



Scientific Sessions

ORAL SESSIONS

Wednesday, June 14

MORNING		
8:30	9:00	Registration
9:00	9:30	<p>Opening ceremony:</p> <p>Prof. Alessandra Carucci (Vice-Rector University of Cagliari)</p> <p>Dr Gabriella Mulas (Director of "Water protection and water and drought management service" at Regione Autonoma della Sardegna)</p> <p>Dr Davide Boneddu (President of Ordine dei Geologi della Sardegna)</p> <p>Prof. Giulio Barbieri, Prof. Giovanni Barrocu, Prof. Antonio Pala and Prof. Antonio Vernier (Committee of honor Members)</p>
<p>Session 1. Groundwater quality protection <i>Conveners: S. Da Pelo, D. Ducci, M. D. Fidelibus</i></p>		
9:30	9:55	<p>KEYNOTE: Geochemical background values in aquatic systems <i>Rosa Cidu, Riccardo Biddau</i></p>
9:55	10:10	<p>Monitoring of composition of LNAPL: essential tool for the estimation of free LNAPL specific volumes <i>Eleonora Frollini, Alessandro Lacchini, Valentina Marinelli, Marco Petitta</i></p>
10:10	10:25	<p>Environmental concerns of borehole heat exchangers (BHE): the role of heat-carrier fluid and grouting <i>Arianna Bucci, Alessandra Bianco Prevot, Sandro Buoso, Manuela Lasagna, Mery Malanrino, Valter Maurino, Domenico Antonio De Luca</i></p>
10:25	10:40	<p>Squaring the cycle: the integration of groundwater processes in nutrient budgets for a basin-oriented remediation strategy <i>Arianna Musacchio, Viviana Re, Carlo Andrea Delconte, Erica Racchetti, Elisa Soana, Raffaella Balestrini, Marco Bartoli, Pierluigi Viaroli, Elisa Sacchi</i></p>
10:40	10:55	<p>Bioremediation of large concentration of organic compounds in lagoon groundwater <i>Jacopo Terrenghi, Giovanni Pietro Beretta</i></p>





10:55	11:25	COFFEE BREAK
11:25	11:40	Hydrocomplexity, and spatial and time scales as drivers of monitoring and management approaches for a karst coastal aquifer (Salento, southern Italy) <i>Alessandro Parisi, Maria Dolores Fidelibus</i>
11:40	11:55	Hydrochemical characterization of groundwater and surface water supported by multivariate statistical analysis: a case study in the Po plain (in Italy) <i>Marco Rotiroti, Tullia Bonomi, Letizia Fumagalli, Chiara Zanotti, Sara Taviani, Gennaro A. Stefania, Martina Patelli, Veronica Nava, Valentina Soler, Elisa Sacchi, Barbara Leoni</i>
11:55	12:10	Proposal for an integrated method of natural background levels assessment in groundwater <i>Daniele Parrone, Elisabetta Preziosi, Stefano Ghergo, David Rossi, Eleonora Frollini</i>
12:10	12:25	The sustainable groundwater management and its contribution to a more resilient Rome <i>Francesco La Vigna, Isidoro Bonfà, Simona Martelli, Lucilla Ticconi</i>
12:25	12:40	Multiple isotope and hydro-chemical techniques investigating dynamics and sources of DIC within a multiple aquifer system of a groundwater fed lake catchment (Lough Gur, Ireland) <i>David W O'Connell, Deb Jaisi, Eve Daly, Raul Carrey Labarta, Massimo Marchesi, Maria Caschetto, Albert Soler, Carlos Rocha, Caoimhe Hickey, Monica Lee, Laurence Gill</i>
12:40	14:15	LUNCH

