
- 2012 Member of the technical forensic experts of the Politecnico di Torino (together with Prof. G. Genon and M. Zanetti) for the Consiglio di Stato for the dispute 2539/12 related to the MSW landfill of Rome (Malagrotta).

International Cooperation:

He held several courses in the framework of Hydroaid (Water for Development Management Institute) projects at the International Training Center of the Interlational Labour Organization (ILO) in Turin and in Brazil:

- "Groundwater Engineering" HYDROAID (Water for Development Management Institute), Torino, 17-19/11/08.
- "Groundwater Engineering". HYDROAID (Water for Development Management Institute), Torino 29-31/10/07. (in english)



- "Processing Modflow (PMWIN) Groundwater modeling short course". HYDROAID (Water for Development Management Institute), Torino 18/05/06 (in english)
- "Characterization and remediation of contaminated aquifers". HYDROAID (Water for Development Management Institute). Brasilia, 13-14/10/05. (in italian)
- "Groundwater modeling course: Visual Modflow and Winflow". HYDROAID (Water for Development Management Institute), Torino 19-21/07/03. (in english)

Cooperation projects in the framework of Master Thesis projects:

- LE SERRE Roberto. Ottimizzazione e salvaguardia della risorsa idrica nel centro Baan Unrak in Thailandia. ROBIGLIO, R. SETHI
- BIONDI Marco. Orti metropolitani. Piattaforme agricole e gestione dell'acqua in un quartiere informale di Taguig city 28/02/2012 P.CROSET, R.SETHI, A.CASASSO
- RUSSO Carlo. Progettare il territorio attraverso le sue risorse: una proposta di riqualificazione della cava di amianto di Balangero e Corio 27/09/2011 P.CROSET, R.SETHI
- MANDRILE Manuele. Olympeked : Beijing-Torino design studio 2008 : progetto integrato di un museo dell'acqua e di un sistema di recupero dei reflui urbani. P.A. CROSET, G. AMBROSINI, M. BONINO, R.SETHI

News reports on his research:

- 2019 Citazione in PoliFlash: "Politecnico e CNR alleati per affrontare le sfide del cambiamento climatico" [Link](#)
- 2019 Citazione in Greenreport: "Nanotecnologie per rimuovere contaminanti cancerogeni dall'ambiente" [Link](#)
- 2019 Citazione "Al Filatoio di Caraglio apre la mostra "Underwater"". [Link](#)
- 2016 Citazione in Repubblica: "La ricerca supera qualsiasi barriera", di Stefano Parola [Link](#)
- 2012 Citazione in: "Nanoremediation: nanotecnologie al servizio dell'ambiente" di Stefania Somarè, Laboratorio 2000. http://www.swas.polito.it/services/Rassegna_Stampa/dett.asp?id=4028-154452377
- 2011 Citazione in: "Cosa succede se si beve nanoferro", di Amelia Beltramini, Focus Online.

Reviewer for Scholarly Journals:

In 2011 he received a Certificate of Appreciation for the valuable contribution and dedicated service in the peer review of manuscript submitted to ACS Journals



1. Environmental Science and Technology
2. Journal of Hazardous materials
3. Water research
4. Chemical Engineering Journal
5. Water resources research
6. Journal of contaminant hydrology
7. Hydrogeology Journal
8. Environmental Pollution
9. Environmental Geology
10. Soil and Sediment contamination
11. New biotechnology
12. Colloids and Surfaces A: Physicochemical and Engineering Aspects
13. Acque sotterranee
14. GEAM - Geoingegneria ambientale e mineraria

Participation in international Committees:

- 2014 Member of the Doctoral Examination Committee: CARNIATO Luca, "Model-data integration for predictive assessment of groundwater reactive transport systems", DELFT University of Technology (Netherlands), Supervisors: N.C. van de Giesen, G.H.W. Schoups
- 2014 Committee for the Election of the Coordinator of Ph.D. courses at the "Vasile Alecsandri" University of Bacau
- 2012 External Referee and member of the Examination Committee: VELIMIROVIC Milica, "Use of injectable Fe-based particles for in-situ treatment of contaminated groundwater", University of Antwerpen (Belgio). Supervisors: P. Seuntjens, R. Samons, L. Bastiaens.
- 2012 Supervisor and member of the Examination Committee: DE BOER Cjestmir Volkert, Transport of nanosized zero valent iron colloids during injection into the subsurface, VEGAS - Institut fur Wasser- und Umweltsystemmodellierung, University of Stuttgart. Supervisors: R. Helmig, R. Schotting, R. Sethi. ISBN 3-9337 61-23-9
- 2011 External Referee: CHITIMUS Alexandra-Dana, Studies and research on the influence of the mechanical and physical properties of soil in self-cleaning and cleaning, Department of Environmental Engineering and mechanical Engineering, Vasile Alecsandri University of Bacau.
- 2010 President of the Committee for the Internal Evaluation of the study program quality at the "Vasile Alecsandri" University of Bacau



Ph.D. supervision:

- 13 2019-2021: PISCITELLO Amelia. Nanoparticle transport in environmental matrices.
- 12 2018-2020: GALLO Andrea. Electro-Nano-remediation of contaminated aquifer systems
- 11 2014-2018: BIANCO Carlo. MNMs and MNM3D: tools for the simulation of micro- and nanoparticle transport in aquifer systems.
- 10 2014-2018: CREVACORE Eleonora. Microscale simulation of colloidal transport in 3D porous media
- 9 2011-2015: BOCCARDO Gianluca. CFD simulation of flow and transport in microscale models (porous media), Politecnico di Torino.
- 8 2011-2015: MESSINA Francesca. (REMTECH AWARD) Modeling microscale iron transport in porous media, Politecnico di Torino.
- 7 2010-2014: GASTONE Francesca. (REMTECH AWARD) Role of the rheological properties of biopolymers in the stabilization and transport of iron slurries, Politecnico di Torino.
- 6 2010-2013: LUNA Michela. (REMTECH AWARD) Injection of zerovalent iron particles: from laboratory scale to field application, Politecnico di Torino.
- 5 2009-2012: XUE Dinqi. Micro- and nano-zerovalent iron dispersion stabilized by biopolymers: magnetic characterization and magnetorheological behaviour, rel. P. Allia, R. Sethi. Politecnico di Torino.
- 4 2009-2012: CASASSO Alessandro. Low enthalpy geothermal systems: coupled flow and heat transport modelling of the long-term performances of Borehole Heat Exchangers, Politecnico di Torino.
- 3 2012: DE BOER Cjestmir Volkert. Transport of nanosized zero valent iron colloids during injection into the subsurface, VEGAS - Institut fur Wasser- und Umweltsystemmodellierung, University of Stuttgart. Rel. R. Helmig, R. Schotting, R. Sethi. ISBN 3-9337 61-23-9.
- 2 2008-2011: COMBA Silvia. (ENI AWARD) Development of nano micro-scale zero-valent iron technology for aquifer remediation. Politecnico di Torino.
- 1 2007-2010: TOSCO Tiziana. Modelling the transport of iron-based colloids in saturated porous media. Politecnico di Torino.



Others:

- 2006 – Tutor of the project “Environmental nanotechnology: application, fate and risk of engineered nanoparticles. DWARFe: Decontamination of groundWAter systems using Fe-based nanoparticles” Marta Barberis Pinlung, Michel A. Cancelliere, Eleonora De Re, Roberto Lecca, Simone Maggiore, Alberto Marnetto dell’ASP - Alta Scuola Politecnica (Politecnico di Torino e Politecnico di Milano)
- 2003-
2004 Supervisor in the framework of “*Environmental safeguard of the production processes and the oil exploitation*” for the Scuola di Alta Formazione dell’Università della Basilicata. A.A. 2003-2004.

Master student supervision:

1. 233316 DELLE VERGINI LUIGI Flussi di gas clima alteranti emessi da discarica di rifiuti solidi urbani 25/03/2019 106/110 R.SETHI
2. 221434 LA ROSA MARIO Studio di fattibilità per un impianto geotermico a pompa di calore in un condominio 25/03/2019 98/110 A.CASASSO, R.SETHI, S.DELLA VALENTINA
3. 243357 MADEDDU MATILDE Utilizzi innovativi dell’olivina: possibilità di cattura dell’anidride carbonica 14/10/2019 106/110 C.OGGERI, R.SETHI, N.RUSSO
4. 242095 MARCHETTI ENRICO Studio dell’interferenza reciproca tra impianti geotermici a bassa entalpia open-loop 18/07/2019 105/110 A.CASASSO, R.SETHI
5. 221966 BARETTA STEFANO Simulazione numerica di sistemi Borehole Thermal Energy Storage (BTES) 13/04/2018 98/110 A.CASASSO, S.DELLA VALENTINA, R.SETHI
6. 231254 CURTI LUCA Ottimizzazione dell’uso di biopolimeri per la nanoremediation di acquiferi contaminati 26/03/2018 110/110 T.TOSCO, C.BIANCO, R.SETHI
7. 231359 FERRANTELLO NATALIA Modellazione 3D del trasporto di particelle colloidali per la nanoremediation di acquiferi contaminati 18/07/2018 110/110 R.SETHI, T.TOSCO, C.BIANCO
8. 233244 GALLINA MATTEO Studio di fattibilità per un impianto geotermico a circuito aperto in un complesso residenziale 13/04/2018 89/110 A.CASASSO, R.SETHI, M.RIVOIRE
9. 231230 GARZONE EUGENIO Studio di un sistema energetico sostenibile e off-grid per un edificio turistico in ambiente montano 13/04/2018 91/110 A.CASASSO, R.SETHI, M.RIVOIRE
10. 232248 PESCARMONA SIMONE Modelli numerici e analitici per lo studio della possibile cross – contaminazione tra acquiferi in presenza di sonde geotermiche 26/07/2018 110/110 A.CASASSO, R.SETHI, S.DELLA VALENTINA
11. 242556 PISCITELLO AMELIA Biopolymer mixtures for the optimization of iron micro- and nanoparticle delivery in aquifer systems for groundwater remediation 28/11/2018 110/110 R.SETHI, C.BIANCO, F.MONDINO
12. 232581 RIGGI LUCA Feasibility study of ground-source heat pumps in Northern Québec 28/11/2018 95/110 A.CASASSO, S.DELLA VALENTINA, R.SETHI



13. 216644 ACCOLLA SABRINA Trasporto di nanoparticelle di ferro per la bonifica di falde idriche contaminate 15/03/2017 108/110 R.SETHI, T.TOSCO
14. 220276 ACCORSI FEDERICO Nuove tecniche di bonifica. Intervento in un sito contaminato da idrocarburi mediante l'iniezione di un surfattante, il trattamento ISCO e il monitoraggio geofisico 3D 15/03/2017 107/110 R.SETHI, T.TOSCO
15. 215994 BELLACIMA ANDREA Trattamento acque di scarico: rimozione di antimonio mediante nanomateriali a base di bismuto 27/07/2017 110/110 A.TAGLIAFERRO, R.SETHI, P.JAGDALE
16. 220467 BIZZARRO VALERIA Simulazione di trasporto di nanoparticelle in mezzi porosi 17/03/2017 108/110 D.MARCHISIO, G.BOCCARDO, R.SETHI
17. 220745 BONFIGLIO CHIARA Hydraulic conductivity reduction induced by precipitation of aluminium-organic matter flocs in porous media 15/03/2017 105/110 R.SETHI
18. 219773 CRUGNOLA CECILIA Transport of nanopesticides in porous media 15/03/2017 110/110 T.TOSCO, S.FIORE, R.SETHI
19. 221749 D'AMORE SIMONA Trasporto di sospensioni colloidali di goethite in mezzi porosi saturi: applicazione per la bonifica in due siti contaminati 09/10/2017 98/110 R.SETHI, T.TOSCO
20. 214091 FERRO ROBERTO Numerical modelling of the reciprocal interference between Ground Water Heat Pumps 05/04/2017 110/110 R.SETHI, A.CASASSO
21. 215930 GATTUSO DARIO Studio del cortocircuito termico nei sistemi geotermici open-loop 15/03/2017 102/110 R.SETHI, A.CASASSO
22. 220536 LIMONE ROBERTA Analisi di trasporto anomalo in un mezzo poroso con il Continuous Time Random Walk 04/12/2017 102/110 A.GRILLO, R.SETHI, E.CREVACORE
23. 220333 LUCCA ENRICO Geochemical investigation of Arsenic in drinking water sources in proximity of gold mining areas within the Lake Victoria Basin, in Northern Tanzania. 27/07/2017 110/110 R.SETHI
24. 210820 MONDINO FEDERICO Analisi di rischio di nanoparticelle in falda. 27/07/2017 102/110 R.SETHI, T.TOSCO, C.BIANCO
25. 219774 NIGRI CECILIA CAROLINA Intervento di messa in sicurezza operativa mediante Pump & Treat: progettazione e simulazione numerica 15/03/2017 110/110 R.SETHI, T.TOSCO, C.BIANCO
26. 221931 RIVOIRE MATTEO Dynamic simulation and economic analysis of geothermal HVAC systems in different climate zones 05/04/2017 101/110 R.SETHI, A.CASASSO, B.PIGA
27. 230265 TOLARDO GIUSEPPE Mappatura del potenziale geotermico a bassa entalpia nel territorio della Valle d'Aosta 06/12/2017 99/110 A.CASASSO, R.SETHI, S.DELLA VALENTINA
28. 222016 TREVISAN CRISTIAN MODELLAZIONE NUMERICA PER LA PROGETTAZIONE DI UN INTERVENTO DI BONIFICA IN SITU MEDIANTE INIEZIONE DI NANOPARTICELLE DI GOETITE 27/07/2017 105/110 R.SETHI, T.TOSCO
29. 222087 VALORI ALESSIO Adattamento ed applicazione del codice numerico RT3D per la mappatura del rischio sanitario ambientale in acquiferi contaminati 27/07/2017 105/110 R.SETHI, C.BIANCO



