

Sunday, October 10

Al Muwajji Hall – Across from 212

Modeling and Groundwater Hydraulics

- 13:40 – 14:00 Quantification of the Impacts of Aquifer Recharge Via Exfiltration Along the Mid North Coast, NSW, Australia
Hawkes, Graham; Ross J; Watkins G
- 14:00 – 14:20 Temporal Variations of the Sulfur and Carbon Isotope Signatures During ASR of Aerobic Groundwater in a Pyritic Aquifer: Development of a Reactive Transport Modelling Framework and Application to a Field Data Set
Prommer, Henning; Carlos Descourvieres; Simone Seibert; Grzegorz Skrzypek
- 14:20 – 14:40 The Orange County Water District Riverbed Filtration Pilot Project: Modeling of Lateral Drain Performance to Guide Project Design
Keller, Jason; Greg Woodside; Adam Hutchinson; Michael Milczarek

BREAK

- 15:20 – 15:40 Modelling of Flow in an Unsaturated Zone of a Tank Clustered Catchment
Balathandayutham, Kalayansundram ; N. G. Anuthaman; Dr. M. Krishnaveni; Dr. K. Karunakaran
- 15:40 – 16:00 Estimation of Groundwater Recharge of Sewage Effluent Using a Coupled Water-Solute Transport Model
Hasan, Issa; Peter-Wolfgang Gräber; P. Werner
- 16:00 – 16:20 Environmental (Quantitative and Hydrogeochemical) Status Assessment of the Budapest Cold-thermal Karst System, Hungary
Poyanmehr, Zahra;
- 16:20 – 16:40 Modelling Groundwater Flow in the Agricultural Area of Ghriss Plain
Belkacem, Bekkoussa; Hervé Jourde; Abdelkader Khaldi; Azzaz Habib

The Role of MAR in Climate Change

- 16:40 – 17:00 Managed Aquifer Recharge in Ground-source Heating and Cooling Systems
Hawkes, Graham ; David Birks
- 17:00 – 17:20 Managed Aquifer Recharge in Ground-source Heating and Cooling Systems
Hawkes, Graham ; Stuart Brown
- 17:20 – 17:40 Solutions for Managing of Coastal Aquifers in Context of Climate Change
Phan Thi, Kim Van; Giuseppe Arduino; Paolo Bono; Peter Dillon; Nguyen Thi Nhan

Hydraulics and Water Resources Engineering

- 17:40 – 18:00 Spatial Distribution and Chemistry of Geothermal Springs in Nkhata Bay, Malawi
Burnett, MSIKA

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Enhancements in Aquifer Characterization

- 13:40 – 14:00 Characterisation of Fractured Rock Aquifers for ASR in Adelaide
Martin, Russell; D. Baldwin
- 14:00 – 14:20 Multi-temporal Analysis for Mexico City Aquifer Using a GIS-based on Measured Data
Ruiz, Gerardo; Rosío Ruiz
- 14:20 – 14:40 Aquifer Characteristics Evaluation in Arid Regions by Dimensionless Method and Software Application
Wagdani, Essam;
- 14:40 – 15:00 Action Research for Managed Aquifer Recharge in Bangladesh to Secure Groundwater Quantity and Quality
Ahmed, Kazi Matin; K Hasan; S Sultana; K Groen; A Tuinhof; H Spruijt; L Patra; S K Ghosh; I Huq

BREAK

- 15:20 – 15:40 Spatial Multi-criteria Decision Support for Site Suitability Mapping with Regards to Aquifer Artificial Recharge Projects
Rahman, Mohammad Azizur; B. Rusteberg; R. Constantin Gogu; J.P. Lobo Ferreira; M. Sauter
- 15:40 – 16:00 Composition Physical - Chemical and Mineralogical Analysis in Charging - Downloading Relationship of a Karstic Aquifer
Barrios, Rosa;
- 16:00 – 16:20 Geophysical Characterization of Aquifer Types and Its Hydro-geological Implications in a Coastal Area of Lagos, Nigeria.
Oyedele, Kayode; L. Adeoti