AFTERNOON

Session 2 - Hydrogeology of fractured rocks and karst aquifers

Conveners: M. Petitta, M. Pola, B. Vigna

14:15	14:40	KEYNOTE: Origin of fracturing in hard-rock aquifers: what are the factors controlling the properties of the fractured layer? <i>Robert Wyns, Benoît Dewandel, Patrick Lachassagne</i>
14:40	14:55	Groundwater changes in the Nera river valley due to the August-October 2016 seismic sequence in central Italy <i>Francesca Banzato, Marino D. Barberio, Livio Campagnoli, Stefania Passaretti, Andrea Pollastrelli, Carlo Doglioni, Marco Petitta</i>
14:55	15:10	Electrical conductivity as a tool to evaluate the various recharges of a karst aquifer <i>Chiara Calligaris, Mario Galli, Fabio Gemiti, Stefano Piselli, Maurizio Tentor, Luca Zini</i>





15:10	15:25	Differentiated karst spring behavior under changing hydrological conditions in the Cansiglio-Cavallo area (italian Alps) <i>Maria Filippini, Gabriela Squarzoni, Jo De Waele, Adriano Fiorucci, Bartolomeo Vigna, Christine Stumpp, Barbara Grillo, Alberto Riva, Stefano Rossetti, Luca Zini, Giacomo Casagrande, Alessandro Gargini</i>
15:25	15:40	Multi-scale hydraulic characterization of stimulated fractured crystalline rock at Grimsel test site <i>Mohammadreza Jalali, Bernard Brixel, Maria Klepikova, Valentin Gischig, Joseph Doetsch, Florian Amann</i>
15:40	16:10	COFFEE BREAK
16:10	16:25	Discharge variations of springs induced by strong earthquakes: the case of the mw 6.5 Norcia event (Italy, October 30 th 2016) <i>Daniela Valigi, Costanza Cambi, Lucia Mastrorillo, Massimiliano Rinaldo Barchi, Carlo Cardellini, Roberto Checcucci, Lucio Di Matteo, Francesco Frondini, Francesco Mirabella, Stefano Viaroli, Isotta Vispi</i>
16:25	16:40	Pumping response and sustainable well yield of some hard-rock aquifers of the mediterranean region <i>Antonella Baiocchi, Francesca Lotti, Vincenzo Piscopo, Valentina Sammassimo</i>
16:40	16:55	Analysis of recharge processes in karst systems <i>Francesco Fiorillo, Mauro Pagnozzi</i>
16:55	17:10	Linear time series modelling for groundwater level forecasting: the case study of the fractured aquifer system of Monsummano terme (central Italy) <i>Chiara Zanotti, Marco Rotiroti, Marco S. Nannucci, Tullia Bonomi</i>
17:10	18:15	POSTER SESSION 1,2
18:15	19:15	IAH Italian Chapter General Assembly
21:00		Conference dinner – During the dinner, the 3 rd Zuppi award will be assigned for the best Ph.D thesis on hydrogeological issues.





Thursday, June 15

MORNING		
Session 3 - Groundwater flow and transport modelling <i>Conveners: F. Lotti, M. Mastrocicco, G. Uras</i>		
9:00	9:25	KEYNOTE: Nitrogen and oxygen isotopes of dissolved nitrate to evaluate the efficiency of induced groundwater denitrification at field-scale <i>Albert Soler, Rosanna Margalef-Marti, Raúl Carrey, Neus Otero, Marta Viladés, Irene Jubany Jubany, Ester Vilanova, Roser Grau</i>
9:25	9:40	1-D reactive transport modeling to evaluate the interaction among different compounds in a complex contaminated site driven by redox processes <i>Diego Di Curzio, Sergio Rusi</i>
9:40	9:55	The impact of the last glaciation on groundwater flow in the northern baltic artesian basin (BAB): a numerical study <i>Arnaud Sterckx, Jean-Michel Lemieux, Rein Vaikmäe</i>
9:55	10:10	Two-dimensional numerical modelling of the Roccamonfina volcanic aquifer to constrain the recharge from deep reservoir <i>Stefano Viaroli, Francesca Lotti, Lucia Mastrocicco, Roberto Mazza, Vittorio Paolucci</i>
10:10	10:25	A central Apennine test site for long-term monitoring: relationship between seismicity and groundwater during 2016-17 earthquakes <i>Marino Domenico Barberio, Maurizio Barbieri, Francesca Banzato, Andrea Billi, Carlo Doglioni, Alessandro Lacchini, Valentina Marinelli, Angela Nigro, Marco Petitta</i>
10:25	10:40	A comparison between two stochastic approaches to assess groundwater PCE diffuse pollution in Milano functional urban area <i>Luca Alberti, Loris Colombo, Giovanni Formentin</i>
10:40	11:10	COFFEE BREAK
11:10	11:25	Thermal impact evaluation of an open loop heat pump system: integrated approach with project data, numerical modeling and groundwater monitoring <i>Luca Vettorello, Silvia Bertoldo, Roberto Pedron, Andrea Sottani</i>
11:25	11:40	Subsoil geostatistical modeling as tool for hydrogeological modeling: transitional probability approach applied upon a heterogeneous site <i>Nico Dalla Libera, Paolo Fabbri, Leonardo Mason, Leonardo Piccinini, Marco Pola</i>