30. 220918 ANDRIOLLO CRISTINA Fabbricazione e caratterizzazione di membrane polimeriche per la rimozione di cromo da acque potabili 05/12/2016 106/110 A.TIRAFERRI, R.SETHI
31. 211220 BALZANELLI FULVIA Effect of Freeze-Thaw Operation on the Stability of a Borehole Heat Exchanger 25/07/2016 104/110 R.SETHI
32. 202529 DAVILA TORRES YURI MARCELA Prove batch per la riduzione in situ di mercurio e solventi clorurati in acque di falda contaminate 25/07/2016 98/110 R.SETHI, T.TOSCO
33. 211253 GIUNTA GIULIANA SIMULAZIONE DI TRASPORTO E DEPOSIZIONE DI PARTICELLE IN MEZZI POROSI CON BILANCIO DI POPOLAZIONE 25/07/2016 106/110 D.MARCHISIO, G.BOCCHARDI, R.SETHI
34. 200135 LA MOTTA FEDERICA ANALISI DEI DATI PROGETTUALI E RELATIVI APPROFONDIMENTI DI UN IMPIANTO DI BONIFICA CON SISTEMA MULTI PHASE EXTRACTION 25/07/2016 105/110 R.SETHI
35. 203673 PATINO HIGUITA JANIS ENEIDA Strategie per l'inezione di sospensioni di nanoparticelle in mezzi porosi per la bonifica di acquiferi contaminati 19/10/2016 100/110 R.SETHI, T.TOSCO, A.TIRAFERRI, C.BIANCO
36. 211140 RICCERI FRANCESCO Asymmetric Membranes Functionalized with Graphene Oxide for Enhanced Contaminant Removal 05/12/2016 105/110 A.TIRAFERRI, R.SETHI
37. 192184 ACHOULINE SASKIA Design of a pump-and-treat ground-water remediation system 26/03/2015 93/110 R.SETHI
38. 199294 DE MARCO CRISTINA Optimization of a Ground Source Heat Pump in a building located in Germany 24/11/2015 110/110 R.SETHI, P.ASINARI, A.CASASSO
39. 198375 MARCUCCI CARLO Trasporto di nanoparticelle di grafene ossido nei mezzi porosi: influenza delle condizioni di flusso e della geochimica 22/10/2015 100/110 R.SETHI, T.TOSCO
40. 206972 PACE FRANCESCA Underground thermal impact of Ground Water Heat Pumps: a sensitivity analysis. 22/10/2015 110/110 R.SETHI, A.CASASSO
41. 208370 PALESTINI CARLO Prove di trasporto di nanoparticelle in mezzi porosi: automatizzazione e analisi dimensionale 10/12/2015 110/110 R.SETHI, T.TOSCO, C.BIANCO
42. 203873 SALDARRIAGA HERNANDEZ LAURA ANDREA Aggregation and transport in porous media of iron oxide nanoparticles in the presence of monovalent and divalent ions 10/12/2015 99/110 R.SETHI, T.TOSCO, C.BIANCO, A.TIRAFERRI
43. 153834 MILANI CLAUDIA. Studio modellistico dell'influenza delle interazioni elettrostatiche nel trasporto di nanoparticelle finalizzato alla bonifica di acquiferi. 11/12/2014 R.SETHI
44. 133705 MATTURRO FRANCESCO RECUPERO ADATTIVO DEL COMPLESSO INDUSTRIALE WAY ASSAUTO - ASTI 19/12/2015 108/110 M.ROBIGLIO, R.SETHI
45. 187461 ALI FARHAD. Step rate tests. 14/03/2014 R.ROMAGNOLI, R.SETHI, T.TOSCO
46. 190654 ANNOVAZZI ALICE. Degradation of the azo-dye Acid Orange 7 by zero valent iron with different particles size. 15/07/2014 B.BONELLI, R.SETHI
47. 190638 BALZINO MICHELA. Gold recovery process in dredges located in Rio Madeira 15/07/2014 R.SETHI, J.SECCATORE



48. 190371 GIANNELLI GIULIA. Small flume experiment for the transport evaluation of carbo-iron particles in a confined aquifer. 23/10/2014 R.SETHI, T.TOSCO, J. BRAUN
49. 186702 ANTONINI Francesca. Nanosized iron oxides in groundwater bioremediation: mobility and reactivity studies in column experiments and field application 11/12/2013 R.SETHI, T.TOSCO
50. 188088 BIANCO Carlo. Implementing colloidal and nanoparticles transport on RT3D/MODFLOW:from lab to pilot scale. 11/12/2013 R.SETHI, T.TOSCO
51. 188285 CREVACORE Eleonora. Microscale CFD simulations of fluid flow and colloid transport in porous media 12/12/2013 R.SETHI, D.MARCHISIO, L.PREZIOSI
52. 161802 SALAZAR VELASQUEZ Monica Alejandra. Demineralization process using a newly designed thermosensitive hydrogel 26/03/2013 R.SETHI
53. 160605 BIONDI Marco. Orti metropolitani. Piattaforme agricole e gestione dell'acqua in un quartiere informale di Taguig city 28/02/2012 P.CROSET, R.SETHI, A.CASASSO
54. 168932 COSSU Elena. Newly designed demineralization hydrogel for water softening 26/03/2012 R.SETHI, A.DI MOLFETTA
55. 170200 LE SERRE Roberto. Acqua, paesaggio e architettura per la comunità. Ridisegno degli spazi e degli usi per Baan Unrak a Sangkhlaburi, Tailandia. 19/12/2012 M.ROBIGLIO, R.SETHI
56. 168547 RAIMONDI Cristian. Studio sperimentale sull'influenza di pretrattamenti in membrane ultrafiltranti presso l'impianto di trattamento acque di harnaschpolder. 30/03/2012 R.SETHI, M.ZANETTI
57. 155142 ANNOVAZZI Alice. Degradazione dell'azo-colorante orange ii con ferro nanoscopico in fase acquosa 23/03/2012 B.BONELLI, R.SETHI
58. SCARAMUZZI CARLO. Permeable reactive barriers (PRBs). 2012. Università dell'Insubria. C. MOROSINI, R. SETHI
59. 150782 BOCCARDO Gianluca. Simulazione di trasporto e deposizione di particelle di ferro in mezzi porosi per applicazioni ambientali 13/12/2011 D.MARCHISIO, R.SETHI
60. 161498 BONGIOVANNI Niccolo'. Suspensioni di ferro micrometrico per la bonifica di falde contaminate: studio della stabilita', delle proprieta' reologiche e del trasporto in mezzi porosi 20/07/2011 R.SETHI, A.DI MOLFETTA
61. 159370 BUFFA Stefano Bruno. Prove di trasporto di ferro zerovalente micrometrico in mezzi porosi saturi 06/04/2011 R.SETHI
62. 160279 COMBA Simone. U.S. high plains aquifer calibration monitoring program: aquifer levels data correction using barometric response function and estimation of full recovery 06/04/2011 R.SETHI
63. 168429 MESSINA Francesca. Modellazione alla microscala del trasporto di micro e nanoparticelle di ferro zerovalente in mezzi porosi. 07/12/2011 R.SETHI
64. 159084 PROMIO Daniele. Model for the assessment of the risk of point sources to surface water: development and application. 08/04/2011 M.ZANETTI, R.SETHI, S.FIORE
65. 159101 RUSSO Carlo. Progettare il territorio attraverso le sue risorse: una proposta di riqualificazione della cava di amianto di Balangero e Corio 27/09/2011 P.CROSET, R.SETHI



66. 170703 TURRINI Daniele. Studio reologico e di trasporto di sospensioni non newtoniane di microparticelle di ferro. 07/12/2011 R.SETHI, A.DI MOLFETTA
67. 167952 ZORTEA Raissa. Effect of water treatment on disinfection by-products formation in swimming pool water. 07/12/2011 R.SETHI, A.DI MOLFETTA
68. 149716 SIMONDI Maurizio. Studio sperimentale e modellistico di fenomeni di trasporto di nanoparticelle su mezzi porosi saturi. 07/04/2011 D.MARCHISIO, R.SETHI
69. 153147 RINALDI Samuele. Simulazione alla microscala del trasporto di nanoparticelle di ferro in mezzi porosi. 14/05/2010 R.SETHI
70. 159490 RUGGERI Miriam Assunta. Studio del trasporto in mezzi porosi di nanoparticelle di ferridrite per la bonifica di acquiferi contaminati. 10/12/2010 R.SETHI
71. 150878 SCRIPPELLITI Elena. Da un approccio di design sostenibile alla modellazione parametrica: landscape art competition negli Emirati Arabi. 12/07/2010 P.CROSET, R.SETHI, I.PAOLETTI
72. 150748 ARATO Alessandro. Studio idrogeofisico del sito di Trecate (NO) 13/05/2009 A.GODIO, R.SETHI, A.DI MOLFETTA
73. 144936 BARDINI Laura. Studio di campo della dinamica stocastica della superficie freatica. 22/07/2009 L.RIDOLFI, F.LAIO, R.SETHI
74. 147895 LUNA Michela. Trasporto di micro e nano-particelle di ferro zerovalente in mezzi porosi saturi. 13/05/2009 A.DI MOLFETTA, R.SETHI
75. 145012 MARCHISIO Daniele. Ferro zerovalente per la bonifica di acquiferi contaminati: studio del comportamento reologico e della capacita' degradativa nei confronti dei nitrati. 20/03/2009 R.SETHI, A.DI MOLFETTA
76. 143590 OLIVERO Samuele. Processo accoppiato di adsorbimento e ossidazione per la rimozione in situ di ferro e arsenico da acquiferi contaminati 22/07/2009 R.SETHI
77. 142107 SALIVO Vincenzo. Deposition of fly ashes into former sandpits. 22/07/2009 R.SETHI
78. MANDRILE Manuele. Olympeked : Beijing-Torino design studio 2008 : progetto integrato di un museo dell'acqua e di un sistema di recupero dei reflui urbani. P.A. CROSET, G. AMBROSINI, M. BONINO, R.SETHI
79. 137847 COLOMBA Anastasia. Caratterizzazione, stabilizzazione e trasporto di nano e micro particelle di ferro zerovalente in mezzi porosi saturi. 08/10/2009 D.MARCHISIO, R.SETHI
80. 144222 CASASSO Alessandro. Studio per un modello di flusso e trasporto nell'acquifero superficiale in corrispondenza della bocca di Lido nella laguna di Venezia. 12/12/2008 A.DI MOLFETTA, R.SETHI
81. 134651 DALLA VECCHIA Elena Cristina. Caratterizzazione magnetica e modelli d'interazione di particelle di ferro zerovalente monoscopico per la bonifica di acquiferi contaminati. 12/03/2008 R.SETHI, A.DI MOLFETTA
82. 143985 ZANIRATTI Irene. Modellizzazione di flusso per il controllo dell'aggiramento laterale di una barriera permeabile reattiva. 10/12/2008 A.DI MOLFETTA, R.SETHI
83. 98139 GREGORIO Domenico. Sistema di acquisizione compatto per misurazioni di livello dinamiche in falde idriche. 18/04/2008 M.ORTOLANO, R.SETHI



84. 124834 BUZIO Federica. Trasporto di colloidì in mezzi porosi saturi: ruolo della forza ionica nei meccanismi di filtrazione. 08/10/2008 A.DI MOLFETTA, R.SETHI
85. 125093 MONDINO Alessandro. Prove di trasporto di colloidì in mezzi porosi saturi. 18/07/2008 R.SETHI, A.TIRAFERRI
86. 134997 BALDARELLI Tommaso. Modellazione accoppiata di flusso e trasporto nell'acquifero costiero in corrispondenza della Bocca di Lido (VE). 12/12/2007 A.DI MOLFETTA, R.SETHI
87. 134612 CAMPANELLI Roberta. Modelling of diffusion/dispersion - limited reactions in saturated porous media at the bench scale. 12/12/2007 A.DI MOLFETTA, M.ROLLE, R.SETHI
88. 134449 PANCARO Alessandro. Analisi del progetto preliminare di bonifica del sito di interesse nazionale porto Vesme (CI). 05/10/2007 M.ZANETTI, R.SETHI
89. 129559 SALATO Alessandro. Monitoraggio e studio dell'intrusione del cuneo salino nella falda in prossimità della bocca di porto di Lido. 18/07/2007 R.SETHI, A.DI MOLFETTA
90. 128828 TAORMINA Riccardo. An application of artificial neural networks for time series modeling in a coastal aquifer system. 12/12/2007 A.DI MOLFETTA, R.SETHI
91. 134613 TIRAFERRI Alberto. Stability and transport of zero-valent iron nanoparticle suspensions for the remediation of contaminated aquifers. 12/12/2007 A.DI MOLFETTA, R.SETHI
92. 122580 COMBA Silvia. Bonifica di acquiferi contaminati mediante ferro nanoscopico zerovalente: studio della stabilità, del trasporto e dell'iniezione. 20/12/2006 A.DI MOLFETTA, R.SETHI
93. 126632 RICCOMAGNO Rubina Sarah. Elaborazione di una procedura automatica di trattamento di dati piezometrici per la valutazione quali-quantitativa dell'influenza di forzati naturali e antispicche su un sistema acquifero costiero. 20/12/2006 A.DI MOLFETTA, R.SETHI
94. 126983 SANTI Chiara. Modellizzazione numerica per la quantificazione dei processi di attenuazione naturale in acquiferi contaminati. 19/07/2006 A.DI MOLFETTA, R.SETHI
95. 122544 TOSO Davide. Prove innovative per la simultanea caratterizzazione idrodinamica di sistemi acquiferi e valutazione dell'efficienza di pozzi di emungimento. 17/05/2006 A.DI MOLFETTA, R.SETHI
96. 99386 FREYRIA Francesca Stefania. Caratterizzazione del ferro nanoscopico per la bonifica di falde idriche contaminate. 11/10/2006 A.DI MOLFETTA, R.SETHI, E.GARRONE, B.BONELLI
97. 81542 LODI Nicola. Caratterizzazione idrodinamica di un sito contaminato. 19/07/2006 R.SETHI
98. 99825 MICCOLI Fabrizio. Sistema di visione e acquisizione sincronizzata per misurazioni di livello dinamiche in falde idriche. 25/01/2006 M.ORTOLANO, R.SETHI
99. 121525 TOSCO Tiziana Anna Elisabetta. Metodo probabilistico per la definizione di aree di salvaguardia di pozzi ad uso idropotabile. 21/12/2005 A.DI MOLFETTA, R.SETHI
100. 83066 ARGOLAS Angelo Maurizio. Applicabilità di un sistema di bonifica tramite prb ad un sito inquinato da idrocarburi clorurati. 16/03/2005 A.DI MOLFETTA, R.SETHI
101. 97646 ARIOTTI Chiara. Realizzazione della prima barriera reattiva permeabile in italia mediante l'impiego di un fango a polimeri naturale e biodegradabile. 25/05/2005 A.DI MOLFETTA, R.SETHI