Geochemistry during Infiltration and Flow

- 16:20 – 16:40 Water Quality Changes Following Deep Well Injection of Supersaturated BWRO Membrane Concentrate
Kooiman, Jan Willem ; Klassjan Raat; Pieter J. Stuyfzand; Harry Boukes; Ate T. Oosterhof
- 16:40 – 17:00 Study of the Transformation and Removal of Nitrogen in Variably Saturated Soil Column Under Alternative Leaching and Drying Conditions
Shasha, Zhang; Menggui Jing; Qiang Sun; Xiaoliang Dong; Qingjia Tang
- 17:00 – 17:20 Geochemical Compatibility Study of Injected and Native Waters at the Nizwa ASR Site
Al-Ajmi, Houda; Asam A. Almulla; Mayada Bardan; AlaEldin M.E.H
- 17:20 – 17:40 Geochemistry in Disturbed Aquifers – Beyond Standard Modeling
Maerten, Horst; Harald Kalka

Monday, October 11

Al Muwajji Hall – Across from 212

Alternative Recharge Systems

- 8:00 – 8:20 Numerical Modeling for Site Selection for Managed Aquifer Recharge
Al-Maktoumi, Ali; Osman Abdullah; Salem Al-Jabri; S.A. Prathaper
- 8:20 – 8:40 Determine Suitable Areas for Artificial Recharge of Groundwater in Ardebil Aquifer Using GIS
Abdeh-Kolahchi, Abdolnabi;
- 8:40 – 9:00 Aquifer Storage and Recovery (ASR): Why Modeling is Essential for Successful Projects
Gamache, Matthew; Kristina Masterson; Dan O'Rourke
- 9:00 – 9:20 Aquifer Storage and Recovery (ASR) in a Low-permeability Fractured Media
Dillon, P.; K. Moitlinski; P. Pavelic
- 9:20 – 9:40 Groundwater Salinity Modeling Using Artificial Neural Networks
Seyam, Mohammed; Y. Mogheir
- 9:40 – 10:00 Feasibility of Recharging Aquifer Through Rainwater in Patan, Lalitpur
Joshi, Hitendra Raj;

BREAK

- 10:20 – 10:40 Groundwater resources assessment using numerical model in Firouzabad plain, Shiraz, Iran
Askary, S; M. Chitsazan; S. Y. Mirzaei

Fate of Pathogens/Organics

- 10:40 – 11:00 Use of Diffusion Cells to Monitor Pathogen Survival in Aquifers During Managed Aquifer Recharge
Page, Declan; Simon Toze, Jatinder Sidhu; Leonie Hodgers; Declan Page; Peter Dillon
- 11:00 – 11:20 Fate of Iodinated X-ray Contrast Media Compounds During MAR
Patterson, Bradley; M. SHACKLETON; A. J. FURNESS; F. BUSETTI

- 11:20 – 11:40 Identification of Significant Transport Processes for Organic Micropollutant Classes During Soil Aquifer Treatment (SAT) – A Field Study
Rahman, Mohammad Azizur ; Karsten Nödler, Tobias Licha, Mohammad Azizur Rahman, Athanasios Soupilas, Martin Sauter
- 11:40 – 12:00 Modeling Oxygen Release into Contaminated Groundwater Aquifers to Facilitate Biodegradation
Mohamed, Mohamed M. A. ;

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- 13:00 – 13:20 Soil Column Studies on the Removal of Pharmaceutical Residues and Microorganisms
Schmidt, Natalie; A. Tiehm
- 13:20 – 13:40 Fate of Trihalomethanes in Groundwater During Managed Aquifer Recharge with Reclaimed Water in a Confined Carbonate Aquifer
Page, Declan; Karen Barry; Paul Pavelic; Joanne Vanderzalm; Peter Dillon
- 13:40 – 14:00 Reactive Transport Modelling Integrating Microbially Catalyzed Redox Reactions in the Framework of Management of Aquifer Recharge (MAR)
Kremer, Sarah; M. Parmentiera; M. Pettenatia; M. Azaroual; L. Mercury
- 14:00 – 14:20 Hybrid Managed Aquifer Recharge System for Elimination of Organic Micropollutants
Lekkerkerker-Teunissen, Karin;
- 14:20 – 14:40 Accumulation Potential of Pharmaceuticals in Groundwater Under Arid Climate Conditions – Tank Experiments in a Climatic Chamber
Zemann, Moritz; L; Wolf; H. Hötzl

