

# "FLOWPATH 2012" Percorsi di Idrogeologia

I edizione

Bologna, 20-22 Giugno 2012

Complesso Monumentale di San Giovanni in Monte; Via San Giovanni in Monte, 2. Bologna



## PROGRAMMA PRELIMINARE DELLE PRESENTAZIONI

### Mercoledì 20 giugno

#### SESSIONE 1: "Aquifer parameterization" (Convenors: Paolo Fabbri, Vincenzo Piscopo).

##### Presentazioni orali

**Parte I:** 10.00: "The snow melting process" (Vigna B., Banzato C.); 10.15: "Problems in the application of the environmental isotope to the hydrogeological analysis of high mountain aquifers" (Tazioli A., Nanni T., Vivalda P. M.); 10.30: "Groundwater monitoring network in the classical karst" (Zini L., Cucchi F., Calligaris C.); 10.45: "A multidisciplinary approach to the physical and geometrical characterization of multi-layered aquifers" (Fabbrone S., Di Maio R., Forte G., Piegari E.).

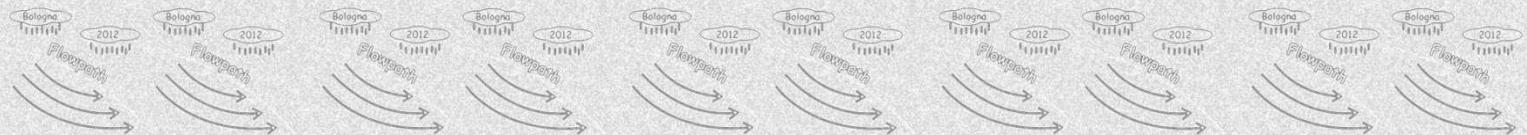
##### 11.00: Coffee break

**Parte II:** 11.30: "Flow and transport in fractured media at different spatial scales" (Cherubini C., Giasi C., Pastore N.); 11.45: "Analysis of borehole dilution tests by a numerical modeling approach" (Ortombina M., Fabbri P., Piccinini L.); 12.00: "Borehole flowmeter logging for the accurate design and analysis of tracer test" (Basiricò S., Frattini P., Villa A., Godio A., Crosta G. B.); 12.15: "Use of tracer tests for the assessment of the relationship between surface water and drinking-water spring (Quincinetto, Turin)" (Lasagna M., Clemente P., De Luca D. A., Dino G. A., Forno M. G., Gattiglio M.).

##### Poster (riportati in ordine alfabetico secondo il cognome degli autori)

12.30: "Drainage index calculated with artificial tracers" (Banzato C., Marchionatti F., Vigna B.); "Unconfined and confined aquifers close to the Po river in the Emilia-Romagna region : geological setting and groundwater monitoring" (Biavati G., Guadagnini L., Severi P.); "Flow velocity evaluation with point dilution method using thermic and saline tracers" (Bosio B., Clemente P., De Luca D., Lasagna M.); "Springs as main groundwater dependent ecosystems" (Cantonati M., Gargini A., Segadelli S., Angeli N., Spitale D., De Nardo M. T.); "The groundwater dependent ecosystem of Sagittario river, central Italy: relationships between surface/groundwater and nitrogen cycle" (Caschetto M. C., Barbieri M., Galassi D., Mastorillo L., Petitta M., Rusi S., Saladini V., Schipani I., Aravena R.); "Vulnerability assessment by fuzzy logic in a coastal aquifer of northern Sicily" (Cimino A., Cimino A., Oieni A.); "Climatic change and water resources in central Italy: an update" (Dragoni W., Melillo M., Valigi D., Belardinelli M., Cambi C., Giontella C., Di Matteo L.); "Hydrogeological analysis of land subsidence in the Campanian plain" (Fabbrone S., Lanari R., Paduano P.); "Hydrogeology of the "maiolica" and "scaglia" carbonatic aquifers in the northeastern flank of mt. Paganuccio (Furlo mountains, Marche, Italy)" (Farina D., Bisiccia C., Severini A.); "Hydraulic behaviour of karst aquifers during dry periods" (Fiorillo F.); "The effect of the temperature increase on the aquifer recharge processes" (Fiorillo F., Pagnozzi M.); "Conceptualization and parametrization of a karst aquifer using long term monitoring data and quantitative hydrogeology: the Acque Albule case" (La Vigna F., Mazza R., Capelli G.); "Cost-and time-effective methodology to evaluate aquifer parameters in coastal aquifers" (Mastrocicco M., Giambastiani B. M. S., Colombani N., Severi P.); "Hydraulic conductivity distribution and hydrogeological behaviour of some aquitards in southern Italy" (Petrella E.); "Groundwater field measurements for stream seepage estimation" (Vettorello L., Berti M., Pedron R., Sottani A.); "Parameterization of hard rock aquifers in the Romagna sector of northern Apennines, Ravenna and Forlì-Cesena provinces (Italy)" (Vincenzi V., Gargini A., De Nardo M. T., Zani O.); "Resurgence belt discharge as environmental indirect indicator" (Zini L., Calligaris C., Treu F.).