102. 60786 CENA Igor. Caratterizzazione idrodinamica e modellizzazione numerica di un aquifero per il dimensionamento di una barriera idraulica. 12/10/2005 A.DI MOLFETTA, R.SETHI
103. 100873 CONDINI Elisa. Verifica numerica dei fenomeni accoppiati di flusso e consolidazione rilevati in prova di falda. 25/05/2005 A.DI MOLFETTA, R.SETHI
104. 98945 GRICINELLA Aristide. Prove sperimentalni per il dimensionamento di un sistema di pump & treat. 20/07/2005 A.DI MOLFETTA, R.SETHI
105. 100936 PRETTE Chiara. Studio idrogeologico e modellistico relativo alla realizzazione di una trincea drenante nell'area di Beinette (Provincia di Cuneo) 12/10/2005 B.VIGNA, R.SETHI
106. 100610 RIGHETTI Anna. L'analisi di rischio sanitario ambientale applicata a discariche di RSU. 20/07/2005 A.DI MOLFETTA, R.SETHI
107. 107606 SALATO Alessandro. Analisi del fenomeno di overshooting durante l'esecuzione di slug test meccanici. 25/05/2005 R.SETHI
108. 102174 SCACCIANOCE Luana. Determinazione della conducibilita' idraulica mediante slug test. 21/07/2004 A.DI MOLFETTA, R.SETHI

Technology Transfer and Internship supervision:

- 2015 Exploitation of the Water-Wells patent related to an efficient installation of pumps in water wells
- 2014- present Member of the Spin-off Committee of the Politecnico di Torino
- 2014- present 2014-present: Coordinator: LICPAT: "Laboratori di Innovazione, Consulenza tecnica e Progettazione per l'Ambiente e il Territorio". Attività integrativa 4 CFU. Master of Science in Environmental Engineering, Politecnico di Torino
- 2014- present Member of the Steering Committee of the Technology Transfer Laboratory (Laboratorio Interdipartimentale per il Trasferimento Tecnologico) of the Politecnico di Torino
- 2012 Internship supervisor: Gastone Francesca, at ETH Zurich Institute of F.N.H, Switzerland
- 2012 Internship supervisor: Turrini Daniele, at FENICE spa
- 2012 Internship supervisor: Buffa Stefano, at Acs srl
- 2012 Internship supervisor: Comba Simone, at FIAT GROUP AUTOMOBILES SPA
- 2011 Internship supervisor: Alzate Gomez Juliana, at Studio Tecnico Soffietti S.
- 2011 Internship supervisor: Sinatra Aureliano, at Amiat SpA
- 2010 Internship supervisor: Dascola Giuseppe, at Delft University of Technology
- 2009 Internship supervisor: Baldarelli Tommaso, at ENI S.p.A.
- 2009 Internship supervisor: Zaniratti Irene, at A.R.T. Studio Ambiente



- 2008 Tutor in the framework of the Alta Scuola Politecnica (ASP) project: "DWARFe: Decontamination of groundwater systems using Fe-based nanoparticles", Politecnico di Torino
- 2008 Ruolo: co-proponente, "Introduzione delle energie rinnovabili nei contesti abitativi della Provincia di Cuneo", progetto finanziato dalla Cassa di Risparmio di Cuneo nell'ambito del quale una unità operativa ha studiato l'applicazione del ferro nanoscopico al trattamento di nitrati in falda.
- 2006 Ruolo: Tutor. Progetto Sinapsi (Regione Piemonte), per l'assistenza di un giovane ricercatore sulla tematica: "Bonifica di acquiferi contaminati mediante ferro nanoscopico: studio del trasporto, della deposizione e dei meccanismi d'azione sui contaminanti e individuazione di nuove tecniche di iniezione" per SINAPSI S.c.a.r.l. formata da POLIEDRA PROGETTI INTEGRATI S.p.A, FONDAZIONE ALMA MATER e FEDERAPI Piemonte.
- 2004 Collaboration to the design of the first Permeable Reactive Barrier in Italy and exploitation of a patent by ETI (Canada)

International collaborations and visits:

- 01/2014 LLP Programme – Erasmus, teaching staff mobility, Vasile Alecsandri University of Bacau, Romania
- 01/2013 LLP Programme – Erasmus, teaching staff mobility, Vasile Alecsandri University of Bacau, Romania
- 06/12/2012 Official of the Italian delegation at the Senior officials meeting Carnegie Group (G8+5), the United Nations and the World Bank, "Improving disaster anticipation and resilience through international scientific partnership", JRC – Brussels
- 02/2012 Visiting researcher Helmholtz Zentrum München -Institut für Grundwasserökologie, Prof. Dr. Rainer Meckenstock. Munich, Germany, 28/02/12
- 10/2010 LLP Programme – Erasmus 2010/2011, teaching staff mobility, Vasile Alecsandri University of Bacau, Romania
- 10/2010 President of the Committee for the Internal Evaluation Committee for the quality of course program at the "Vasile Alecsandri" University of Bacau
- 06/2007 Visiting researcher Center for Applied Geoscience - Tuebingen University, Prof. Peter Grathwhol , Germania
- 08/2007 Visiting researcher Department of Chemical engineering – Yale University, Prof. Menachem Elimelech
- 06/2006 Visiting researcher Civil and Environmental Engineering, Carnegie Mellon University, Prof. Greg. Lowry, USA
- 2002 Visiting Ph.D. student at Waterloo University in Canada.



Memberships:

- INTERPORE - International Society for Porous Media (<https://www.interpore.org/>)
- YOUNG NANO – Network of Young Nano Scientists (<http://www.youngnano.eu/>)
- EU NanoSafety Cluster (<http://www.nanosafetycluster.eu/>)
- MODENA - Materials, Physics and Nanosciences TD1204: Modelling Nanomaterial Toxicity – Cost Action
- ESSEM - Earth System Science and Environmental Management ES1205: The transfer of engineered nanomaterials from wastewater treatment & stormwater to rivers – Cost Action

Editorial Service:

- 2012 – present: Scientific and Advisory Board “Acque sotterranee. Italian Journal of Groundwater”. ISSN 1828-454X
- 2011 – present: Editorial Board “Journal of Engineering Studies and Research – JESR”. Alma Publishing House. ISSN 2068-7559
- 2018 – present: Associate Editor of Water Resources Research

Softwares:

He coordinated and contributed to the development of the following software, available for free download from <http://www.polito.it/groundwater/software>:

- MNMs 2015 (Micro-and Nanoparticle transport, filtration and clogging Model - Suite), software tool for the simulation of solute and particle transport in saturated porous media. It provides analytical solutions to solute transport equations, a graphical interface for the particle transport numerical models MNM1D and E-MNM1D (1D geometry), and implements a finite differences numerical model for particle transport in radial geometry.
- E-MNM1D (Enhanced Micro-and Nanoparticle transport Model in porous media in 1D geometry), finite differences numerical model, implemented in a Matlab environment, for direct and inverse simulation of the transport of highly concentrated, non-Newtonian suspensions of colloidal particles (eg. Nano- and micro- iron for groundwater remediation), in the presence of clogging phenomena.
- MNM1D (Micro-and Nanoparticle transport Model in porous media in 1D geometry), finite differences numerical model, implemented in a Matlab environment, for direct and inverse



simulation of colloid transport in porous media in the presence of transient hydrochemical conditions.

- TRS (Thermal Recycling Simulator): a software for the simulation of the thermal recycling in open-loop Ground Water Heat Pumps (GWHPs).
- APA (Automatic Protection Areas), for the automatic delineation of capture areas for pumping wells, based on a particle tracking approach.

Journal Articles (with citations)

<https://scholar.google.com/citations?user=GnM6aOAAAAAJ&hl=en>

1. Velimirovic M., Bianco C., Ferrantello N., Tosco T., Casasso A., Sethi R., Schmid D., Wagner S., Miyajima K., Klaas N., Meckenstock R.U., Von Der Kammer F., Hofmann T. A Large-Scale 3D Study on Transport of Humic Acid-Coated Goethite Nanoparticles for Aquifer Remediation (2020) *Water*, 12 (4), 1207.
2. Casasso, A., Ferrantello, N., Pescarmona, S., Bianco, C., Sethi, R. Can Borehole Heat Exchangers Trigger Cross-Contamination between Aquifers? (2020) *Water*, 12(4), 1174.
3. Mondino, F., Piscitello, A., Bianco, C., Gallo, A., de Folly D'Auris, A., Tosco, T., Tagliabue, M., Sethi, R. Injection of Zerovalent Iron Gels for Aquifer Nanoremediation: Lab Experiments and Modeling (2020) *Water* 12, 826.
4. Beryani, A., Alavi Moghaddam, M. R., Tosco, T., Bianco, C., Hosseini, S. M., Kowsari, E., Sethi, R. Key factors affecting graphene oxide transport in saturated porous media (2020) *Science of the Total Environment*, 698 (1).
5. Casasso, A., Tosco, T., Bianco, C., Bucci, A., Sethi, R. How Can We Make Pump and Treat Systems More Energetically Sustainable? (2020) *Water*, 12 (1), 67.
6. Ferrero, F.F., Fadda, M., De Carli, L., Barbutta, M., Sethi, R., Pezzana, A. Vive la difference! the effects of natural and conventional wines on blood alcohol concentrations: A randomized, triple-blind, controlled study (2019) *Nutrients*, 11 (5), p. 986.
7. Gallo, A., Bianco, C., Tosco, T., Sethi, R. Characterization and reactivity of novel silver/iron nanoparticles (2019) *Materials Today: Proceedings*, 19, pp. 15-23.
8. Boccardo, G., Sethi, R., Marchisio, D.L. Fine and ultrafine particle deposition in packed-bed catalytic reactors (2019) *Chemical Engineering Science*, 198, pp. 290-304.
9. Gallo, A., Bianco, C., Tosco, T., Tiraferri, A., Sethi, R. Synthesis of eco-compatible bimetallic silver/iron nanoparticles for water remediation and reactivity assessment on bromophenol blue (2019) *Journal of Cleaner Production*, 211, pp. 1367-1374.
10. Casasso, A., Sethi, R. Assessment and minimization of potential environmental impacts of ground source heat pump (GSHP) systems (2019) *Water (Switzerland)*, 11 (8), art. no. 1573.



11. Casasso, A., Capodaglio, P., Simonetto, F., Sethi, R. Environmental and economic benefits from the phase-out of residential oil heating: A study from the Aosta Valley region (Italy) (2019) *Sustainability* (Switzerland), 11 (13), art. no. 3633.
12. Minella, M., De Bellis, N., Gallo, A., Giagnorio, M., Minero, C., Bertinetti, S., Sethi, R., Tiraferri, A., Vione, D. Coupling of Nanofiltration and Thermal Fenton Reaction for the Abatement of Carbamazepine in Wastewater (2018) *ACS Omega*, 3 (8), pp. 9407-9418.
13. Tosco, T., Sethi, R. Human health risk assessment for nanoparticle-contaminated aquifer systems (2018) *Environmental Pollution*, 239, pp. 242-252.
14. Rivoire, M., Casasso, A., Piga, B., Sethi, R. Assessment of energetic, economic and environmental performance of ground-coupled heat pumps (2018) *Energies*, 11 (8), art. no. 1941.
15. Corsi, I., Winther-Nielsen, M., Sethi, R., Punta, C., Della Torre, C., Libralato, G., Lofrano, G., Sabatini, L., Aiello, M., Fiordi, L., Cinuzzi, F., Caneschi, A., Pellegrini, D., Buttino, I. Ecofriendly nanotechnologies and nanomaterials for environmental applications: Key issue and consensus recommendations for sustainable and ecosafe nanoremediation (2018) *Ecotoxicology and Environmental Safety*, 154, pp. 237-244.
16. Boccardo, G., Crevacore, E., Sethi, R., Icardi, M. A robust upscaling of the effective particle deposition rate in porous media (2018) *Journal of Contaminant Hydrology*, 212, pp. 3-13.
17. Gallo, A., Bianco, C., Tosco, T., Sethi, R. Zerovalent iron for the remediation of contaminated aquifers. [Ferro zerovalente nanoscopico per la bonifica di acquiferi contaminati] (2018) *Geoingegneria Ambientale e Mineraria*, 155 (3), pp. 5-16.
18. Casasso, A., Della Valentina, S., Filippo Di Feo, A., Capodaglio, P., Cavorsin, R., Guglielminotti, R., Sethi, R. Ground source heat pumps in Aosta Valley (NW Italy): Assessment of existing systems and planning tools for future installations (2018) *Rendiconti Online Societa Geologica Italiana*, 46, pp. 59-66.
19. Bianco, C., Patiño Higuita, J.E., Tosco, T., Tiraferri, A., Sethi, R. Controlled Deposition of Particles in Porous Media for Effective Aquifer Nanoremediation (2017) *Scientific Reports*, 7 (1), art. no. 12992, .
20. Casasso, A., Sethi, R. Assessment and mapping of the shallow geothermal potential in the province of Cuneo (Piedmont, NW Italy) (2017) *Renewable Energy*, 102, pp. 306-315.
21. Tiraferri, A., Saldarriaga Hernandez, L.A., Bianco, C., Tosco, T., Sethi, R. Colloidal behavior of goethite nanoparticles modified with humic acid and implications for aquifer reclamation (2017) *Journal of Nanoparticle Research*, 19 (3), art. no. 107, .
22. Gallo, A., Sethi, R. Microscopic zero valent silver for dye removal in wastewater (2017) *Chemical Engineering Transactions*, 60, pp. 181-186.
23. Casasso, A., Sethi, R. Models and tools for the assessment of thermal-short circuit in open-loop geothermal systems (2017) *Rendiconti Online Societa Geologica Italiana*, 42, pp. 50-53.



