

Sustain Istanbul 2024
October 9-11, 2024

Venue:

Assembly Hall, Bogazici University
Istanbul, Türkiye



Assembly Hall

Detailed Scientific Program

Wednesday October 9, 2024	
9:00-9:45	Registration
9:45-10:00	Welcome
10:00-10:45	Keynote Speaker David Andrew Barry: <i>Warming and Cooling- Temperature Impacts on Flows in Coastal Aquifers and Large Lakes</i>
10:45-11:15	Coffee/Tea Break
	Session I- Modeling for groundwater management Chair: Jim Butler
11:15-11:30	Integrating Remote Sensing and Integrated Hydrologic Models to Develop Paths Toward Water Sustainability- <i>David Hyndman, Anthony Kendall, Jake Stid, Adam Zwickle</i>
11:30-11:45	Water resource management in the Konya Closed Basin: insights of process-based, data-driven, and system dynamics modeling approaches- <i>Daniele Secci, Ali Kerem Sayasel, Izel Uygur, Onur Cem Yolođlu, Andrea Zanini, Nadim K Copty</i>
11:45-12:00	Investigating the direct impact of climate change on groundwater levels in Iberian Peninsula using deep learning- <i>Amir Rouhani, Marco D'Oria, Nadim K. Copty, Michael Rode, J. Jaime Gómez-Hernández, Seifeddine Jomaa</i>
12:00-12:15	Using the Central Valley Hydrologic Model to Evaluate Groundwater Sustainability and Land Subsidence in California's Central Valley, USA- <i>Claudia Faunt, Jonathan Traum, Scott Boyce</i>
12:15-12:30	Where is it coming from? A modeling assessment of the larger-than-expected inflow to the depleting High Plains Aquifer in Kansas- <i>Gaisheng Liu, Brownie Wilson, Geoff Bohling, Don Whittemore, James Butler</i>
12:30-14:00	Lunch
	Session II- Groundwater management in arid and semi-arid regions Chair: Dave Hyndman
14:00-14:15	Saltwater Intrusion Mitigation in the Urban Aquifer of the Thiaroye Area, Dakar: A Geophysical and Modelling Approach, <i>Axel Laurel Tcheheumeni Djanni, Peter Dietrich</i>
14:15-14:30	Improving Parameter Estimation Using InSAR Measurements with Coupled Groundwater Flow – Geomechanical Modeling- <i>Alper Elçi, Yueting Li, Pietro Teatini, Berker Bayırtepe, Elif Aysu Batkan, Barış Çaylak, Claudia Zoccarato, Claudia Meisina</i>

14:30-14:45	Divining an Aquifer's Future Through the Fog of Heterogeneity: Integration of Pumping, Geologic, and Airborne Electromagnetic Data- <u>James Butler</u> , <u>Geoff Bohling</u> , <u>Jared Abraham</u> , <u>Ted Asch</u> , <u>Steve Knobbe</u> , <u>Scott Ishman</u> , <u>Gaisheng Liu</u>
14:45-15:00	Defining pumping strategies in a data-scarce scenario: the Eastern Mancha aquifer in Spain- <u>Vanessa A. Godoy</u> , <u>J. Jaime Gómez-Hernández</u> , <u>Jim Butler</u>
15:00-15:05	Indoor Group Photo
15:05-15:35	Coffee/Tea Break
	Session III- Optimization approaches for groundwater systems Chair: <u>Orhan Gündüz</u>
15:35-15:50	Optimal aquifer remediation with the use of harmony search algorithm- <u>Eirini Chatziyiannakidou</u> , <u>Diamantis Karakatsanis</u> , <u>Nicolaos Theodossiou</u>
15:50-16:05	A simulation-optimization approach for simultaneous identification of aquifer parameters and zone structures considering the general form of the Voronoi tessellation- <u>Mirac Bugse Tozak</u> , <u>Pinar G. Durgut</u> , <u>M. Tamer Ayyaz</u>
16:05-16:20	Groundwater Vulnerability Assessment of Efteni Wetland and Surrounding Area Using DRASTIC Vulnerability Method- <u>Cengiz Aybirdi</u> , <u>Türker Kurttaş</u>
16:20-16:35	Unveiling Farmers' Perceptions: A Citizen Science and Machine Learning approach to exploring drivers in the adequacy and fairness of water systems- <u>Vasilios Plakandaras</u> , <u>Amvrossios Bagtzoglou</u> , <u>Fahad Khan Khadim</u> , <u>Emmanouil Anagnostou</u> , <u>Vassiliki Kazana</u>
16:35-16:50	An Assessment for Estimating Root Uptake from Water Retention Curve in Unsaturated Zone, <u>A. Ufuk Şahin</u> , <u>Cem Demir</u>
16:50-17:05	Estimation of the total Interaction Flow Rate in a simplified river aquifer system using the Catboost Regression Method- <u>Hayri Baycan</u> , <u>Uğur Boyraz</u>