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Case Studies

- 8:00 – 8:20 Technical Criteria to Improve Artificial Recharge in Infiltration Ponds and Channels After Seven Years of Management in the Los Arenales Aquifer Facilities
Fernandez Escalante, Enrique; M^a Jesús Minaya
- 8:20 – 8:40 Water Management and Operational Aspects for the Water Works Haltern in Germany
König, Christoph M. ; Prof. Dr.-Ing; Dipl.-Geol. Ulrich Peterwitz; Dipl.-Ing. Martin Becker
- 8:40 – 9:00 Turbidity and Suspended Solids in the Runoff Susceptible of Use for the Artificial Recharge of the Deep Granular Aquifer Subjacent to the Town of San Luis De Potosí (Mexico).
Murillo, Jose Manuel
- 9:00 – 9:20 Hydrogeophysical Study of Well Fields for Drinking Water Supply of Damascus City
Alammareen, Ammar
- 9:20 – 9:40 Methodology Integrating the Hydrologic Distributed Event Model Within Oriented Object Geographic Information System
Ben Salah, Chafika
- 9:40 – 10:00 Hydrological and Hydrogeological Investigations of the Area North Western Gulf of Suez, Egypt
Abu El Ella, Elsayed M.

BREAK

- 10:20 – 10:40 Mapping of Groundwater Potential Zones in Hard Rock Terrain Using Remote Sensing Data and GIS: A Case Study in Shotori, Iran
Safar Ali Zadeh, Hossein ; Chitsazan, Manochehr; Saeed Tourk Ghashghaie Nejad; Safar Ali Zadeh, Hossein
- 10:40 – 11:00 Delineation of Groundwater Recharge Area by Using Hydrogeological Mapping and Hydroisotope Method, Case Study: Pasuruan, Indonesia
Putra, Doni Prakasa Eka; Heru Hendrayana; Suharyadi
- 11:00 – 11:20 The Monitor of Groundwater Flow Direction Using Resistivity Image Profiling Method on the Artificial Recharge of Groundwater in Pingtung, Taiwan
Ting, Cheh-Shyh
- 11:20 – 11:40 Assessment of the Plio-pleistocene Aquifer System in Uja Area West Bank-palestine
Sawalha, Amer; A Abu-Thaher; S. Al Khayat

11:40 – 12:00 Groundwater Contamination in Damascus Plain
Alammareen , Ammar

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13:00 – 13:20 Artificial Recharge Scheme Proposed for Crestatx, a Limestone Aquifer in Majorca Island, Spain. The Role of Suspended Solids in the Artificial Recharge Process. Previous Design of an AR Plant
De la Orden, Jose Antonio

13:20 – 13:40 Etowah Water Bank: a Case Study for Aquifer Storage Recovery
Pyne, David

13:40 – 14:00 Sustainable Development of West Bank Groundwater Aquifers, Aquifer Recharge Case Study in Gaza Strip
Frookh, Loay

14:00 – 14:20 Artificial Recharge of the Aquifer System of Central Veneto (Italy): Modelling and Forced Infiltration Experiments Through Dismissed Quarries
Passadore, Giulia; M. Monego; L. Altissimo; A. Sottani; M. Putti; A. Rinaldo

14:20 – 14:40 Electrical Resistivity Surveys to Delineate Groundwater Potential Aquifers in Akobo Area, Ibadan, South Western, Nigeria.
Coker, Joseph Olakunle

14:40 – 15:00 Aquifer Saturation and Subterranean Flows- Links to Mudbank Formation
Paimpillil, Joseph Sebastian

Tuesday, October 12

Al Muwajji Hall – Across from 212

Water Reuse and MAR

8:00 – 8:20 Using MAR to Recycle Urban Stormwater for Drinking Water Supplies
Vanderzalm, Joanne; W. Weiping; D. W. Page; P. J. Dillon