24. Crevacore, E., Boccardo, G., Grillo, A., Marchisio, D.L., Sethi, R. Pore-scale simulations of particle transport for groundwater remediation: The effect of gravitational settling (2017) Chemical Engineering Transactions, 60, pp. 193-198.
25. Piga, B., Casasso, A., Pace, F., Godio, A., Sethi, R. Thermal impact assessment of groundwater heat pumps (GWHPs): Rigorous vs. simplified models (2017) Energies, 10 (9), art. no. 1385, .
26. Casasso, A., Pestotnik, S., Rajver, D., Jež, J., Prestor, J., Sethi, R. Assessment and mapping of the closed-loop shallow geothermal potential in Cerkno (Slovenia) (2017) Energy Procedia, 125, pp. 335-344.
27. Becchio, C., Bottero, M.C., Casasso, A., Cognati, S.P., Dell'Anna, F., Piga, B., Sethi, R. Energy, economic and environmental modelling for supporting strategic local planning (2017) Procedia Engineering, 205, pp. 35-42.
28. Crevacore, E., Tosco, T., Sethi, R., Boccardo, G., Marchisio, D.L. Recirculation zones induce non-Fickian transport in three-dimensional periodic porous media (2016) Physical Review E, 94 (5), art. no. 053118, .
29. Bianco, C., Tosco, T., Sethi, R. A 3-dimensional micro- and nanoparticle transport and filtration model (MNM3D) applied to the migration of carbon-based nanomaterials in porous media (2016) Journal of Contaminant Hydrology, 193, pp. 10-20.
30. Casasso, A., Sethi, R. G.POT: A quantitative method for the assessment and mapping of the shallow geothermal potential (2016) Energy, 106, pp. 765-773.
31. Messina, F., Tosco, T., Sethi, R. On the failure of upscaling the single-collector efficiency to the transport of colloids in an array of collectors (2016) Water Resources Research, 52 (7), pp. 5492-5505.
32. Crevacore, E., Boccardo, G., Marchisio, D.L., Sethi, R. Microscale colloidal transport simulations for groundwater remediation (2016) Chemical Engineering Transactions, 47, pp. 271-276.
33. Casasso, A., Sethi, R. Territorial analysis for the implementation of Geothermal Heat Pumps in the Province of Cuneo (NW Italy) (2015) Energy Procedia, 78, pp. 1159-1164.
34. Luna, M., Gastone, F., Tosco, T., Sethi, R., Velimirovic, M., Gemoets, J., Muyshondt, R., Sapien, H., Klaas, N., Bastiaens, L. Pressure-controlled injection of guar gum stabilized microscale zerovalent iron for groundwater remediation (2015) Journal of contaminant hydrology, 181, pp. 46-58.
35. Messina, F., Marchisio, D.L., Sethi, R. An extended and total flux normalized correlation equation for predicting single-collector efficiency (2015) Journal of Colloid and Interface Science, 446, pp. 185-193.
36. Flores Orozco, A., Velimirovic, M., Tosco, T., Kemna, A., Sapien, H., Klaas, N., Sethi, R., Bastiaens, L. Monitoring the injection of microscale zerovalent iron particles for groundwater remediation by means of complex electrical conductivity imaging (2015) Environmental Science and Technology, 49 (9), pp. 5593-5600.



37. Casasso, A., Sethi, R. Modelling thermal recycling occurring in groundwater heat pumps (GWHPs) (2015) *Renewable Energy*, 77, pp. 86-93.
38. Casasso, A., Di Molfetta, A., Sethi, R. Groundwater monitoring at a building site of the tidal flood protection system “MOSE” in the Lagoon of Venice, Italy (2015) *Environmental Earth Sciences*, 73 (5), pp. 2397-2408.
39. Gastone, F., Tosco, T., Sethi, R. Guar gum solutions for improved delivery of iron particles in porous media (Part 1): Porous medium rheology and guar gum-induced clogging (2014) *Journal of Contaminant Hydrology*, 166, pp. 23-33.
40. Tosco, T., Gastone, F., Sethi, R. Guar gum solutions for improved delivery of iron particles in porous media (Part 2): Iron transport tests and modeling in radial geometry (2014) *Journal of Contaminant Hydrology*, 166, pp. 34-51.
41. Tosco, T., Petrangeli Papini, M., Cruz Viggi, C., Sethi, R. Nanoscale zerovalent iron particles for groundwater remediation: A review (2014) *Journal of Cleaner Production*, 77, pp. 10-21.
42. Icardi, M., Boccardo, G., Marchisio, D.L., Tosco, T., Sethi, R. Pore-scale simulation of fluid flow and solute dispersion in three-dimensional porous media (2014) *Physical Review E - Statistical, Nonlinear, and Soft Matter Physics*, 90 (1), art. no. 013032, .
43. Gastone, F., Tosco, T., Sethi, R. Green stabilization of microscale iron particles using guar gum: Bulk rheology, sedimentation rate and enzymatic degradation (2014) *Journal of Colloid and Interface Science*, 421, pp. 33-43.
44. Boccardo, G., Marchisio, D.L., Sethi, R. Microscale simulation of particle deposition in porous media (2014) *Journal of Colloid and Interface Science*, 417, pp. 227-237.
45. Casasso, A., Sethi, R. Efficiency of closed loop geothermal heat pumps: A sensitivity analysis (2014) *Renewable Energy*, 62, pp. 737-746.
46. Casasso, A., Sethi, R. Sensitivity analysis on the performance of a ground source heat pump equipped with a double U-pipe borehole heat exchanger (2014) *Energy Procedia*, 59, pp. 301-308.
47. Casasso, A., Sethi, R. Double U-pipe borehole heat exchangers: Sensitivity analysis of their energy efficiency [Sonde geotermiche a doppia U: Analisi di sensitività del rendimento energetico] (2014) *Geoingegneria Ambientale e Mineraria*, 141 (1), pp. 51-62.
48. Icardi, M., Boccardo, G., Marchisio, D.L., Tosco, T., Sethi, R. Pore-scale simulation of fluid flow and solute dispersion in three-dimensional porous media (2014) *Engineering Sciences and Fundamentals 2014 - Core Programming Area at the 2014 AIChE Annual Meeting*, 2, p. 725.
49. Velimirovic, M., Tosco, T., Uyttebroek, M., Luna, M., Gastone, F., De Boer, C., Klaas, N., Sapien, H., Eisenmann, H., Larsson, P.-O., Braun, J., Sethi, R., Bastiaens, L. Field assessment of guar gum stabilized microscale zerovalent iron particles for in-situ remediation of 1,1,1-trichloroethane (2014) *Journal of Contaminant Hydrology*, 164, pp. 88-99.



50. Tosco, T., Gastone, F., Sethi, R. Injection of zero-valent iron micro- and nano-particles for groundwater remediation: Laboratory tests and transport modelling (2013) Coupled Phenomena in Environmental Geotechnics: From Theoretical and Experimental Research to Practical Applications Proceedings of the International Symposium, ISSMGE TC 215, pp. 223-230.
51. Casasso, A., Sethi, R. Technology and potentiality of geothermal heat pumps [Tecnologia e potenzialità dei sistemi geotermici a bassa entalpia] (2013) Geoingegneria Ambientale e Mineraria, 138 (1), pp. 13-22.
52. Tosco, T., Marchisio, D.L., Lince, F., Sethi, R. Extension of the Darcy-Forchheimer Law for Shear-Thinning Fluids and Validation via Pore-Scale Flow Simulations (2013) Transport in Porous Media, 96 (1), pp. 1-20.
53. Taormina, R., Chau, K.-W., Sethi, R. Artificial neural network simulation of hourly groundwater levels in a coastal aquifer system of the Venice lagoon (2012) Engineering Applications of Artificial Intelligence, 25 (8), pp. 1670-1676.
54. Xue, D., Sethi, R. Viscoelastic gels of guar and xanthan gum mixtures provide long-term stabilization of iron micro- and nanoparticles (2012) Journal of Nanoparticle Research, 14 (11), art. no. 1239, .
55. Tosco, T., Bosch, J., Meckenstock, R.U., Sethi, R. Transport of ferrihydrite nanoparticles in saturated porous media: Role of ionic strength and flow rate (2012) Environmental Science and Technology, 46 (7), pp. 4008-4015.
56. Comba, S., Martin, M., Marchisio, D., Sethi, R., Barberis, E. Reduction of nitrate and ammonium adsorption using microscale iron particles and zeolite (2012) Water, Air, and Soil Pollution, 223 (3), pp. 1079-1089.
57. Freyria, F.S., Bonelli, B., Sethi, R., Armandi, M., Belluso, E., Garrone, E. Reactions of acid orange 7 with iron nanoparticles in aqueous solutions (2011) Journal of Physical Chemistry C, 115 (49), pp. 24143-24152.
58. Tiraferri, A., Tosco, T., Sethi, R. Transport and retention of microparticles in packed sand columns at low and intermediate ionic strengths: Experiments and mathematical modeling (2011) Environmental Earth Sciences, 63 (4), pp. 847-859.
59. Sethi, R. A dual-well step drawdown method for the estimation of linear and non-linear flow parameters and wellbore skin factor in confined aquifer systems (2011) Journal of Hydrology, 400 (1-2), pp. 187-194.
60. Comba, S., Di Molfetta, A., Sethi, R. A comparison between field applications of nano-, micro-, and millimetric zero-valent iron for the remediation of contaminated aquifers (2011) Water, Air, and Soil Pollution, 215 (1-4), pp. 595-607.
61. Comba, S., Dalmazzo, D., Santagata, E., Sethi, R. Rheological characterization of xanthan suspensions of nanoscale iron for injection in porous media (2011) Journal of Hazardous Materials, 185 (2-3), pp. 598-605.



62. Marchisio, D., Lince, F., Tosco, T., Sethi, R. Micro-scale modelling of flow and particle transport in porous media via cfd (2011) Catalysis and Reaction Engineering Division - Core Programming Topic at the 2011 AIChE Annual Meeting, 1, pp. 465-474.
63. Tosco, T., Sethi, R. Transport of non-newtonian suspensions of highly concentrated micro- and nanoscale iron particles in porous media: A modeling approach (2010) Environmental Science and Technology, 44 (23), pp. 9062-9068.
64. Tosco, T., Di Molfetta, A., Sethi, R. Automatic delineation of capture zones for pump and treat systems: A case study in piedmont, Italy (2010) Ground Water Monitoring and Remediation, 30 (2), pp. 46-52.
65. Tosco, T., Sethi, R. Comparison between backward probability and particle tracking methods for the delineation of well head protection areas (2010) Environmental Fluid Mechanics, 10 (1), pp. 77-90.
66. Dalla Vecchia, E., Luna, M., Sethi, R. Transport in porous media of highly concentrated iron micro- and nanoparticles in the presence of xanthan gum (2009) Environmental Science and Technology, 43 (23), pp. 8942-8947.
67. Tosco, T., Sethi, R. MNM1D: A numerical code for colloid transport in porous media: Implementation and validation (2009) American Journal of Environmental Sciences, 5 (4), pp. 516-524.
68. Tosco, T., Tiraferri, A., Sethi, R. Ionic strength dependent transport of microparticles in saturated porous media: Modeling mobilization and immobilization phenomena under transient chemical conditions (Environmental Science and Technology (2009) 43, (4425-4431)) (2009) Environmental Science and Technology, 43 (19), pp. 7592-7593.
69. Comba, S., Sethi, R. Stabilization of highly concentrated suspensions of iron nanoparticles using shear-thinning gels of xanthan gum (2009) Water Research, 43 (15), pp. 3717-3726.
70. Coisson, M., Celegato, F., Vecchia, E.D., Sethi, R., Tiberto, P., Vinai, F. Temperature dependence of magnetic properties in Fe/Fe-O nanoparticles dispersed in water (2009) Journal of Magnetism and Magnetic Materials, 321 (14), pp. 2276-2278.
71. Tosco, T., Tiraferri, A., Sethi, R. Ionic strength dependent transport of microparticles in saturated porous media: Modeling mobilization and immobilization phenomena under transient chemical conditions (2009) Environmental Science and Technology, 43 (12), pp. 4425-4431.
72. Zolla, V., Freyria, F.S., Sethi, R., Di Molfetta, A. Hydrogeochemical and biological processes affecting the long-term performance of an iron-based permeable reactive barrier (2009) Journal of Environmental Quality, 38 (3), pp. 897-908.
73. Vecchia, E.D., Coisson, M., Appino, C., Vinai, F., Sethi, R. Magnetic characterization and interaction modeling of zerovalent iron nanoparticles for the remediation of contaminated aquifers (2009) Journal of Nanoscience and Nanotechnology, 9 (5), pp. 3210-3218.
74. Tiraferri, A., Sethi, R. Enhanced transport of zerovalent iron nanoparticles in saturated porous media by guar gum (2009) Journal of Nanoparticle Research, 11 (3), pp. 635-645.