## Mercoledì 20 giugno

### SESSIONE 2: “Contaminant transport in groundwater” (Convenors: Fulvio Celico, Marco Petitta).

#### Presentazioni orali

**Parte I:** 16.00: “Single dual-domain models for the interpretation of numerical transport experiments in alluvial sediments” (Baratelli F., Cattaneo L., Vassena C., Giudici M., Parravicini G.) - 16.15: “Anaerobic transformation of chlorobenzene in highly contaminated groundwater” (Schmidt M., Wolfram D., Klein B., Devakota S., Birkigt J., Richnow H. H., Nijenhuis I.) - 16.30: “Arsenic mobility under anaerobic conditions – a laboratory study” (Accoto V., Bullo P., Piccolo S.) - 16.45: “Long term monitoring of chlorinated solvents using carbon isotopes: effects of source removal and natural attenuation” (Marchesi M., Palau J., Aravena R., Otero N., Soler A.).

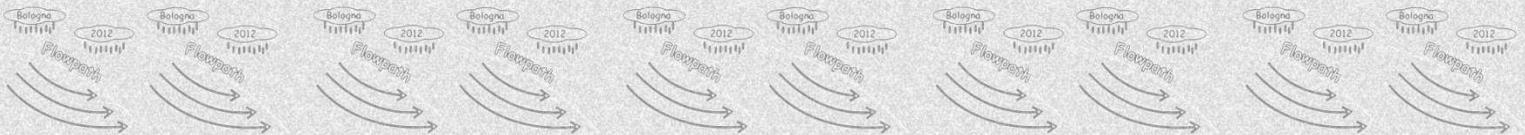
#### 17.00: Coffee break

**Parte II:** 17.30: “Characterizing origin and fate of groundwater nitrate contamination (Catalonia, NE Spain) using multi-isotopic data” (Puig R., Otero N., Torrentò C., Folch A., Menció A., Widory D., Soler A., Mas-Pla J., Bach J.) - 17.45: “Pollute aquifer inverse problem solution using artificial neural networks” (Foddis M. L., Ackerer P., Montisci A., Uras G.) - 18.00: “Characterization and modeling of a BTEX plume originated by a sulphur rich NAPL source” (Mastrocicco M., Colombani N., Gargini A.) - 18.15: “Geostatistics simulation of hydraulic conductivity field applied on groundwater flow and transport modeling in heterogeneous aquifer” (Carloni A., Cappucci S., Maffucci M., Guastaldi E., Gallo C.).

#### Poster (riportati in ordine alfabetico secondo il cognome degli autori)

18.30: “Application of the integral pumping test method in north-east area of Milan for contaminants source identification” (Alberti L., Cantone M., Lombi S., Zanini A.); “Application and comparison among three methodologies to calculate aquifer vulnerability in a municipality of Vercelli province (Piedmont - Italy)” (Amanzio G., Suozzi E., Ghione R., Zhao Y., De Maio M.); “Automated multi parameters monitoring as indicator of groundwater inflow” (De Zorzi N., Bertoldo S., Pedron R., Sottani A.); “Water flow and transport of hexavalent chromium in unsaturated soil and remediation by “soil flushing”” (Ghirardi C., Beretta G. P.); “Ammonia fate transport from landfill leachate and flowpath numerical modeling: a case-study of Alice Castello landfill (Italy)” (Lazovic N., Brett V., Nanni D., Carucci V.); “Hydrodynamic and isotopic characterization of a site contaminated by chlorinated solvents: Chienti river valley, central Italy” (Pacioni E., Petitta M., Corvatta G., Fanelli M., Aravena R.); “Iron, manganese and boron distribution in the Abruzzo region groundwaters” (Palmucci W., Rusi S.); “First results of the characterization of some heavy metals concentration in an industrialised area at north of Rome” (Sappa G., Trotta A., Vitale S.).





**Giovedì 21 giugno**

## **SESSIONE 3: “Hydrogeological and hydrochemical modeling” (Convenors: Marco Masetti, Marco Tallini).**

### **Presentazioni orali**

**Parte I:** 10.00: “Modeling groundwater flow in heterogeneous media with YAGMod” (Cattaneo L., Giudici M., Vassena C.) - 10.15: “The GIS embedded SID&GRID hydrogeological model” (Rossetto R., Borsi I., Schifani C.) - 10.30: “Groundwater flow model management: examples in Emilia-Romagna (Italy)” (Chahoud A., Gelati L., Palumbo A., Patrizi G., Pellegrino I., Zaccanti G.) - 10.45: “The alluvial aquifer of the river Roja in Ventimiglia Numerical flow modelling in temporary regime and instructions concerning transportation” (Capacci F., Migliorini J., Barazzuoli P., Rigati R.).

