International Association of GeoChemistry

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THE 3rd IAGC INTERNATIONAL CONFERENCE

The **3rd IAGC International Conference** will be held in Cagliari, Italy on 16–21 June, 2025. This meeting will include the 18th Water-Rock Interaction Working Group Meeting (WRI-18), the 15th Applied Isotope Geochemistry Working Group Meeting (AIG-15), Urban Geochemistry sessions, and celebration of the 20th Anniversary of *Elements Magazine*. Visit https://sites.unica.it/wri-18/ to learn more!

IAGC 2024 AWARDS

Harmon Distinguished Service Award

Dr. W. Berry Lyons is a professor and Distinguished University Scholar in the School of Earth Sciences at The Ohio State University, USA. Dr. Lyons and his research group currently conduct research on four specific topics: (1) the biogeochemistry of Antarctic terrestrial/aquatic ecosystems and how they respond to climate change; (2) the impact of urbanization, suburbanization, and agricultural management practices on water quality; (3) the role of hydrologic variations, climate change, and anthropogenic activities on the aquatic biogeochemistry of peatlands; and (4) environmental sustainability research and education. Dr. Lyons is a former director of the Byrd Polar Climate and Research Center, and of the School of Earth Sciences at Ohio State. He has been the lead investigator of the McMurdo Dry Valleys Long Term Ecological Research program. He is also a former F.E. Ingerson Lecturer and a Fulbright Research Scholar at University Galway, Ireland. Dr. Lyons has a long history of service in the Earth sciences, including his engagement in the IAGC as Treasurer since 2008.

IAGC Fellows

Dr. Rosa Cidu is a full professor at the University of Cagliari (Faculty of Sciences), Italy. She teaches geochemistry and hydrogeochemistry courses, and has served as a tutor for several MD and PhD theses. Her relevant academic positions were MD coordinator in geological sciences (2014–2018), PhD coordinator in Earth science (2009–2012), and director of the Department of Chemical and Geological Sciences (2018–2021). As an invited professor, she attended short courses devoted to promoting the potential application of hydrogeochemical methods in environmental issues (Universidad Federal da Bahia, Brazil; Universidad Nacional de Cuyo, Argentina; Universidad Catolica del Norte, Cile; Université Mohammed V Rabat, Morocco; École Polytechnique Federal de Lausanne, Switzerland; Jena University, Germany). She has contributed to organizing international symposia, such as the 10th Water Rock Interaction Conference (WRI-10) in 2001 and the Water in Mining Environments in 2007. Prof. Cidu was an editor of conference proceedings, special issues, and associate editor of *Mine Water and the Environment*, and she serves several international journals as a reviewer. She is member of the societies IAGC, AAG, SOGEI, and SIMP, and is an elected member of the Executive Council of the International Mine Water Association.

Her research activities have been carried out within national and international research programs, devoted to water–rock interaction studies in geothermal prospecting, hydrogeochemical gold prospecting, and the environmental impact of mining on the aquatic system in collaboration with researchers from Europe, USA, Morocco, and South America. She has assessed analytical methods for the determination of trace and ultra-trace elements in different aqueous fractions, also investigating the influence of analytical errors on the interpretation of hydrogeochemical data. Many studies were devoted to the understanding of geochemical processes affecting the mobility and fate of harmful and toxic elements (e.g., REE, Hg, Cd, Pb, As, Sb, U) in river water and groundwater, with special attention to areas affected by active and past mining. Recent attention has been given to environmental issues related to the degradation of water quality compared with background values, and the potential sources of nitrate contamination. She has published several full papers in peer-review journals and books, together with many short papers in conference proceedings.

Dr. Carol Ptacek received a PhD degree (1992) in aqueous geochemistry from the Department of Earth and Environmental Sciences at University of Waterloo in Waterloo, Ontario, Canada. After graduating, she worked as a research scientist at the National Water Research Institute, Environment Canada, in Burlington, Ontario, Canada, where she advanced to Section Head for Groundwater Quality and Remediation in 2004. In 2006, she joined the Department of Earth and Environmental Sciences at the University of Waterloo as a professor of environmental geochemistry and contaminant hydrogeology. She is currently a University Research Chair in Environmental Earth Sciences.

Dr. Ptacek's research focuses on developing and implementing improved management strategies for minimizing contaminant release from mine wastes and industrial sites. Her research program integrates laboratory experimentation, field-based measurements, and utilizes a wide range of analytical techniques, including synchrotron-based spectroscopy and electrospray tandem mass spectroscopy. Highlights of her career include detailed studies to address the long-term release of metal(loids) from mine sites, co-development of the permeable reactive barrier technology for passively removing contaminants in subsurface environments, the use of biochar for remediation of mercury-contaminated sites, and application of emerging contaminants as tracers of solute transport in aquifers and aquatic systems. More than 20 of her co-authored articles appear in the IAGC journal *Applied Geochemistry*.

Vernadsky Medal

Dr. Ramon Aravena is currently an emeritus and adjunct professor in the Department of Earth and Environmental Sciences at the University of Waterloo, Canada. He has dedicated over 35 years of his professional life to advancing the field of geochemistry, particularly in the application of isotope and geochemical techniques in hydrogeology. Prof. Aravena's extensive career in academia has included teaching isotope hydrology and geochemistry courses at the University of Waterloo, as well as teaching courses on isotope hydrology in Latin America through collaborations with the International Atomic Energy Agency in the USA, under the umbrella of the National Ground Water Association, and in Europe through collaboration with European Universities. Prof. Aravena was part of the expert pool of the International Atomic Energy Agency, Vienna, Austria, for their projects worldwide.