75. Rolle, M., Clement, T.P., Sethi, R., Di Molfetta, A. A kinetic approach for simulating redox-controlled fringe and core biodegradation processes in groundwater: Model development and application to a landfill site in Piedmont, Italy (2008) *Hydrological Processes*, 22 (25), pp. 4905-4921.
76. Tosco, T., Tiraferri, A., Di Molfetta, A., Sethi, R. Modelling colloid transport in saturated porous media: the influence of ionic strength (2008) *Rendiconti Online Societa Geologica Italiana*, 3 (2), pp. 756-757.
77. Tiraferri, A., Chen, K.L., Sethi, R., Elimelech, M. Reduced aggregation and sedimentation of zero-valent iron nanoparticles in the presence of guar gum (2008) *Journal of Colloid and Interface Science*, 324 (1-2), pp. 71-79.
78. Tosco, T., Sethi, R., Di Molfetta, A. An automatic, stagnation point based algorithm for the delineation of Wellhead Protection Areas (2008) *Water Resources Research*, 44 (7), art. no. W07419, .
79. Comba, S., Sethi, R., Di Molfetta, A. A comparison between field application of Nanoscale Zerovalent Iron [Confronto dei trattamenti su scala reale con ferro Zerovalente Nanoscopico] (2007) *Geoingegneria Ambientale e Mineraria*, 122 (3), pp. 57-67.
80. Sethi, R., Freyria, F., Comba, S., Di Molfetta, A. Nanoscale iron for the remediation of contaminated aquifers [Ferro nanoscopico per la bonifica di acquiferi contaminati] (2007) *Geoingegneria Ambientale e Mineraria*, 122 (3), pp. 39-46.
81. Freyria, F., Bonelli, B., Sethi, R., Belluso, E., Armandi, M., Garrone, E., Di Molfetta, A. Physico-chemical and morphological characterization of nanoscale iron suspensions for groundwater clean-up [Caratterizzazione chimicofisica e morfologica di sospensioni di ferro nanoscopico per la bonifica di falde contaminate] (2007) *Geoingegneria Ambientale e Mineraria*, 122 (3), pp. 47-55.
82. Sethi, R., Di Molfetta, A. Heat transport modeling in an aquifer downgradient a municipal solid waste landfill in Italy (2007) *American Journal of Environmental Sciences*, 3 (3), pp. 106-110.
83. Zolla, V., Sethi, R., Di Molfetta, A. Performance assessment and monitoring of a permeable reactive barrier for the remediation of a contaminated site (2007) *American Journal of Environmental Sciences*, 3 (3), pp. 158-165.
84. Molfetta, A.D., Sethi, R. Clamshell excavation of a permeable reactive barrier (2006) *Environmental Geology*, 50 (3), pp. 361-369.
85. Di Molfetta A.; Sethi R; Tosco T (2006) Confronto tra metodo deterministico e probabilistico per la delimitazione di aree di salvaguardia di pozzi ad uso idropotabile. In: GEAM. GEOINGEGNERIA AMBIENTALE E MINERARIA, vol. 3, pp. 53-59. - ISSN 1121-9041
86. Zolla V.; Sethi R.; Rolle M.; Di Molfetta A. (2005) Contaminazione da nichel in acquiferi a valle di discariche perdenti. In: SITI CONTAMINATI, vol. 2, pp. 34-41.
87. Di Molfetta A.; Rolle M.; Sethi R. (2004) Modello cinetico per la descrizione della zonazione redox in acquiferi contaminati a valle di discariche. In: SITI CONTAMINATI, vol. 3, pp. 98-111.



88. Rolle M.; Sethi R.; Di Molfetta A. (2004) Processi biogeochimici in falde contaminate da percolato: stato dell'arte relativo alla loro descrizione e modellizzazione. In: GEAM. GEOINGEGNERIA AMBIENTALE E MINERARIA, vol. 113, pp. 57-64. - ISSN 1121-9041
89. Di Molfetta A.; Sethi R. (2003) Metodologie di campionamento del mezzo saturo e non saturo nei siti contaminati. In: SITI CONTAMINATI, vol. 1, pp. 52-70.
90. Di Molfetta A.; Sethi R. (2001) Criteri di progettazione di barriere reattive permeabili a ferro zerovalente. Parte I. In: SITI CONTAMINATI, vol. 2, pp. 16-19.
91. Di Molfetta A.; Sethi R. (2001) Criteri di progettazione di barriere reattive permeabili a ferro zerovalente. Parte II. In: SITI CONTAMINATI, vol. 3, pp. 8-11.

Books

- R Sethi, A Di Molfetta (2019) Groundwater Engineering: A Technical Approach to Hydrogeology, Contaminant Transport and Groundwater Remediation. Springer tracts in Civil Engineering. Springer Nature Switzerland AG 2019. ISBN 978-3-030-20514-0
- Di Molfetta A., Sethi R. (2012) Ingegneria degli Acquiferi. Springer-Verlag, Milan, Dordrecht, Heidelberg, London, New York, pp. 1-415. ISBN 9788847018501

Book chapters

1. Sethi, R., Di Molfetta, A. Transport of Immiscible Fluids (2019) Springer Tracts in Civil Engineering, pp. 249-262.
2. Sethi, R., Di Molfetta, A. Human Health Risk Assessment (2019) Springer Tracts in Civil Engineering, pp. 301-329.
3. Sethi, R., Di Molfetta, A. Well Head Protection Areas (2019) Springer Tracts in Civil Engineering, pp. 161-168.
4. Sethi, R., Di Molfetta, A. Aquifer Characterization (2019) Springer Tracts in Civil Engineering, pp. 55-112.
5. Sethi, R., Di Molfetta, A. Characterization of a Contamination Event (2019) Springer Tracts in Civil Engineering, pp. 263-299.
6. Sethi, R., Di Molfetta, A. The Mass Transport Equations (2019) Springer Tracts in Civil Engineering, pp. 219-223.
7. Sethi, R., Di Molfetta, A. Analytical Solutions of the Groundwater Flow Equation (2019) Springer Tracts in Civil Engineering, pp. 33-53.
8. Sethi, R., Di Molfetta, A. Preface (2019) Springer Tracts in Civil Engineering, pp. vii-ix.
9. Sethi, R., Di Molfetta, A. The Groundwater Flow Equation (2019) Springer Tracts in Civil Engineering, pp. 27-32.
10. Sethi, R., Di Molfetta, A. Well Testing (2019) Springer Tracts in Civil Engineering, pp. 113-125.



11. Sethi, R., Di Molfetta, A. Basic Concepts (2019) Springer Tracts in Civil Engineering, pp. 1-25.
12. Sethi, R., Di Molfetta, A. Aquifer Vulnerability and Contamination Risk (2019) Springer Tracts in Civil Engineering, pp. 137-159.
13. Sethi, R., Di Molfetta, A. Groundwater Contaminants (2019) Springer Tracts in Civil Engineering, pp. 169-192.
14. Sethi, R., Di Molfetta, A. Remediation of Contaminated Groundwater (2019) Springer Tracts in Civil Engineering, pp. 331-409.
15. Sethi, R., Di Molfetta, A. Optimization of a Water Supply System (2019) Springer Tracts in Civil Engineering, pp. 127-136.
16. Sethi, R., Di Molfetta, A. Mechanisms of Contaminant Transport in Aquifers (2019) Springer Tracts in Civil Engineering, pp. 193-217.
17. Sethi, R., Di Molfetta, A. Analytical Solutions to the Differential Equation of Mass Transport for Conservative Solutes (2019) Springer Tracts in Civil Engineering, pp. 225-237.
18. Sethi, R., Di Molfetta, A. Analytical Solutions of the Differential Equation of Mass Transport for Reactive Solutes (2019) Springer Tracts in Civil Engineering, pp. 239-247.
19. Tosco T., Coisson M., Xue D., Sethi R. (2012) Zerovalent iron nanoparticles for groundwater remediation: Surface and magnetic properties, colloidal stability, and perspectives for field application. In: Nanoparticles Featuring Electromagnetic Properties: From Science to Engineering / Chiolerio A., Allia P. Research Signpost, Kerala, pp. 201-223. ISBN 9788130804804
20. Di Molfetta A.; Sethi R. (2005) Barriere reattive permeabili. In: Bonifica dei siti contaminati: caratterizzazione e tecnologie di risanamento / A cura di Luca Bonomo. Mc Graw-Hill, Milano, pp. 562-605. ISBN 9788838662782
21. Di Molfetta A.; Sethi R. (2005) Progettazione e realizzazione di barriere reattive permeabili. In: Gestione di siti contaminati / Studio Aglietto S.r.l. Osservatorio Siti Contaminati, Torino, pp. 181-215.

Conference proceedings

1. Piscitello, A., Mondino, F., Bianco, C., Gallo, A., Tosco, T., Sethi, R. (2020) Iniezione di nanoparticelle ferrose per la bonifica di sistemi acquiferi: studio sperimentale su modelli di laboratorio di larga scala. In: SiCon 2019 Workshop su: Siti Contaminati. Esperienze negli interventi di risanamento, Roma, 12-14 febbraio 2020.
2. Bianco, C., Accorsi, F., Tosco, T., Sethi, R. (2020) Confronto tecnico-economico di sistemi di isolamento fisico e idraulico. In: SiCon 2019 Workshop su: Siti Contaminati. Esperienze negli interventi di risanamento, Roma, 12-14 febbraio 2020.



3. Gallo, A., Bianco, C., Sethi, R. (2020) Monitoraggio di elettrobonifiche: problematiche e possibili soluzioni. In: SiCon 2019 Workshop su: Siti Contaminati. Esperienze negli interventi di risanamento, Roma, 12-14 febbraio 2020.
4. Casasso, A., Bianco, C., Tosco, T., Bucci, A., Sethi R. (2020) Valorizzazione energetica degli impianti Pump & Treat: sfide progettuali e opportunità. In: SiCon 2019 Workshop su: Siti Contaminati. Esperienze negli interventi di risanamento, Roma, 12-14 febbraio 2020.
5. Mondino, F., Piscitello, A., Bianco, C., Gallo, A., Tosco, T., Accorsi, F., Sethi, R. (2019) Studio e ottimizzazione del trasporto di nanoparticelle ferrose per la bonifica di sistemi acquiferi. In: SiCon 2019 Workshop su: Siti Contaminati. Esperienze negli interventi di risanamento, Brescia, 12-14 febbraio 2019. pp. 651-664.
6. Bianco, C., Patiño, J. Tosco, T., Tiraferri, A., Sethi, R. (2019) Deposizione controllata di nanoparticelle per la bonifica di acquiferi contaminati: applicazioni dell'approccio Nanotune. In: SiCon 2019 Workshop su: Siti Contaminati. Esperienze negli interventi di risanamento, Brescia, 12-14 febbraio 2019.
7. Casasso, A., Tosco, T., Bucci, A., Sethi, R. (2019) Potenzialità di utilizzo geotermico degli impianti Pump & Treat. In: SiCon 2019 Workshop su: Siti Contaminati. Esperienze negli interventi di risanamento, Brescia, 12-14 febbraio 2019. pp. 615-624.
8. Ferrantello, N., Bianco, C., Tosco, T. Sethi, R. (2019) Modellazione 3D del trasporto di particelle colloidali per la nanoremediation di acquiferi contaminati. In: SiCon 2019 Workshop su: Siti Contaminati. Esperienze negli interventi di risanamento, Brescia, 12-14 febbraio 2019.
9. Gallo, A., Bianco, C., Tosco, T., Tiraferri, A., Sethi, R. (2019) Particelle bimetalliche per la bonifica. In: SiCon 2019 Workshop su: Siti Contaminati. Esperienze negli interventi di risanamento, Brescia, 12-14 febbraio 2019. pp. 639-649.
10. Accorsi, F., Delle Vergini, L., Sethi, R. (2019) Valutazioni di flussi di gas clima alteranti da discariche e siti contaminati. In: SiCon 2019 Workshop su: Siti Contaminati. Esperienze negli interventi di risanamento, Brescia, 12-14 febbraio 2019. pp. 681-682.
11. Casasso, A., Piga, B., Pace, F., Godio, A., Sethi, R. (2018) Thermal impact assessment of Groundwater Heat Pumps (GWHPs): modelling assumptions and key In: EGU General Assembly 2018, Vienna, 8-13 aprile 2018. p. 1.
12. Casasso, A., Gattuso, D., Sethi, R. (2018) Thermal recycling assessment for Groundwater Heat Pumps (GWHPs) with time-varying flow In: EGU General Assembly 2018, Vienna, 8-13 aprile 2018. p. 1.
13. Della Valentina, S., Casasso, A., Tolardo, G., Baietto, A., Capodaglio, P., Sethi, R. (2018) Assessment and mapping of shallow geothermal potential of open and closed loop systems in Aosta Valley (NW Italy). In: EGU General Assembly 2018, Vienna, 8-13 aprile 2018. p. 1.
14. Rivoire, M., Casasso, A., Piga, B., Sethi, R. (2018) Dynamic simulation of Ground-Coupled Heat Pumps (GCHPs): insights on the economic convenience and on the environmental benefits.
15. Bianco, C., Patino, J., Tosco, T., Tiraferri, A., Sethi, R. (2018), Nanotune: iniezione controllata di nanoreagenti in falda per la bonifica di acquiferi contaminati. In: SiCon 2018 Workshop su: Siti Contaminati. Esperienze negli interventi di risanamento, Taormina, 8-10 febbraio 2018. pp. 341-352.