8:20 – 8:40 A Water Fit for a MAR
Rashid, Nauman

8:40 – 9:00 Ranking the Suitability of Subwatersheds for Managed Aquifer Recharge by Ponding in the ower Yom River Basin, Thailand
Srisuk, Ph.D, Kriengsak; Sumrit Chusanatus; Sitisak Munyou; Laa Archwichai; Penlada Boonsongka; Kewaree Pholkern

9:00 – 9:20 Recharge of Wastewater Using Soil Aquifer Treatment (SAT) and Multi-criteria Approach (MCA)
Krishnan, Deepa; Dr. K. Karunakaran

Risk Assessment and Uncertainty

9:20 – 9:40 Study the Influence of Heterogeneity on Aquifer Recharge
Abdulrahman, Ayman

9:40 – 10:00 Pollution of Drinking Ground Water in Swamps of Uganda
Musige, Ronald

BREAK

10:20 – 10:40 Reducing Salt Water Intrusion into the Aquifer with Inexpensive Soil Amendments
Singh, Ram Prakash; Namrata Gupta; R. Parthvi; P. Parthvi

10:40 – 11:00 Problems of the Transport of Dangerous Goods on Inland Waterways with Regard to the Aquifer Pollution
Isakovic, Dusko; Dr. Dusan Stojadinovic2

11:00 – 11:20 Monitoring the Changes in Groundwater System, in Relation to Surface Water Due to Land Subsidence Induced by Underground Mining
Bashar, Ashtar

11:20 – 11:40 Uncertainty Analysis on Calculation and Modelling of Groundwater Recharge
Zhao, Zhongwei; Jian Zhao; Ling Li

11:40 – 12:00 Socio-economic Impact Assessment of Managed Aquifer Recharge
Priya S., Prem; Dr.K. Karunakaran

LUNCH

Data Management/Monitoring/Automation

- 13:00 – 13:20 Groundwater Level Measurement and Data Transmission
Bafna, Payal ; Prof V.RamBabu; Akshay Watwe
- 13:20 – 13:40 Monitoring, Early-warning and Automation Solutions for Aquifer Management
Maerten, Horst; Harald Kalka; Alexander Schlosser; Thomas Schneider
- 13:40 – 14:00 Building GIS System for the Basin of Erzeni River
Moisiu, Lavdie; Math. Albert Avxhi; Mrs. Enkeleda Grazgdani; Eng.Nazmie Puca
- 14:00 – 14:20 Automated Online Information Management System for ASR
Herrmann, Rolf; Mustafa Lofti
- 14:20 – 14:40 River Nile Water Level Gauges Monitoring in Egypt
Ismail, Sherine; Hala M. Ebaid

BREAK

Regulations/Governance/Economics

- 15:00 – 15:20 Water Entitlement and Allocation Policies to Assist Managed Aquifer Recharge Contribute to Water Security in Australia
Dillon, Peter; John Ward
- 15:20 – 15:40 ASR Systems Types, Definitions, Recovery Efficiency, and Economics
Maliva, Robert; Thomas M. Missimer
- 15:40 – 16:00 Economics of ASR – Case Study of the Nizwa Site, ASR Pilot Project of Sharjah Electricity & Water Authority
AlaEldin M.E.H, Dr.; Walid Labaky; Asam A. Almulla; Mayada Bardan

Injection and Pond Infiltration Issues

- 16:00 – 16:20 The Role of Reeds (*Phragmites Australis*) in Basin Recharge
Stuyfzand, Pieter J. ; Femke Rambags; S. de Haas; P. Dammers; T. N. Olsthoorn
- 16:20 – 16:40 Implementation of Techniques for Soil and Aquifer Treatment (SAT) in Spain. Contributions to the State of the Art.
Fernandez Escalante, Enrique; Miriam Wayan Senent