Beyond his academic endeavors, Prof. Aravena has made significant contributions to geochemical research. His work has focused on groundwater resources and groundwater contamination stemming from agricultural, urban, mining, and industrial activities, with numerous studies conducted in Latin America, Canada, the United States, and Europe. His expertise in applying isotopic techniques to fingerprint and evaluate the sources and fate of contaminants in groundwater has had a profound impact on our understanding of environmental issues. During his career, he developed research collaboration with international universities including the University of Barcelona (Spain); La Sapienza University, Politecnico of Milan, and University of Campania Luigi Vanvitelli (Italy); University of Sao Paulo (Brazil); University of Neuchatel (Switzerland); University of La Plata (Argentina); and the University of Concepcion, Catholic University, and University La Serena (Chile). Prof. Aravena's publication record is a testament to his dedication to advancing the field. He has authored or co-authored almost 200 refereed publications, more than 70 technical papers, and 11 book chapters. Notably, he played a pioneering role in the development of compound isotope analysis (CSIA) and co-edited the influential book "Environmental Isotopes in Biodegradation and Bioremediation" in 2009. His publication record has resulted in 18,380 citations, an H-index of 78, and an i10-index of 188 (Google Scholar).

In addition to his research and teaching commitments, Prof. Aravena has served as a reviewer for major North American and European funding agencies and esteemed groundwater journals, including *Water Resources Research*, *Ground Water*, *Journal of Hydrology*, *Journal of Contaminant Hydrology*, *Environmental Science & Technology*, *Organic Geochemistry*, and *Geochimica Cosmochimica Acta*. His peer review contributions have helped maintain the rigor and quality of research in the field.

Jin Jingfu Award

Dr. Meret Aeppli is a tenure track assistant professor at EPFL, Switzerland, where she leads the Soil Biogeochemistry Laboratory. Her group aims to elucidate the fundamental processes and mechanisms that govern the biogeochemical cycling of carbon and other elements in soils. To this end, Dr. Aeppli and her group are developing novel tools and concepts to unveil the underlying drivers of element cycling, including electron transfer reactions and energy transformations. Before joining EPFL, Dr. Aeppli was a postdoctoral fellow at Stanford University, USA, from 2019 to 2022 where she investigated biogeochemical controls on carbon turnover in soils and sediments. She holds bachelor's and master's degrees in environmental sciences from ETH Zürich, Switzerland, and obtained her PhD from ETH Zürich in 2019.

Kharaka Award

Dr. Kamel Zouari is a professor at the University of Sfax, Tunisia, and is head of the Laboratory of Radio-Analysis and Environment (LRAE) at ENIS in Tunisia. From 1986–1988, Dr. Zouari was a researcher in the Laboratory of Isotope Hydrology of Paris South-Orsay University, France, where received his PhD (1988). His research focus is on isotope hydrology and water resources. Since 1995, he has worked with the International Atomic Energy Agency in Vienna, Austria, and he has collaborated as an international expert with the Arab Atomic Energy Agency since January 2002. Dr. Zouari has completed more than 150 expert missions with the IAEA to several African and Middle Eastern countries and has acted as the National Coordinator of G@GPS (Groundwater@GlobalPaleoclimate Signals) international project since 2010.

In addition to his involvement with international agencies, Dr. Zouari founded the LRAE multidisciplinary laboratory. LRAE research spans across different specialties involving the application of geochemical tracers in geologic and water resources investigations. The laboratory consists of approximately 45 members: teachers, researchers, engineers, and technicians. It is also the only laboratory in Tunisia that offers isotope analysis of water samples ($^{18}O/^{2}H$, ^{3}H, ^{13}C, and ^{14}C). Dr. Zouari has been a supervisor of numerous PhD theses (30 PhD defended) in isotope hydrology and geochemistry. His group research activities focus on the characterization of surface and groundwater resources in Tunisia to support integrated resources management (IWRM). Their research investigates water quality issues and assesses aquifer vulnerability to natural and human-induced pollution. The research activities results are published in more than 130 articles and scientific paper in peer reviewed journals focusing on groundwater geochemistry, geology, and hydrogeology.

Ebelmen Award

Dr. Yao Du was born in China in 1989 and earned his PhD from the China University of Geosciences (Wuhan) in 2017. He has been actively involved in studying the sources and fate of geogenic nitrogen and phosphorus compounds in groundwater and their impact on lake eutrophication in recent years. He proposed novel genetic models of high ammonium and high phosphorus groundwater, and thus greatly advanced our knowledge about the hydrogeochemical behavior of nitrogen and phosphorus in groundwater systems. He successfully identified the spatial variability and controlling factors of nitrogen and phosphorus loads via groundwater discharge into lakes at different scales and developed quantitative evaluation methods. His work highlighted the critical importance of quantitatively characterizing lacustrine groundwater discharge for protection and restoration of lake ecological environments. He has published 34 papers as the first or corresponding author in international peer-reviewed journals, including eight papers in top journals such as *Environmental Science & Technology*, *Water Research*, and *Water Resources Research*; and three papers in the official journal of the IAGC, *Applied Geochemistry*.