11:40	11:55	Groundwater numerical model of the Biskra inféro - flux aquifer (ne Algeria) <i>Claudio Arras, Pier Luigi Cau, Cristina Buttau, Stefania Da Pelo, Alberto Carletti, Giorgio Ghiglieri</i>
11:55	12:10	Water planning and management in the Cornia river plain by means of the gis-integrated freewat platform <i>Giovanna De Filippis, Simone Maria Piacentini, Alberto Mantino, Margherita De Peppo, Alessandro Fabbrizzi, Calogero Ravenna, Claudio Benucci, Marco Masi, Alessandra Pei, Valentina Menonna, Riccardo Leoni, Federico Lazzaroni, Enrico Guastaldi, Tiziana Sabbatini, Rudy Rossetto</i>
12:10	12:25	Assessment of seawater intrusion and groundwater quality in the anthropized reclamation area of Arborea (w Sardinia) <i>Anna Matzeu, Maria Laura Foddis, Gabriele Uras</i>
12:25	14:00	LUNCH

AFTERNOON

Session 4 - Groundwater management in arid and semi-arid regions
(Dedicated to Prof. G.M. Zuppi)

Conveners: G. Ghiglieri, M. Polemio

14:00	14:25	KEYNOTE: Groundwater management in arid and semi-arid regions: challenges and opportunities <i>Viviana Re</i>
14:25	14:40	Winner of 3 rd Zuppi Award
14:40	14:55	Exploring the use of modelling tools within the participatory approach to protect the water resource <i>Rudy Rossetto, Giovanna De Filippis, Sabine Gennai-Schott, Margherita De Peppo, Tiziana Sabbatini, Nicola Silvestri, Nicola Del Seppia, Andrea Di Grazia, Enrico Bonari</i>
14:55	15:10	Flow patterns and recharge process in alluvial fans: a case study of the semi-arid Punata fan in Bolivia <i>Andres Gonzales Amaya</i>
15:10	15:25	The management of water resources between traditions and sustainability: the qanats of Shahrood Province (North-eastern Iran) <i>Andrea Del Bon, Ezio Burri, Pietro Ragni, Angelo Ferrari, Faramarz Doulati Ardejani, Ali Younesian</i>
15:25	16:00	COFFEE BREAK





16:00	16:15	An interdisciplinary methodology to design integrated and innovative MAR systems in arid and semi-arid regions. Two case studies in Algeria and in Tunisia <i>Alberto Carletti, Claudio Arras, Manuela Barbieri, Cristina Buttau, Raul Carrey, Stefania Da Pelo, Mohamed Ouessar, Albert Soler, Houcine Yahyaoui, Giorgio Ghiglieri</i>
16:15	16:30	Development of a sustainable water management for the su Gologone karst spring (Sardinia, Italy) <i>Francesco Sanna, Laura Sanna, Jo De Waele, Bartolomeo Vigna</i>
16:30	16:45	Geological and hydrogeological features controlling mechanisms of fluoride enrichment in groundwater in the East African Rift System <i>Giorgio Ghiglieri, Stefania Da Pelo, Marco Pistis, Maria Teresa Melis, Francesco Dessì, Giacomo Oggiano, Bekele Abebe, Tilahun Azazegn, Tigistu Haile</i>
16:45	17:00	Using numerical modeling tools for managed aquifer recharge at induced riverbank filtration schemes <i>Giovanna De Filippis, Rudy Rossetto, Alessio Barbagli, Enrico Bonari, Laura Ercoli, Chiara Marchina, Iacopo Borsi, Giorgio Mazzant</i>
17:00	18:00	Poster Session 3,4
18:00	19:00	ECHN event. Hydrogeology in urban areas: Challenges and Opportunities