Thursday October 10, 2024

9:30-10:15	Keynote Speaker Yoshihide Wada: <i>The Changing Role of Groundwater in the Global Water Cycle</i>
10:15-10:20	Group Photo
10:20-10:50	Coffee/Tea Break
	Session IV: Earth Observations for groundwater management Chair: Alper Elçi
10:50-11:05	Determination of soil hydraulic properties for Land Surface Models using International Soil Moisture Network data and a physically-based inverse calibration technique- <u>Onur Günqör Şahin</u> , <u>Orhan Gündüz</u>
11:05-11:20	Sustainable water quality management in Albufera Lagoon: integrating remote sensing and MRV tools, <u>Patrícia Lourenço</u> , <u>Luís Paixão</u> , <u>Mariano Terrón</u> , <u>Filipe Vieira</u> , <u>Carlos Palma</u> , <u>Luís Encarnaçãõ</u> , <u>Pedro Mendes</u> , <u>José Rafael Marques da Silva</u>
11:20-11:35	Navigating Spatial Complexity: Advancing Groundwater Resources Modeling with Non-Euclidean Distance-Based Ordinary Kriging, <u>Emmanouil Varouchakis</u> , <u>Andrew Pavlides</u> , <u>Maria Koltsidopoulou</u>
11:35-11:50	Using remotely sensed imagery to track irrigation for sustainable groundwater management- <u>Cindy Viviers</u> , <u>Michael van der Laan</u>
11:50-12:05	Tracking land subsidence by Sentinel-1 InSAR to reveal groundwater depletion at the El-Qaa Plain of Sinai, Egypt- <u>Mona Morsy</u> , <u>Peter Dietrich</u> , <u>Mahmud Haghshenas Haghghi</u>
12:05-12:20	Methods to assess and characterize infiltration processes in the vadose zone of regional aquifer systems- <u>Peter Dietrich</u> , <u>Ulrich Maier</u> , <u>Anna Rieß</u> , <u>Alireza Kavousi</u> , <u>Irina Engelhardt</u> , <u>Martin Sauter</u>
12:20-13:50	Lunch
13:50-15:00	Poster Session Characterization of the limit of the Bailén aquifer using direct data and geophysical prospecting techniques (Baños de la Encina, Southern Spain)- <u>Javier Rey</u> , <u>Carmen Hidalgo</u> , <u>Rosendo Mendoza</u> , <u>Bruna Marinho</u> Comparing ANN and aPC models as surrogates for groundwater transport, <u>Daniele Secci</u> , <u>Valeria Todaro</u> , <u>Marco D'Oria</u> , <u>Maria Giovanna Tanda</u>

Are groundwater levels declining in southwestern Europe? *Rafael Chávez García Silva, Robert Reinecke, Nadim K. Copty, David A. Barry, Essam Heggy, David Labat, Pier Paolo Roggero, Dietrich Borchardt, Michael Rode, J. Jaime Gómez-Hernández, Seifeddine Jomaa*

GRACE potential to detect hydrological extremes- *Alexandra Gemitzi, Venkat Lakshmi*

An Optimization Based Curve Matching Approach for Estimating Unconfined Aquifer Parameters based on Neuman's Solution - *M. Tamer Ayvaz*

Delineation of groundwater vulnerability zones using DRASTIC Model in the alluvial and west marginal tract of West Bengal, India- *Aditya Sarkar, Saikat Majumder, Srijan Mukherjee, Debasish Bagchi*

Evaluating the Prospects of Drought Patterns in Turkey- *Mohammadreza Khandandel, İrem Daloğlu Çetinkaya, Nadim K. Copty*

Challenges and Conflicts in Water Governance: A Political Ecology Perspective on the Konya Closed Basin, Türkiye- *Cenk Ceylan, Cem İskender Aydın, İrem Daloğlu Çetinkaya*

Sustainable Groundwater Management in the Canary Islands: Implementing Managed Aquifer Recharge and Nature-Based Solutions- *Noelia Cruz-Pérez, Joselin S. Rodríguez-Alcántara, Jesica Rodríguez-Martín, Miguel Á. Marazuela, Alejandro García-Gil, Juan C. Santamarta*

Geochemical characterization of tailings impoundments and mine drainage in the Renegadero River upper reach (SE Spain)- *M. Carmen Hidalgo, Javier Rey, Rosendo Mendoza, M. José de la Torre, M. José Campos, Katheryn Lopez-Lasserra*

Passive remediation of acid mine drainage (AMD): batch experiments using mixed treatment substrates *M. José de la Torre, M. Carmen Hidalgo, Javier Rey, Rosendo Mendoza, M. José Campos, Cristian Rivas*

Water use efficiency and crop selection for sustainability in the El Ghanima irrigated farm (Sidi Brahim district in Medjerda river basin)- *Ahmed Skhiri, Tasnim Hajji, Salem Mabrouk, Slaheddine Khelifi*