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Integrated Water Management

- 8:00 – 8:20 Integrated Urban Water Balance as a Tool for Aquifer Recharge Management in Arid Urban Areas: The San Luis Potosi, Mexico Case.
Escolero, Oscar; Sandra Martinez; Leif WOLFWolf
- 8:20 – 8:40 Recovery of Campo De Dalías Aquifer
Araus Gozalo, Mario; Fermín Lopez Unzu; Abraham Garcia Pena; M^a José Mateo Del Horno
- 8:40 – 9:00 Sustainable Conjunctive Use of Groundwater to Supplement Surface Water for Irrigation in the Indus Basin, Pakistan
Alam, Naveed; Theo N. Olsthoorn
- 9:00 – 9:20 Estimation of Evapotranspiration from Satellite Remote Sensing and Meteorological Data over the Fogera floodplain - Ethiopia
Enku, Temesgen; Christiaan van der Tol; Ambro Gieske
- 9:20 – 9:40 Karst Water Pollution Issues and Related Water Resources Management in Guangxi Province, Southwest China
Chen, Xi; Wen Peng
- 9:40 – 10:00 Feasibility of Managed Aquifer Recharge (MAR) Using Excess Treated Wastewater in Oman
Ahmed, Mushtaque; S. A. Prathapar; Salem Hakawati

BREAK

- 10:20 – 10:40 **Monitoring of the Water Resources in the Erzeni River Basin**
Neziraji, Adil; Msc.Lavdie Moisiu; Eng. Enkejleda Grazhdani
- 10:40 – 11:00 **Aquifer Storage & Recovery (ASR) - a Diversified and Sustainable Water Solution**
Franklin, Justin; S. Butcher; J. Franklin
- 11:00 – 11:20 **Study of Artificial Recharge in the Area of Small Dams Around Gedaref Town**
Fathelbari, Mohamed Osman
- 11:20 – 11:40 **Comprehensive Optimal Management Planning of Integrated Aquifer and Surface Water Resource Systems.**
Deschaine, Larry; Varut Guvanasen; Don DeMarco; Xinyu Wei; János D. Pintér
- 11:40 – 12:00 **Feasibility for Artificial Recharging Kohnak Plain Aquifer Using Underground Dam**
Alipour, Darush; Mohammad Albaji; Hamid Majedi

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- 13:00 – 13:20 **Unfolding the Miracle of Decentralised Rainwater Harvesting and Artificial Recharge to Groundwater in the Semi Arid Saurashtra Region of Gujarat, India**
Jain, Ratan

Operations and Management

- 13:20 – 13:40 **Aquifer Storage Recovery Systems for Multi-year, Subsurface Storage to Support Everglades Ecosystem Restoration, South Florida, USA**
Mirecki, June
- 13:40 – 14:00 **Managed Deep Well Aquifer Recharge in the Coastal Dunes of South Holland: 20 Years of Experience**
de Jonge, Hein; P.H. Dammers; M. Bonte
- 14:00 – 14:20 **Management of Backwash Water During Recycled Water Aquifer Storage and Recovery at Bolivar, South Australia**
Hyde, Kylie; jian Zhao; Ling Li
- 14:20 – 14:40 **Use GRACE-derived Groundwater Storage Variation to Evaluate the Potential of Groundwater Storage in the Indus Basin, Pakistan**
Alam, Naveed; Theo N. Olsthoorn

BREAK

MAR in Arid Environments

- 15:00 – 15:20 **Adapting to the Impacts of Climate Change on Groundwater Quantity and Quality**
Tarits, Pascal; S. Baraka-Lokmane; D. Pope; M. Smith; S. Hautot; K. Hiscock; P. Dennis; O. Bour; T. Le Borgne; P. Davy; J. R. De Dreuzy; V. Vergnaud
- 15:20 – 15:40 **Remote Sensing, Geographic Information Systems and Watershed Modeling in Determining Optimum Sites for Conducting an Artificial Storage Recovery Program in Sinai Peninsula, Egypt**
Elawa, Hossam; Qaddah AA
- 15:40 – 16:00 **Estimation of Runoff and Infiltration Using the Curve Number for Wadi Ta'amira / Bethlehem, Palestine**
Qannam, Ziad; Reem Zeitoun
- 16:00 – 16:20 **A Study on the Impact of Eleven Years of Inter-basin Water Transfer on Groundwater Reserves in Yazd**
Dehghan Manshadi, Behrooz