Friday, June 16

Field trip (meeting at P.zza Matteotti – Front railway station)

08:00	17:20	Visit to the former mining sites at Porto Flavia and Nebida coast. Buffet lunch at the Tonnara in Portoscuso. During the lunchtime, posters on the reclamation of aquifers and soil in the SIN of Portovesme will be available. Short presentation and video on the activities of Ligestra S.r.l. will be shown. For interested delegates, a short visit to the water treatment plant of Ligestra S.r.l. can be organized. On return, we will stop at the airport for the delegates who will be leaving. Adhesions for the visit and for the stop at the airport will be taken at the registration desk on Wednesday, 14.
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POSTER SESSIONS

Wednesday, June 14

Session 1. Groundwater quality protection		
	TITTLE	AUTHORS
1	Urban groundwater warming in Turin area (NW Italy)	<i>Arianna Bucci, Diego Barberio, M. Gabriella Forno, Manuela Lasagna, Domenico Antonio De Luca</i>
2	Water budget as a tool to evaluate the sustainable use of groundwater resources (Isonzo Plain NE Italy)	<i>Chiara Calligaris, Giacomo Casagrande, Daniela Iervolino, Federica Lippi, Paolo Olivo, Massimo Ramani, Francesco Treu, Luca Zini</i>
3	Assessment of biogeochemical processes involved in NH ₄ and NO ₃ attenuation processes. Evidences from diffuse and point source contamination sites by a multi-isotopic approach	<i>Mariachiara Caschetto, Nicolò Colombani, Micòl Mastrocicco, Marco Petitta, William Robertson, Ramon Aravena</i>
4	Hydrogeological and hydrogeochemical monitoring in the Cumae archaeological site (Phlegraean Fields, southern Italy)	<i>Vincenzo Allocca, Silvio Coda, Pantaleone De Vita, Brunella Di Rienzo, Luciano Ferrara, Antonella Giarra, Olga Mangoni, Luisa Stellato, Marco Trifuoggi, Michele Arienzo</i>
5	The hydrogeological monitoring of an experimental site in Campania focused at the evaluation of the contaminants transfer from the soil	<i>Alfonso Corniello, Daniela Ducci, Mariangela Sellerino</i>
6	A proposal for groundwater sampling guidelines: application to a case study in southern Latium	<i>Eleonora Frollini, David Rossi, Martina Rainaldi, Daniele Parrone, Stefano Ghergo, Elisabetta Preziosi</i>
7	Relation between climatic condition, temperature and moisture in the subsoil of Turin Plain	<i>Manuela Lasagna, Arianna Bucci, Diego Barbero, Alberto Saba, Domenico Antonio De Luca</i>
8	Specific vulnerability of the Caserta Plain (IT) to nitrogen losses	<i>Gianluigi Busico, Emilio Cuoco, Micòl Mastrocicco, Maurizio Sirna, Dario Tedesco</i>