16. Bianco, C., Trevisan, C., Tosco, T., Sethi, R. (2018) Nano-ossidi di ferro per la bonifica di acquiferi contaminati da metalli pesanti. In: SiCon 2018 Workshop su: Siti Contaminati. Esperienze negli interventi di risanamento, Taormina, 8-10 febbraio 2018. pp. 59-71.
17. Tosco, T., Bianco, C., Mondino, F., Sethi, R. (2018) Analisi di rischio sanitario ambientale per siti contaminati da nanomateriali. In: SiCon 2018 Workshop su: Siti Contaminati. Esperienze negli interventi di risanamento, Taormina, 8-10 febbraio 2018. pp. 161-174.
18. Mohammadian, S., Krok, B., Saldarriaga H., Laura A., Bianco, C., Sethi, R., Meckenstock, R. (2017) Nanoparticles for Permeable reactive barriers: Production and application of mobile particles. In: 9th International Conference on Porous Media & Annual Meeting, Rotterdam, 8-11 May 2017. p. 1.
19. Zolla, V., Di Molfetta, A., Tosco, T., Sethi, R. (2017) Confronto tra differenti reagenti per la degradazione di solventi clorurati e l'immobilizzazione di mercurio. In: Temtech 2016, Ferrara, 21-23 September 2016. pp. 1-8.
20. Casasso, A., Sethi, R. (2017) G.POT: a method for the assessment and mapping of the near-surface geothermal potential. In: EGU General Assembly 2017, Vienna, 23-28 aprile 2017.
21. Sethi, R., Tosco, T., Gastone, F. (2017) Shear thinning fluids to optimize the injection of engineered microparticles for groundwater remediation. In: 9th International Conference on Porous Media & Annual Meeting, Rotterdam, 8-11 May 2017. p. 1.
22. Tosco, T., Bianco, C., Sethi, R. (2017) Transport models for risk assessment of natural and engineered nanoparticles in groundwater. In: Aquaconsoil 2017 - 14th International Conference on Sustainable Use and Management of Soil, Sediment and Water Resources, Lyon, 26-30 June 2017. p. 127
23. Bianco, C., Tosco, T., Sethi, R. (2017) MNM3D: a modelling tool for simulation of nanoparticle injection and transport in 3D geometries. In: Aquaconsoil 2017 - 14th International Conference on Sustainable Use and Management of Soil, Sediment and Water Resources, Lyon, 26-30 June 2017. p. 198.
24. Crevacore, E., Boccardo, G., Tosco, T., Marchisio, D., Sethi, R. (2017) The role of recirculation zones on non-Fickian transport phenomena in 3D porous media. In: 9th International Conference on Porous Media & Annual Meeting, Rotterdam, 8-11 May 2017. p. 1.
25. Bianco, C., Tosco, T., Sethi, R. (2017) Simulating nanoparticle transport in 3D geometries with MNM3D. in: European Geosciences Union General Assembly 2017, Vienna, 23-28 April 2017. p. 1.
26. Bianco, C., Tosco, T., Sethi, R. (2017) MNM3D: a modelling tool for simulation of nanoparticle injection and transport in 3D geometries. In: 9th International Conference on Porous Media & Annual Meeting, Rotterdam, 8-11 May 2017. p. 1.
27. Tiraferrri, A. Saldarriaga H., Laura A., Bianco, C., Tosco, T., Sethi, R. (2016) Water Chemistry Affects the Efficacy of Concentrated Suspensions of Iron Oxide Nanoparticles Used for Aquifer Reclamation. In: IAP 2016 - Interfaces against pollution - Environmental Challenges and Opportunities, Lleida, 4-7 September 2016. p. 1.
28. Sethi, R., Tosco, T., Bianco, C. (2016) Nanoparticelle ferrose per la bonifica di falde contaminate. In: SiCon 2016 "SITI CONTAMINATI. Esperienze negli interventi di risanamento", Brescia, 11-13 febbraio 2016. pp. 695-709.



29. Bianco, C., Tosco, T., Sethi, R. (2016) Modelling the injection and the long-term fate of nanoparticle suspensions in groundwater. In: XI Convegno Nazionale del Gruppo di Geoscienze e Tecnologie Informatiche, Torino, 13-15 giugno 2016.
30. Sethi, R., Tosco, T., Casasso, A. (2016) Prevention and mitigation measures against groundwater contamination. In: COWM2016 - International Conference on Citizen Observatories for Water Management, Venezia, 7-9 giugno 2016. pp. 98-98.
31. Casasso, A., Sethi, R. (2016) Modelli e strumenti per la valutazione del cortocircuito termico negli impianti geotermici a circuito aperto. In: XI Convegno Nazionale del Gruppo di Geoscienze e Tecnologie Informatiche, Torino, 13-15 giugno 2016.
32. Sethi, R., Casasso, A. (2016) Il rendimento energetico delle sonde geotermiche: margini di miglioramento e di incertezza in fase di progettazione. In: XI Convegno Nazionale del Gruppo di Geoscienze e Tecnologie Informatiche, Torino, 13-15 giugno 2016.
33. Messina, F., Marchisio, D., Sethi, R. (2015) Normalization and extension of single-collector efficiency correlation equation. In: EGU General Assembly 2015, Vienna, 12-17 April 2015.
34. Tosco, T., Sethi, R. (2015) Modelling the transport of iron micro and nanoparticles in saturated porous media. In: 7th International Conference on Porous Media & Annual Meeting, Padova, 18-21 Maggio 2015.
35. Romagnoli, R., Sethi, R., Tosco, T. (2015) Critical pressure analysis of the injection of shear thinning fluids in porous media. In: Offshore Mediterranean Conference & Exhibition 2015, Ravenna, 25-26 March 2015. pp. 1-8.
36. Casasso A., Sethi R. (2015) Energia rinnovabile dalle acque sotterranee con le pompe di calore geotermiche a circuito aperto. In: International conference on "Water and development", Milano, 14/1/2015. p. 1.
37. Boccardo, G., Crevacore, E., Sethi, R., Marchisio, D. (2015) Simulation of particle deposition in porous media: computational fluid dynamics and population balance modelling. In: 10th European Congress of Chemical Engineering, Nice (FRA), September 27th - October 1st 2015.
38. Sethi, R., Tosco, T., Bianco, C. (2015) MNMs: a model for the simulation of depth filtration of non-Newtonian suspensions in granular media. In: Filtech 2015, International Conference & Exhibition for Filtration and Separation Technology, Cologne – German, 24-26 February. pp. 135-135.
39. Messina, F., Marchisio, D., Sethi, R. (2015) A Normalized and Extended Correlation Equation for Predicting Single-Collector Efficiency in Physicochemical Filtration in Saturated Porous Media. In: 7th International Conference on Porous Media & Annual Meeting, Padova, May 18 - 21, 2015.
40. Boccardo G., Crevacore E., Sethi R., Marchisio D.L. (2015) Particle dispersion and deposition in porous media: a computational perspective. In: 68th Annual Meeting of the APS Division of Fluid Dynamics, Boston, MA, USA, November 22-24.
41. Boccardo, G., Sethi, R., Marchisio, D.L. (2015) Population Balance Modelling of Particle Deposition and Aggregation in Porous Media. In: AIChE 2015 Annual Meeting.
42. Tosco, T., Bianco, C., Sethi, R. (2015) Modelling nanoparticle transport in porous media across the scales: from pore network models to simulation of filed injection. In: Aquaconsol 2015. 13th



International UFZ-Deltas Conference on Sustainable Use and Management of Soil, Sediment and Water Resources, Copenhagen, Denmark, 9-12 June 2015.

43. Crevacore, E., Tosco, T., Marchisio, D., Sethi, R., Messina, F. (2015). From micro-scale 3D simulations to macro-scale model of periodic porous media. In: EGU General Assembly 2015, Vienna, 12-17 April 2015.
44. Bianco, C., Tosco, T., Sethi, R. (2015) Modelling field-scale injection and transport of nanoparticles suspensions in 3D geometries In: 7th International Conference on Porous Media & Annual Meeting, Padova, 18-21 Maggio.
45. Bianco, C., Tosco, T., Sethi, R. (2015) Simulation of the transport of nanofluids in porous media: particle deposition and clogging phenomena. In: 7th International Conference on Porous Media & Annual Meeting, Padova, 18-21 Maggio.
46. Tosco, T., Bianco, C., Sethi, R. (2015) Field-scale modeling of nanoparticle transport in aquifer systems. In: ICEENN 2015 - 10th International Conference on the Environmental Effects of Nanoparticles and Nanomaterials, Vienna, 6-10 September 2015. p. 129
47. Casasso A., Sethi R., Di Molfetta A. (2015) Eight years of groundwater monitoring at the building site of the MOSE system for the safeguard of Venice. In: EGU General Assembly 2015, Vienna, 12-17 Aprile 2015. p. 1
48. Casasso A., Sethi R. (2015) Energia rinnovabile dalle acque sotterranee con le pompe di calore geotermiche a circuito aperto. In: International conference on "Water and development", Milano, 14/1/2015. p. 1
49. Casasso A., Sethi R. (2015) TRS: a tool for the evaluation of thermal recycling in Ground Water Heat Pumps. In: EGU General Assembly 2015, Vienna, 12-17 Aprile 2015. p. 1
50. Casasso A., Sethi R. (2015) Territorial analysis for the implementation of Geothermal Heat Pumps in the Province of Cuneo (NW Italy). In: 6th International Building Physics Conference, Torino, 15-17 giugno 2015. p. 42
51. Tosco T., Gastone F., Luna M., Sethi R. (2015) Zerovalent iron micro and nanoparticles for groundwater remediation: from laboratory to field scale. In: Water and Development, Milano, fondazione Enrico Mattei, 14 gennaio 2015.
52. Casasso A., Sethi R. (2014) Analytical and numerical study of the thermal feedback in Groundwater Heat Pumps (GWHP). In: EGU General Assembly 2014, Vienna, 27/04/2014 - 02/05/2014. p. 1
53. Sethi R., Tosco T., Luna M., Gastone F., Velimirovic M., Gemoets J., Muyshond R., Sapien H., Klaas N., Bastiaens L. (2014) Field injection of microscale zerovalent iron for groundwater remediation. In: EGU General assembly 2014, Vienna, Austria, 27 April - 2 May 2014.
54. Tosco T., Bianco C., Sethi R. (2014) MNMs: a numerical model for the simulation of nanoparticles transport from landfills under transient ionic strength. In: COST Action ES1205 - WG1 ThinkTank Meeting Engineered Nanomaterials in Landfills, Dübendorf, Switerland, 17-18 November 2014.
55. Tosco T., Gastone F., Luna M., Sethi R. (2014) Microparticelle di ferro per la bonifica di acquiferi contaminati: dal laboratorio all'applicazione in campo. In: Sicon 2014 Siti Contaminati: Esperienze negli interventi di risanamento, Brescia, 6-8 febbraio 2014. pp. 397-405



56. Casasso A., Sethi R. (2014) Modelli analitici e numerici per lo studio della corto-circuitazione termica nei sistemi geotermici open loop. In: GEOFLUID, Piacenza, 1-3 ottobre 2014.
57. Messina F., Sethi R., Marchisio D. (2014) Normalization and extension of the single-collector efficiency correlation equation for predicting transport of (nano)particles. In: Nanosafety Forum for Young Scientists, Siracusa, 9-10/10/2014. p. 1
58. Gianluca Boccardo, Matteo Icardi, Daniele Marchisio , Rajandrea Sethi, Tiziana Tosco (2014)
59. PORE-SCALE SIMULATION OF COLLOID DISPERSION AND DEPOSITION IN POROUS MEDIA. In: International Conference on Multiphase Flows in Industrial Plants, Sestri Levante, September 16-19, 2014.
60. Sethi R., Tosco T., Gastone F., Luna M. (2014) Pilot Injection of Microscale Zerovalent Iron for Aquifer Remediation. In: Ecoforum Conference and Exhibition, Jupiters Casino, Gold Coast, QLD, 29-31 October 2014.
61. Tosco T., Marchisio D., Lince F., Boccardo G., Sethi R. (2014) Pore scale simulations for the extension of the Darcy-Forchheimer law to shear thinning fluids. In: EGU General Assembly 2014, Vienna, Austria, 27 April - 2 May 2014.
62. Matteo Icardi, Gianluca Boccardo, Daniele Marchisio, Tiziana Tosco, Rajandrea Sethi (2014) Pore-scale simulation of fluid flow and solute dispersion in three-dimensional porous media. In: 2014 AIChE Annual Meeting, Atlanta, USA, November 16-21.
63. Casasso A., Sethi R. (2014) Sensitivity analysis on the performances of a closed-loop Ground Source Heat Pump. In: EGU General Assembly 2014, Vienna, 27/04/2014 - 02/05/2014. p. 1
64. Tosco T., Gastone F., Sethi R. (2014) Simulation of the injection of colloidal suspensions for the remediation of contaminated aquifer systems. In: EGU General Assembly 2014, Vienna, Austria, 27 April - 2 May 2014.
65. Tosco T., Bianco C., Sethi R. (2014) Transport in porous media of iron nanoparticles for the remediation of contaminated aquifer systems. In: Nanosafety Forum for Young Scientists, Siracusa, Italy, 9-10 October 2014.
66. Messina F., Sethi R. (2014) A new definition of a correlation equation for single collector efficiency. In: EGU General Assembly 2014, Vienna, 27/04/2014 - 02/05/2014. p. 1
67. Sethi R., Tosco T., Gastone F. (2013) Modeling the injection of Non-Newtonian shear-thinning dispersions of iron particles in porous media. In: American Geophysical Union (AGU) Fall Meeting 2013, San Francisco, 9-13 December 2013.
68. Tosco T., Lince F., Marchisio D., Sethi R. (2013) Extension of Darcy-Forchheimer law to shear thinning fluids by CFD pore-scale simulations. In: 5th International Conference on Porous Media, Prague, 22-24 May 2013.
69. Velimirovic M., De Boer C., Tosco T., Klaas N., Larsson P.O., Carniato L., Schoups G., Luna M., Gastone F., Sethi R., Blaha L., Sapien H., Simons Q., Uyttebroek M., Bastiaens L., Bosch J., Meckenstock R.U., Eisenmann H., Braun J. (2013) Development of Groundwater Rehabilitation Technologies with Injectable Fe-based Materials - AQUAREHAB WP5. In: 2nd European Symposium on Water Technology and Management, Leuven, 20-21 November 2013. pp. 254-260
70. Velimirovic M., Bastiaens L., Muyshondt R., Gemoets J., Sterckx H., Klaas N., Gastone F., Sethi R., Sapien H., Larsson P.-O., (2013). Injection of guar gum micro-sized zero-valent iron



via direct push – field study. In: 2nd European Symposium on Water Technology and Management, Leuven, 20-21 November 2013. pp. 191-196