### **10.45: Coffee break**

**Parte II:** 11.30: “Modeling the impact of dewatering in the Acque Abule basin (Tivoli, Italy): options for a more sustainable groundwater use” (Brunetti E., Jones J., Petitta M., Rudolph D., Bianchi Fasani G., Esposito C., Prestininzi A.) - 11.45: “Analysis of the interactions between overlapping aquifers in the Viterbo hydrothermal area (central Italy) from pumping tests” (Baiocchi A., Lotti F.) - 12.00: “Numerical modeling to support the management of coastal karstic aquifer (Salento)” (Polemio M., Romanazzi A.) - 12.15: “Groundwater vulnerability assessment using positive and negative weights-of-evidence methods to correct for sampling bias” (Sorichetta A., Robinson G. R.).

### **Poster (riportati in ordine alfabetico secondo il cognome degli autori)**

12.30: “Impact of the NAO on the hydrological cycle of karst aquifers in southern Apennines” (Allocca V., De Vita P., Manna F.); “Preliminary relation between different spring vulnerability methods applied on two alpine springs (regione autonoma Valle D'Aosta)” (Amanzio G., Suozzi E., Crepaldi S., De Maio M.); “Numerical simulation of vertical flow within monitoring wells in a sloping layer” (Basiricò S., Villa A., Crosta G., Frattini P.); “Preliminary groundwater model of the Aosta valley aquifer (northern Italy)” (Bonomi T., Fumagalli L., Capodaglio P.); “Activities of the Arno River Basin Authority to support the Environmental Observatory AV Florence as regards to the modeling of groundwater flows in the Florentine subsoil” (Brugioni M., Consumi F., Sulli L.); “Groundwater movement in a terraced slope: comparison of the results of two different scale models” (Camera C., Apuanı T.); “Modeling groundwater recharge in an alluvial aquifer of Somaliland with the new groundwater flow model YAGMOD” (Cattaneo L., Vassena C., Giudici M., Petrucci B.); “Groundwater modelling application: an operating tool in groundwater resource evaluation” (Chahoud A., Gelati L., Zaccanti G.); “A 3D hydrostratigraphic modeling to aquifer features assessment in an urban environment” (Ducci D., Sellerino M.); “Data-driven modelling applied to multiple groundwater scenarios” (Doglioni A., Simeone V.); “TRIAD approach in Italy” (Falconi M.); “Interpretation of hydrogeochemical data of the western Po Plain (Piedmont) based on the theory of metamorphization of chemical composition of water” (Fetisov V., De Maio M.); “Modelling the carbonatic aquifer system of Salento (Puglia, southern Italy): a sensitivity analysis” (Giudici M., Margiotta S., Mazzone F., Negri S., Vassena C., De Filippis G.); “Vertical thermal aquifer stratification related to an open-loop ground-water heat pump system: numerical modeling results and experimental evidences” (Lo Russo S., Taddia G., Gnavi L., Roccia E.); “Hydrogeological characterization of volcanic areas: the Sabatini volcanic complex” (Manca F., Viaroli S., Mazza R.); “Hydrological changes due to the Irpinia earthquake, Cervialto M. aquifer numerical model, preliminary results” (Mariani I., La Vigna F., Mattei M., Tallini M.); “Temporal evolution of the volumetric water content profile in a homogeneous soil layer from analytical solutions” (Menziani M., Pugnaghi S., Vincenzi S.); “Large scale 3D groundwater flow modeling in fractured rocks: the case of Mt. Amiata volcanic aquifer (southern Tuscany, Italy)” (Nocchi M., Salleolini M.); “Maintenance and rehabilitation of an infiltration gallery for water supply based upon hydrogeological investigation and numerical model” (Panini G., Cingi M., Pedrazzoli P., Voltolini C.); “A semi-automatic method in ground water modelling calibration” (Patrizi B.); “A new hydrothermal conceptual and numerical model of the Euganean geothermal system - NE Italy” (Pola M., Fabbri P., Zampieri M.); “The contribution of shallow electrical and seismic imaging to the study of the hydrogeology of mud vulcanos: an example from Abruzzo” (Rainone M. L., Rusi S., Signanini P., Torrese P.); “Preliminary conceptual model of groundwater contamination by Mn, Fe, & As in a multi-layer alluvial aquifer, the case study of Cremona (northern Italy)” (Rotiroti M., Bonomi T., Fumagalli L.); “Considerations on hydrogeochemical characteristics of groundwater from carbonate aquifers of southern Latium region” (Sappa G., Ergul S., Ferranti F.); “Bias between flowmeter measurements and numerical model in a contaminated coastal aquifer” (Colombani N., Sbarbati C., Mastriticco M., Petitta M.); “Modeling riverbank infiltration into an unconfined aquifer in central Italy: evidences and remarks from  $^{222}\text{Rn}$  and hydrochemical tracers” (Stellato L., Marzaioli F.).