9	Quality of water in two areas affected by past mining activities in alpine context	<i>Neha Mehta, Manuela Lasagna, Giovanna Antonella Dino, Domenico Antonio De Luca</i>
10	Making groundwater visible: a contribution for classifying hydrogeological research and knowledge by KINDRA H2020 project	<i>Marco Petitta, Adrienn Cseko, Isabel Fernandez, Clint Marcelo García Alibrand, Eva Hartai, Klaus Hinsby, Viktória Mikita, Mercedes Garcia Padilla, Peter Szucs, Peter van der Keur</i>
11	Isotopic characterization of groundwater for drinking use in multilayer aquifers of the Milano and Monza provinces	<i>Marco Petitta, Maria Chiara Caschetto, Cesare Cristoforetti, Maurizio Gorla, Alessandro Lacchini, Valentina Marinelli, Chiara Righetti, Roberto Simonetti, Ramon Aravena</i>
12	Stochastic approach to hydraulic barrier design: an example in Northeastern Italy	<i>Leonardo Piccinini, Francesco Ronchetti, Marco Mulas, Manuela Deiana, Paolo Fabbri, Gianluca Franchi, Stefano Poles</i>
13	Multidisciplinary approach to assess the seasonal effect on redox processes occurring in an tropical alluvial aquifer	<i>Diego Di Curzio, William Palmucci, Sergio Rusi, Patrizio Signanini</i>
14	Temperature logs application to evaluate groundwater – surface water interaction in an area of Sabato basin, in southern Italy	<i>Giuseppe Sappa, Gerardo Grelle, Flavia Ferranti and Francesco Maria De Filippi</i>
15	Using the hydrochemical database TANGCHIM to manage groundwater quality data: the case study of a leachate plume from a dumping area	<i>Gennaro A. Stefania, Marco Rotiroti, Letizia Fumagalli, Tullia Bonomi</i>
16	How much does air pollution affect groundwater quality?	<i>Stevenazzi Stefania, Masetti Marco, Tiepolo Massimo, Ferrari Elena</i>
17	"La Maddalena" exploratory adit - base tunnel of the Turin-Lyon high speed rail project: hydrogeological monitoring data analysis	<i>Stefano Lo Russo, Glenda Taddia, Elena Cerino Abdin, Maria Elena Parisi</i>
18	Pollutants transfer from soil to water: geochemical investigation in different watersheds	<i>Alberto Tazioli, Cristiano Casucci, Roberto D' Amato, Arianna De Bernardi, Elga Monaci</i>





Session 2 - Hydrogeology of fractured rocks and karst aquifers		
	TITTLE	AUTHORS
19	Hydrogeology of Ogliastra and Barbagia di Seulo "Tacchi" (Central and eastern Sardinia)	<i>Venerio Giuseppe Anardu</i>
20	3D hydrogeological modelling supporting studies on the sources of manganese, sulphate and trichloromethane in groundwater at Portoscuso (Sardinia, Italy)	<i>Cristina Buttau, Gianfranco Mulas, Giorgio Ghiglieri, Carla Ardu, Rosa Cidu, Franco Frau, Andrea Porcheddu, Salvatore Vacca, Stefania Da Pelo</i>
21	Geodatabase and knowledge of coastal carbonate aquifers of the Adriatic and Ionian Seas	<i>Giorgio De Giorgio, Livia Emanuela Zuffianò, Alessia Basso, Maurizio Polemio</i>
22	Co-seismic and post-seismic changes in groundwater discharge: first results from the epicentral region of the Central Italy 2016 earthquake	<i>Silvia Fabbrocino, Marco Giacometti, Marco Materazzi</i>
23	Groundwater recharge estimation in karst aquifers of southern Apennines (Italy) by integration of remotely sensed data	<i>Giovanni Ruggieri, Vincenzo Allocca, Flavio Borfecchia, Pantaleone De Vita</i>
24	Inferring threshold behavior of the Supramonte karst aquifer from tracer test and its implication for groundwater protection (Sardinia, Italy)	<i>Laura Sanna, Salvatore Cabras</i>
25	Groundwater temperature as natural tracer to characterize hydraulic behaviour and geometrical properties in carbonate aquifers: M. Nerone karst aquifer, central Italy	<i>Andrea Tamburini, Marco Menichetti</i>
26	Kinds of aquifer recharges in carbonate rocks	<i>Bartolomeo Vigna, Adriano Fiorucci, Cinzia Banzato</i>