71. Martí V., Calderer M., Velimirovic M., Haest P.J., Decorte L., Broekx S., Seuntjens P., Springael D., Vandermeeren P., Johnson A.R., Aamand J., Engesgaard P., Carniato L., Schoups G., Slobodnik J., Sapien H., Luna M., Gastone F., Tosco T., Sethi R., Klaas N., Braun J., Boucard P., Blaha L., Larsson P.-O., Bastiaens L. (2013) Extrapolation and transference of Remediation Technologies and generic approaches to new selected test locations - AQUAREHAB WP8. In: 2nd European Symposium on Water Technology and Management, Leuven, 20-21 November 2013 . pp. 274-278
72. Casasso A., Sethi R. (2013) Finite-element flow and heat transport modelling of Borehole Heat Exchangers. In: European Geothermal Congress 2013, Pisa, 3-7 June 2013. pp. 1-7
73. Casasso A., Sethi R. (2013) Il ruolo della simulazione numerica nella progettazione degli impianti geotermici a bassa entalpia. In: Geotermia a bassa entalpia: prospettive di sviluppo dall'esperienza nazionale alla scala locale, Vicenza, 8 novembre 2013.
74. Tosco T., Gastone F., Sethi R. (2013) Injection of microscale zero-valent iron slurries for aquifer remediation: laboratory tests and transport modelling. In: 5th International Conference on Porous Media, Prague, 22-24 May 2013.
75. Tosco T., Gastone F., Sethi R. (2013) Injection of non-Newtonian dispersions of iron particles in porous media: modeling of clogging processes. In: XXI Congresso Associazione Italiana di Meccanica Teorica e Applicata, Torino, 17-20 Settembre 2013.
76. Tosco T., Gastone F., Sethi R. (2013) Injection of zero-valent iron micro- and nano-particles for groundwater remediation: laboratory tests and transport modelling. In: International Symposium on Coupled Phenomena in Environmental Geotechnics (CPEG), Torino, 1-3 July 2013. pp. 223-230
77. Luna M., Gastone F., Tosco T., Sethi R., Velimirovic M., Bastiaens L., Gemoets J., Muyshondt R., Sapien H., Klaas N. (2013) Low pressure injection of guar gum stabilized microscale zerovalent iron particles: a pilot study. In: 2nd European Symposium on Water Technology and Management, Leuven, 20-21 November 2013. pp. 78-83
78. Icardi M., Marchisio D., Prudhomme S., Sethi R., Tempone R., Tosco T. (2013) Multi-scale simulation and Bayesian inversion of advection-diffusion-reaction equation in porous media. In: SRI center for uncertainty quantification annual meeting, Thuwal, April 2013.
79. Messina F., Icardi M., Marchisio D., Sethi R. (2013) Pore scale simulation of micro and nanoscale zerovalent iron particles transport. In: 5th International Conference on Porous Media, Prague, 22-24 May 2013.
80. Icardi M., Boccardo G., Messina F., Marchisio D., Sethi R., Tempone R., Prudhomme S. (2013) Pore-scale investigation of flow in saturated and unsaturated media: computational tools and upscaling. In: XXI congresso associazione italiana meccanica teorica e applicata, Torino, 17-20 September 2013. p. 329
81. Icardi M., Marchisio D., Sethi R. (2013) Pore-scale simulation and hydrodynamic dispersion estimation in realistic porous media. In: 5th International Conference on Porous Media, Prague, May 2013.



82. Icardi M., Marchisio D., Sethi R., Tosco T., Tempone R., Prudhomme S. (2013) Pore-scale simulation and upscaling of flow, transport and wetting in porous media. In: 12th U.S. National Congress on Computational Mechanics, Raleigh, July 22-25, 2013.
83. Gastone F., Tosco T., Sethi R. (2013) Rheology and optimized preparation of guar gum solutions for the suspension of zerovalent iron particles. In: 2nd European Symposium on Water Technology and Management, Leuven, 20-21 November 2013. pp. 85-90
84. Boccardo G., Icardi M., Marchisio D.L., Sethi R. (2013) SIMULATION OF FLOW AND PARTICLE TRANSPORT AND DEPOSITION IN POROUS MEDIA WITH COMPUTATIONAL FLUID DYNAMICS. In: 9th European Congress of Chemical Engineering, World Forum, The Hague The Netherlands, April 21-25, 2013.
85. Casasso A., Sethi R. (2013) Sonde geotermiche closed loop: ruolo dei parametri del suolo, dell'acquifero e dello scambiatore termico sulle performance del sistema. In: Italian DHI Conference 2013, Torino, 9-10 ottobre. p. 1
86. Casasso A., Sethi R. (2013) Sonde geotermiche: simulazione numerica del flusso e trasporto di calore nel suolo. In: Geotermia a bassa entalpia: prospettive di sviluppo dall'esperienza nazionale alla scala locale, 8 novembre 2013.
87. Ali F., Tosco T., Romagnoli R., Sethi R. (2013) Step-rate injection tests for the determination of the critical pressure for reagent injection in aquifers systems. In: 2nd European Symposium on water technology and management, Leuven, 20-21 November 2013. pp. 206-211
88. Casasso A., Sethi R. (2012) Borehole Heat Exchangers: sensitivity analysis of the most important factors affecting their performances. In: 3rd International FEFLOW User Conference, Berlin, 3-5 September 2012.
89. Sethi R., Tosco T., Gastone F., Stekkova B. (2012) Micro and nanoscale iron for the remediation of contaminated aquifers: transport tests and modeling. In: Proceedings of the thirteenth international symposium on environmental issues and waste management in energy and mineral production (SWEMP 2012), Delhi, November 28-30, 2012. pp. 326-331
90. Tosco T., Gastone F., Sethi R. (2012) Iron particles mobility in saturated porous media: influence of flow rate and fluid viscosity in column transport tests and transport modelling in radial geometry. In: 1st European Symposium on Remediation Technologies and their Integration in Water Management, Barcelona, 25-26 September. pp. 93-98
91. Messina F., Icardi M., Marchisio D., Sethi R. (2012) Microscale Simulation of Nanoparticles Transport in Porous Media for Groundwater Remediation. In: COMSOL Conference 2012, Milano, 10-12 October 2012.
92. Messina F., Sethi R. (2012) Microscale modeling of zerovalent iron micro and nanoparticles transport in porous media. In: Remtech 2012, Ferrara, 19-21 September 2012.
93. Tosco T., Gastone F., Sethi R. (2012) Mobility of Nanoscale and Microscale iron for groundwater remediation: experiments and modelling. In: AGU Fall Meeting 2012, San Francisco, 3-7 December 2012.
94. Bosch J., Tosco T., Sethi R., Mechenstock R. (2012) Nanosized iron oxides in microbial BTEX oxidation: a novel concept for groundwater remediation. In: 1st European Symposium on Remediation Technologies and their Integration in Water Management, Barcelona, 25-26 September 2012.



95. Velimirovic M., Uyttebroek M., Bastiaens L., De Boer C., Klaas N., Braun J., Tosco T., Luna M., Gastone F., Sethi R., Sapien H., Eisenmann H., Larsson P.-O. (2012) Pilot Scale Injection of Guar Gum Stabilized Micro-sized Zero-valent iron via Hydro-fracturing. In: 1st European Symposium on Remediation Technologies and their Integration in Water Management, Barcelona, 25-26 September 2012. pp. 113-119
96. Tosco T., Lince F., Marchisio D., Boccardo G., Sethi R. (2012) Pore scale flow simulations for numerical validation of Darcy-Forchheimer law for shear thinning fluids used in colloidal zerovalent iron delivery. In: 1st European Symposium on Remediation Technologies and their Integration in Water Management, Barcelona, 25-26 September 2012. pp. 106-110
97. Di Molfetta A., Sethi R., Tosco T., Coisson M., Paladino O. (2012) Produzione, stabilizzazione e trasporto di nano-particelle di ferro zero-valente per bonifica di acquefieri contaminati (Progetto MIUR PRIN 2008). In: Reclaim Expò - Ecomondo, Rimini, 7-10 Novembre 2012.
98. Novarino D., Tosco T., Sethi R., Santagata E., Zanetti M. (2012) Rheological characterization of hydrogen release compounds for aquifer remediation. In: SIDISA 2012 - Sustainable Technology for Environmental Protection, Milano, 26-29 giugno 2012.
99. Sethi R., Tosco T., Gastone F. (2012) Studio di laboratorio e modellistico del trasporto di nano- e micro- particelle di ferro per la bonifica di falde contaminate. In: SITI CONTAMINATI Esperienze negli interventi di risanamento, Taormina, 9-11 febbraio 2012. pp. 417-427
100. Icardi M., Sethi R., Tosco T., Marchisio D. (2012) Towards multi-scale modelling and simulation of colloid transport in porous media. In: M&MKT - Models & Methods in Kinetic Theory (6th Edition 2012), Porto Ercole, 3-9 giugno 2012.
101. Icardi M., Boccardo G., Messina F., Marchisio D., Sethi R. (2012) Two and three dimensional simulation of flow and particle transport in porous media. In: SIMAI 2012, Torino, 25-28 giugno 2012.
102. Zolla V., Di Molfetta A., Sethi R., Luna M., Ferrero A. (2012) Zone reattive in-situ in ambiente anaerobico. Elementi di progettazione e tecniche di iniezione. In: Remtech 2012, Ferrara, 19-21 Settembre 2012.
103. Sethi R., Tosco T., Di Molfetta A. (2011) Bonifica in situ di falde contaminate mediante ferro nanoscopico. In: Remtech Expo 2011, Ferrara, 28-30 September 2011.
104. Sethi R., Tosco T. (2011) E-MNM1D: A model for the simulation of shear thinning suspensions of zerovalent iron micro and nanoparticles in porous media. In: European Geosciences Union General Assembly 2011, Vienna, 3-8 aprile 2011.
105. Xue D., Sethi R., Allia P., Coisson M (2011) Magnetic and magnetorheological characterization of biopolymer suspensions of nanoscale iron particles for ground water remediation. In: European Congress and Exhibition on Advanced Materials and Processes 2011, Montpellier (France), 12-15 September 2011.
106. Sethi R., Tosco T. (2011) Micro- e nano-particelle di ferro zerovalente per il trattamento di sorgenti contaminanti. In: 3°Workshop Fenice - Metodologie avanzate per la caratterizzazione e la bonifica di siti contaminati, Torino, 13 dicembre 2011.
107. Marchisio D., Lince F., Tosco T., Sethi R. (2011) Micro-Scale Modelling of Flow and Particle Transport In Porous Media Via CFD. In: AIChE Annual Meeting, Minneapolis, 16-21 ottobre 2011.



108. Lince F., Tosco T., Marchisio D.L., Sethi R. (2011) Modelling the mobility in porous media of iron colloids for groundwater remediation: from micro- to macroscale. In: Aquarehab - second open end-user meeting, Copenhagen, 18 January 2011.
109. Casasso A, Sethi R, Di Molfetta A (2011) Monitoring plan of MOSE building sites (Venezia): the hydrogeologic situation around the building sites. In: CORILA, Riunione Annuale 2009, Venezia, 6-7 luglio 2009. pp. 217-226
110. Sethi R., Tosco T., Gastone F., Luna M. (2011) Nanoscale and Microscale iron for groundwater remediation: experiments, modelling and perspectives. In: REMTECH 2011, Ferrara, 28 - 30 settembre 2011. pp. 10-16
111. Bastiaens L., Sethi R. (2011) Obiettivi, principali attivita', risultati e possibiliricadute del progetto Europeo (FP7) Development of rehabilitation technologies and approaches for multipressured degraded waters and the integration of their impact on river basin management (AQUAREHAB). In: Ecomondo Reclaim Expo, Rimini, 9-11 Novembre 2011.
112. Tosco T., Sethi R. (2011) Transport in porous media of iron-based bioslurries for groundwater remediation. In: European Geosciences Union General Assembly 2011, Vienna, 3-8 aprile 2011.
113. Sethi R., Tosco T., Comba S. (2010) AQUAREHAB - Injection of nanoscale iron suspensions for aquifer remediation: from lab test to field applicatios. In: VEGAS - Kolloquium 2010, Stoccarda, 7 ottobre 2010. pp. 61-68
114. Sethi R. (2010) Construction and monitoring of the Italian zerovalent iron PRB. In: Inaugural Ceremony of the Academic Year 2010, Vasile Alecsandri University, Bacau, Romania, 7 october 2010.
115. Lince F., Tosco T., Marchisio D., Sethi R. (2010) Micro-Scale Modelling of Iron Particles Transport in Saturated Porous Media. In: AiChe 2010 Annual Meeting, Salt Lake City - USA, 7-12 novembre 2010.
116. Lince F, Tosco T, Marchisio D L, Sethi R (2010) Micro-scale modelling of iron particles transport in saturated porous media. In: Permeable Reactive Barriers & Reactive Zones. PRB/RZ 2010, Anversa (Belgio), 6-8 luglio 2010. pp. 61-66
117. Di Molfetta A., Zolla V., Sethi R. (2010) Monitoraggio post operam e della funzionalità a lungo termine della barriera reattiva permeabile di Avigliana (To). In: Metodologie avanzate per la caratterizzazione e la bonifica di siti contaminati, Rivoli (To), 18 giugno .
118. Casasso A., Di Molfetta A., Sethi R. (2010) Monitoring of the groundwater levels in the framework of Mo.S.E. project of Venice. In: 4th IAHR International Groundwater Symposium, Valencia, 22-24 settembre 2010.
119. Sethi R. (2010) Nanoscale iron for groundwater remediation. In: Inaugural Ceremony of the Academic Year 2010, Vasile Alecsandri University, Bacau, Romania, 7 october 2010. pp. 1-19
120. Sethi R. (2010) Remediation of contaminated aquifers using Permeable Reactive Barriers. In: Inaugural Ceremony of the Academic Year 2010, Vasile Alecsandri University, Bacau, Romania, 7 october 2010.