The main issues related to water management in the Medjerda watershed: a living lab approach- *Imen Souissi, Oussama Rhouma*

	<p>Effective Design Solutions for the Control of Leachate Contamination of Landfills Near Watercourses- <i>Batuhan Kasap, İncilay Çeşme, Yunus Emre Karpuz, Merve Meryem Aslan, Ceyhun Akarsu, Uğur Boyraz</i></p> <p>Stakeholders' analysis for a better water management at basin level in arid regions- <i>Fathia ElMokh, Mongi Ben Zaied, Kamel Nagaz, Alexandros Kandarakis, Vangelis Constantianos, Matteo Funaro, Marta Debolini, Simone Mereu</i></p> <p>Regional Legal Protection of groundwater in the Climate Change Scenario- <i>Luciana Cordeiro de Souza Fernandes, Alexandre Martins Fernandes, Carlos Hiroo Saito</i></p>
15:00-15:30	Coffee/Tea Break
	<p>Session V: Groundwater-surface water interactions Chair: Daniele Secci</p>
15:30-15:45	Co-existence of saline groundwater onshore and freshened groundwater offshore in the Pearl River Delta and Estuary, China- <i>Jimmy Jiao</i>
15:45-16:00	Investigation of Lake-Aquifer Interactions with MODFLOW- <i>İnci Yalçın, Cevza Melek Kazezyılmaz-Alhan</i>
16:00-16:15	Enhancing Water Management in the Keritis-Therissos Watershed: A WEAP System Approach to Sustainable Solutions- <i>Yula Koroptsenko, Emmanouil Varouchakis, George Karatzas, Iren Vozinaki, Ionna Anyfanti, Antonis Lyrons</i>
16:15-16:30	The Impact of Surface Water and Shallow Groundwater Interactions on Solute Transport in Rivers with Different Types of Morphology- <i>Kavsar Bako, Cevza Melek Kazezyılmaz-Alhan</i>
16:30-16:45	The effect of river microplastic pollution on groundwater: Gediz River Basin Case Study <i>Yiğithan Kazancı, Nefise Alyürük, Neval Baycan, Orhan Gündüz</i>
	<p>Special Lecture</p>
16:45-17:15	The science behind dowsers, or is it magic? <i>J. Jaime Gómez-Hernández</i>
18:00-22:00	Conference Dinner

Friday October 11, 2024

9:15-10:00	Keynote Speaker Jose Albiac: <i>The Wicked Challenge of Sustainable Groundwater Management under Climate Change</i>
10:00-10:15	Session VI: Governance and policy towards sustainable groundwater management Chair: Seifeddine Jomaa
10:15-10:30	Unpacking unsustainable groundwater polices worldwide: an analysis of governance failure- <u>Fatemeh Karandish</u> , <u>Sida Liu</u> , <u>Inge de Graaf</u>
10:30-10:45	From Himalayas to the Arabian Sea: Discovering River Indus as a Living Entity in Pakistan- <u>Shireen Mushtaq</u>
10:45-11:00	Coupling of System Dynamics and Hydrogeological Models for Sustainable Groundwater Management for Konya Basin, Türkiye, <u>Şanser Güz</u> , <u>İzel Uygur</u> , <u>Nadim K. Copty</u> , <u>Ali Kerem Saysel</u>
11:00-11:30	Coffee/Tea Break
11:30-11:45	Session VII: Groundwater vulnerability Chair: Ali Kerem Saysel
11:45-12:00	The critical role of groundwater in the sustainable extraction of lithium from shallow and deep brine systems- <u>David Boutt</u> , <u>Lee Ann Munk</u>
12:00-12:15	Assessing Impacts of Climate Change on Sustainable Groundwater Resources Management- <u>Cem Avci</u> , <u>Mohsen Vanolya</u> , <u>Emirhan Ozsoy</u>
12:15-12:30	Impact of industrialization on the salinized aquifer system in parts of Bengal Basin with focus on the Lower Ganga Deltaic Plain <u>Debasish Bagchi</u> , <u>Suparna Datta</u> , <u>Naseema Jamal</u> , <u>Anadi Gayen</u> , <u>Aditya Sarkar</u> , <u>Saikat Majumder</u>
12:30-12:45	The value of groundwater for biodiversity and species at risk conservation in British Columbia, Canada- <u>Frances Varty Bayar</u>
12:45-13:00	Spain's first UNESCO-IHP Ecohydrology Demonstration Site: Acequias de careo in Sierra Nevada- <u>Thomas Zakaluk</u> , <u>Jorge Jódar</u> , <u>Marco Albarracín</u> , <u>Nuria Naranjo-Fernández</u> , <u>Javier Cabello</u> , <u>María Jacoba Salinas-Bonillo</u> , <u>José Jesús Casas</u> , <u>Carlos Marín-Lechado</u> , <u>José María Martín Civantos</u> , <u>Sergio Martos-Rosillo</u>
13:00-14:00	Closing Remarks
13:00-14:00	Lunch