Thursday, June 15

Session 3 - Groundwater flow and transport modelling		
	TITTLE	AUTHORS
1	Influence of groundwater temperature variation on thermal plume modelling in geothermal open loop systems	<i>Stefano Lo Russo, Glenda Taddia, Elena Cerino Abdin</i>
2	Modelling groundwater flow in carbonate ridges (M. Paganuccio and Cesane, Italy) as a tool to constrain the hydrogeological conceptual model	<i>Nicolò Colombani, Stefano Palpacelli, Torquato Nanni</i>
3	Results of a research regarding the variability of spring depletion curves	<i>Walter Dragoni, Lucio Di Matteo, Francesca Lotti, Simone Maria Piacentini</i>
4	Unravelling the importance of fractured zone in regional fluid flow: insights from the hydrothermal modelling of the Euganean Geothermal System (NE Italy)	<i>Marco Pola, Mauro Cacace, Paolo Fabbri, Leonardo Piccinini, Dario Zampieri, Nico Dalla Libera</i>
5	Testing indirect methods to infer hydraulic conductivity in streambed sediments: preliminary results	<i>Patrizia Fenza, Stefania Da Pelo, Cristina Buttau, Salvatore Vacca, Giorgio Ghiglieri</i>
6	Hydrogeological study and numerical model of groundwater rise mitigation actions effects in the glacial-fluvioglacial territory of Grandate (Como, North Italy)	<i>Luca Alberti, Ivana La Licata, Vincenzo Francani</i>
7	Permanent Safety Measures (MISP): efficacy assessment through pumping test analysis, groundwater flow modeling and environmental isotope investigation	<i>Luca Alberti, Elio Brunetti, Martino Cantone, Massimo Marchesi, Gianluca Leggio, Silvio Ristagno</i>
8	The FREEWAT platform for planning and management of conjunctive use of surface-and ground-water	<i>Rudy Rossetto, Giovanna De Filippis, Iacopo Borsi, Laura Foglia, Massimiliano Cannata, Rotman Criollo, Enric Vasquez-Suñe</i>





9	Hydrogeological conceptual model of a highly impacted watershed: the case study of Oglio River (N Italy)	<i>Sara Taviani, Tullia Bonomi, Letizia Fumagalli, Marco Rotiroti, Gennaro A. Stefania, Chiara Zanotti, Marco Faggioli, Barbara Leoni</i>
10	Parameters of flow in porous alluvial aquifers evaluated by tracers	<i>Alberto Tazioli, Lucia Aquilanti, Francesca Clementi, Torquato Nanni, Stefano Palpacelli, Andrea Roncolini, Paola Vivalda</i>
11	Continuously optimizing a complex groundwater remediation system	<i>Philipp Joswig, Sergio Vernocchi, Anna Pilone, Alessandro Violetti, Elio Brunetti, Michele Pellegrini, Sara Scolieri, Stefano Rocchetti, Silvio Ristagno, Alessandro Gargini, Elena Leide, Anna Grava</i>
12	The effects of low enthalpy geothermal system on groundwater of the Cesine Wetland	<i>Giorgio De Giorgio, Michele Chieco, Livia Emanuela Zuffianò, Andrea Sottani, Roberto Pedron, Luca Vettorello, Maurizio Polemio</i>

Session 4 - Groundwater management in arid and semi-arid region

	TITTLE	AUTHORS
13	Water balance estimates for determining natural aquifer recharge in the arid context of the Oum Zessar area (SE Tunisia)	<i>Alberto Carletti, Simona Canu, Andrea Motroni, Giorgio Ghiglieri</i>
14	Using ICT tools to promote the governance of groundwater resources in semi-arid areas of southern Africa: the Stampriet Transboundary Aquifer System	<i>Giovanna De Filippis, Tales Carvalho Resende, Youssef Filiali-Meknassi, Shaminder Puri, Piet Kenabatho, Maria Amakali, Kwazikwakhe Majola, Rudy Rossetto</i>
15	The role of the hydrogeological and anthropogenic factors on the environmental equilibrium of the Ugento Wetland (Southern Italy)	<i>Giorgio De Giorgio, Livia Emanuela Zuffianò, Maurizio Polemio</i>
16	A hydrogeological study to support the optimized management of the main sea level aquifer of the island of Malta	<i>Maurizio Polemio, Manuel Sapiano, Francesca Santalòia, Alessia Basso, Vittoria Dragone, Giorgio De Giorgio, Pierpaolo Limoni, Livia Emanuela Zuffiano, John Mangion, Michael Schembri</i>