121. Sethi R. (2010) Tecniche avanzate per la caratterizzazione idrodinamica e della contaminazione di siti inquinati. In: Metodologie avanzate per la caratterizzazione e la bonifica di siti contaminati, Rivoli (TO), 18 June .
122. Tosco T., Sethi R. (2010) Transport of highly concentrated slurries of iron colloids for groundwater remediation: experimental and modeling. In: Permeable Reactive Barriers & Reactive Zones. PRB/RZ 2010, Anversa (Belgio), 6-8 luglio 2010. pp. 54-58
123. Tosco T., Sethi R. (2010) Transport of iron micro and nanoparticles in saturated porous media. In: CONSOIL 2010 - Management of Soil, Groundwater and Sediment, Salisburgo, 22-24 settembre 2010.
124. Sethi R. (2009) Caratterizzazione di matrici ambientali contaminate e dinamica degli inquinanti. In: L'applicazione dell'analisi di rischio nella bonifica di siti inquinati, Torino, 10-12 febbraio.
125. Sethi R.; Tosco T (2009) Colloidal and nanoparticle transport in saturated porous media. In: Part of the Ph.D. Course of Excellence hold together with Prof. Jacob Bear, Politecnico di Torino, 4 settembre 2009.
126. Sethi R. (2009) Ferro nanostrutturato per la bonifica di falde inquinate. In: Tecnologie avanzate per la caratterizzazione ed il monitoraggio dei siti inquinati e processi innovativi in-situ per la loro bonifica, Valmontone, 1 ottobre.
127. Sethi R.; Taormina R. (2009) Groundwater systems: main aspects and black box modelling with Artificial Neural Networks. In: Talks at DIMAT, Politecnico di Torino.
128. Di Molfetta A.; Sethi R.; Casasso A (2009) Lo stato idrologico del sottosuolo nelle aree a ridosso dei cantieri. In: CORILA, Riunione Annuale 2009, Venezia, 6-7 luglio 2009. p. 78
129. Tosco T, Tiraferrri A, Sethi R (2009) MNM1D: a code for modeling colloid transport under variable ionic strength in saturated porous media. In: 4th International Conference on the Environmental Effects of Nanoparticles and Nanomaterials, Vienna (Austria), 7-9 Settembre 2009.
130. Coisson M; Sethi R.; Dingqi X; Appino C (2009) Magnetic characterization of water suspensions of iron nanoparticles for groundwater remediation. In: Soft Magnetic Materials 19, Torino, 6-9 September, 2009. F3-03-
131. Sethi R. (2009) Nanoparticelle di ferro per il trattamento di falde contaminate. In: Incontri del giovedì 2009, Torino, 30 aprile 2009.
132. Sethi R.; Di Molfetta A; A. Ferrero (2009) Proven Methods for Successfully Engineered Introduction of Remediation Amendments into Impacted Groundwater Environments. In: Environmental Success In Treatment Objectives - Best Practices In Sustainable Soil, Sediment, and Groundwater Remediation: An Industry and Regulatory Perspective, Stresa, 18-19 giugno 2009.
133. Di Molfetta A; Sethi R.; Zolla V. (2008) Barriere reattive permeabili. In: Dall'emergenza delle bonifiche ad una gestione consapevole del territorio, Trento, 3-4 luglio 2008.
134. Sethi R.; Tiraferrri A.; Di Molfetta A. (2008) Characterization and mobility enhancement of iron nanopowders suspensions for groundwater remediation. In: Water Resource Management - IASTED, Gaborone, Botswana, 8-10 settembre, 2008.
135. Sethi R. (2008) Groundwater Engineering. In: Hydroaid 2008, Torino, 17-19 novembre.



136. Tiraferri A; Chen K.L; Sethi R.; Elimelech M (2008) Guar gum enhances the stability and mobility of zerovalent iron nanoparticles in porous media. In: nanoECO: Nanoparticles in the Environment: Implications and Applications, Centro S. Franscini. Monte Verità (ASCONA). Svizzera, 2008. p. 129
137. Tosco T.; Tiraferri A.; Di Molfetta A.; Sethi R. (2008) Modelling colloid transport in saturated porous media: the influence of ionic strength. In: Società Geologica Italiana - 84° Congresso Nazionale, Sassari, 15-17 Settembre 2008. pp. 756-757
138. Sethi R.; Tiraferri A.; Di Molfetta A. (2008) Nanoscale iron characterization and mobility enhancements by means of biodegradable hydrocolloids. In: CONSOIL 2008, Milano, 3-6 Giugno 2008.
139. Tosco T; Sethi R; Di Molfetta A. (2008) An enhanced filtration model for the transport of nanoscale iron in aquifer systems. In: nanoECO - Nanoparticles in the environment: Implications and Applications, Centro S. Franscini, Monte Verità (Ascona). Svizzera, 2-7 Marzo 2008. p. 94
140. Tosco T.; Sethi R; Di Molfetta A (2007) A Backward probabilistic model to calculate well head protection areas. In: International Conference on Water Pollution in natural Porous media at different scales. Assessment of fate, impact and indicators, WAPO2, Barcellona, 11-13 aprile. pp. 731-737
141. Zolla V.; Freyria F.; Sethi R.; Di Molfetta A. (2007) Biogeochemical characterization of zerovalent iron reactive barriers. In: 3rd International Symposium on Permeable Reactive Barriers, Rimini, 8-9 novembre 2007. pp. 185-188
142. Di Molfetta A; Sethi R. (2007) Caratterizzazione idrodinamica e della contaminazione per il dimensionamento de il monitoraggio di una barriera reattiva permeabile a ferro zerovalente. In: REMTHECH - Caratterizzazione di siti contaminati, Ferrara, 26 Settembre 2007.
143. Freyria F; Sethi R.; Di Molfetta A (2007) Characterization of nanoscale iron for groundwater remediation. In: International Conference on Water Pollution in natural Porous media at different scales. Assessment of fate, impact and indicators, WAPO2, Barcellona, 11-13 aprile 2007. pp. 419-425
144. Tosco T; Sethi R; Di Molfetta A. (2007) Metodo probabilistico per la determinazione di aree di salvaguardia di aree potabili. In: REMTECH 2007 - Applicazione di modelli per la descrizione del trasporto di inquinanti nel sottosuolo, Ferrara, 27 Settembre 2007.
145. Freyria F; Bonelli B.; Sethi R; Garrone E; Di Molfetta A (2007) Physico-chemical characterization of colloidal iron suspensions for groundwater remediation. In: International Symposium on Permeable Reactive Barriers, Rimini (Italy), 8-9 novembre 2007. pp. 49-52
146. Tiraferri A.; Chen Kai L.; Sethi R.; Elimelech M. (2007) Reduced aggregation and sedimentation of zerovalent iron nanoparticles in the presence of guar gum. In: 3rd International Symposium on Permeable Reactive Barriers, Rimini, 8-9 novembre 2007. pp. 99-101
147. Rolle M.; Sethi R; Di Molfetta A.; Bauer S.; Koldiz O. (2007) Simulazione numerica di processi di biodegradazione e zonazione redox in acquiferi contaminati. In: REMTECH - Applicazione di modelli per la descrizione del trasporto di inquinanti nel sottosuolo, 27 Settembre 2007.



148. Miccoli F; M. Ortolano; Sethi R. (2007) Sistema di visione e acquisizione sincronizzata per misurazioni dinamiche di livello in falde idriche. In: Forum Tecnologico - NIDays 2007. pp. 195-196
149. Comba S; Sethi R.; Di Molfetta A (2007) A comparison between field applications of NZVI. In: 3rd International Symposium on Permeable Reactive Barriers, Rimini, 8-9 novembre 2007. pp. 133-136
150. Di Molfetta A.; Sethi R.; Day S. (2006) Comparison between Clamshell and Backhoe Excavators for the Emplacement PRBs. In: Fifth International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey (CA), USA, Maggio 2006.
151. Di Molfetta A; Sethi R; Zolla V. (2006) Design, excavation and management of a zerovalent iron PRB near Torino. In: La bonifica dei siti contaminati: normative e tecnologie a confronto, Milano, 23-24 novembre 2006.
152. Di Molfetta A; Sethi R. (2006) Full scale application of a PRB in Torino. In: Kick-off Meeting - TRANSIT Project, Como, Villa Vigoni, 2-4 Aprile 2006.
153. Rolle M.; Zolla V.; Sethi R.; Clement T.P.; Di Molfetta A. (2006) Modeling TEAPs and computing redox zonation in contaminated aquifers. In: Proceedings of Modflow and More 2006 Managing Ground Water Systems, 21-24 maggio 2006. pp. 215-219
154. Zolla V.; Rolle M.; Sethi R.; Di Molfetta A. (2006) Performance evaluation of permeable reactive barrier using zero-valent iron at a chlorinated solvents site. In: 15th International Symposium on Mine Planning & Equipment Selection, MPES, Torino, 20-22 settembre 2006. pp. 354-359
155. Sethi R.; Di Molfetta A (2006) Progettazione e realizzazione di barriere permeabili reattive con Ferro zerovalente: la barriera di Avigliana (Torino) come esempio italiano". In: " Il recupero dei siti inquinati: dalle indagini alla bonifica", Valmontone (Roma), 22/12/2006.
156. Di Molfetta A; Sethi R. (2006) Progettazione e realizzazione di barriere reattive permeabili. In: Bonifica di siti contaminati. Caratterizzazione e tecnologie di risanamento, Milano, 13 febbraio 2006. pp. 139-171
157. Sethi R.; Di Molfetta A. (2006) Tecniche per la caratterizzazione di siti contaminati. In: Bonifica di siti contaminati. Caratterizzazione e tecnologie di risanamento, 13 febbraio 2006. pp. 35-94
158. Tosco T, Sethi R, Di Molfetta A. (2006) A probabilistic method for delineation of wellhead protection areas. In: Fifteenth International Symposium on Mine Planning & Equipment Selection, MPES, TORINO, 20-22 settembre 2006. pp. 343-348
159. Di Molfetta A; Sethi R. (2005) Bonifica di un acquifero contaminato mediante barriera reattiva permeabile a ferro zerovalente. In: 15th Meeting of the Italian Society of Ecology, Torino, 2005.
160. Di Molfetta A.; Rolle M.; Sethi R.; Clement T.P. (2005) Modeling of Redox Zonation Downgradient of Landfill Sites. In: World Water & Environmental Congress (EWRI 2005), Anchorage, Alaska, 15-19 maggio 2005. pp. 1-12
161. Rolle M.; Sethi R.; Di Molfetta A. (2005) Modellizzazione di fenomeni di biodegradazione in acquiferi contaminanti da composti organici. In: 15th Meeting of the Italian Society of Ecology, Torino, 2005.



162. Rolle M.; Sethi R.; Clement T.P.; Di Molfetta A. (2005) Natural Attenuation of Chlorinated Solvents at a Complex Landfill Site. In: 8th International Symposium In-Situ and On-Site Bioremediation, Baltimore, Maryland, 6-9 giugno 2005.
163. Di Molfetta A.; Sethi R. (2005) The first permeable reactive barrier in Italy. In: Consoil 2005 - Proceedings of the 9th International FZK/TNO Conference on Soil Water Systems, Bordeaux, 3-7 ottobre 2005. pp. 2302-2310
164. Papini M.P.; D'Aprile L.; Di Molfetta A.; Sethi R. (2005) The situation of groundwater remediation in Italy with a specific reference to the applicability of the permeable reactive barrier technology. In: Consoil 2005 - Proceedings of the 9th International FZK/TNO Conference on Soil Water Systems, Bordeaux, 3-7 ottobre 2005. pp. 2880-2883
165. Di Molfetta A.; Cordero P.; Sethi R. (2004) Interference between road network and groundwater resources. In: EETI 2004 - 5th International Congress on Energy, Environment and Technological Innovation, 4-7 ottobre 2004.
166. Di Molfetta A.; Sethi R. (2004) Realizzazione di una barriera reattiva permeabile. In: SIDISA 2004 - Simposio Internazionale di Ingegneria Sanitaria Ambientale, Taormina, 23-26 giugno 2004.
167. Di Molfetta A.; Sethi R. (2003) Barriere reattive permeabili. In: Siti Contaminati: Tecnologie di risanamento, Milano, 17-21 Febbraio 2003. pp. 525-564
168. Di Molfetta A.; Zanetti M.C.; Fiore S.; Sethi R.; Genon G. (2003) In situ remediation by means of zero-valent iron reactive barriers: laboratory tests. In: IX International Waste Management and Landfill Symposium, S. Margherita di Pula, 6-10 ottobre 2003.
169. Di Molfetta A.; Buonomo L.; Sethi R.; Goria P. (2003) Progetto di una barriera reattiva permeabile a ferro zerovalente in un sito contaminato da solventi clorurati. In: Tecnologia per la bonifica in situ delle acque sotterranee, Roma, 13-14 Ottobre 2003. pp. 77-96
170. Di Molfetta A.; Sethi R. (2001) A Chlorinated hydrocarbon contamination in an industrial area. In: 3rd International Conference on Future Groundwater Resources at Risk, Lisbon (Portugal), 25-27 June 2001. pp. 345-352
171. Di Molfetta A.; Sethi R. (2001) Heat generation and transport from MSW landfill to groundwater. In: Eighth International Waste Management and Landfill Symposium, Sardinia 2001, S. Margherita di Pula (Cagliari), 1- 5 Ottobre 2001. pp. 701-709