

# Meet the Authors



**Stefano Albanese** is a researcher in the Department of Earth Science, University of Napoli "Federico II," where he teaches courses on environmental risk assessment. His studies are currently focused on the bioavailability of toxic elements and on the evaluation of their natural backgrounds in different environmental media (water, soil, sediments, air). He has also carried out studies on the

potential interactions between environmental contamination and cancer mortality in the Campania region. He is currently a member of the Italian unit of the GEMAS (EuroGeoSurveys geochemical mapping of agricultural and grazing-land soil of Europe) team.



**Daniel J. Bain** is an assistant professor in the Department of Geology and Planetary Science at the University of Pittsburgh and a co-principal investigator in the Baltimore Ecosystem Study. His main research interests include legacy effects of human activities, fluvial systems, and trace-metal geochemistry.



**Francesco Bellucci** received a BS in geology from the University of Florence (2003), and an MS (2007) and PhD (2011) in Earth and environmental sciences from the University of Illinois at Chicago, where he applies stable isotope geochemistry in the study of paleoclimatology, environmental contaminants, and anthropogenic greenhouse gas emissions (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O). He is currently a post-

doctoral fellow with the Interfacial Process Group at Argonne National Laboratory (USA), where he conducts X-ray scattering experiments to probe the geochemistry of mineral-water interfaces.



**Jean E. Bogner** is a research professor in the Department of Earth and Environmental Sciences, University of Illinois at Chicago. She holds geology degrees from Augustana College (BA 1969), the University of Illinois (MS 1973), and Northern Illinois University (PhD 1996). Her research centers on soil gases, especially greenhouse gases (GHGs) related to waste-management processes. Previously,

she was a member of the scientific staff at Argonne National Laboratory and was the coordinating lead author for the chapter on waste management for the IPCC 4<sup>th</sup> Assessment Report (2007).



**Domenico Cicchella** is a research scientist in the Department of Biological, Geological and Environmental Sciences at the University of Sannio, Benevento, Italy, where he teaches geochemistry. He received a PhD in environmental geochemistry from University of Naples "Federico II" in 2003. His current research interests include multimedia, multielement regional geochemistry,

site characterization and remediation, geomedicine, and statistical data analysis. He has actively collaborated with the Geochemistry Expert Group of EuroGeoSurveys studying the geochemistry of European bottled water and carrying out mapping of agricultural and grazing-land soils in Europe. He is the author of several geochemical atlases and more than fifty publications in international journals.



**Angus Cook** is a researcher and lecturer in environmental epidemiology and director of the Ecology and Health group at the School of Population Health, the University of Western Australia. He completed his medical degree in New Zealand in 1992, registered as a medical practitioner in 1994, and completed his PhD in epide-

miology in 2007. He provides teaching and research training in environmental health, including impacts on health from water, soil, food, and air pollutants; he also examines major ecological shifts, including urbanization, loss of food and water resources, bioinvasion, and climatic events.



**Gabriel M. Filippelli's** work on the intersection between geology and human health began with a graduate student, Mark Laidlaw, who wanted to identify the distribution of heavy metals in urban settings. This environmental geochemistry work has moved toward, and into, the human body, with recent efforts in tracking down the environmental and social factors that influence individual exposures to heavy metals. He is a former chair of the Geology and Health Division of GSA, holds faculty appointments in the Department of Earth Sciences at Indiana University-Purdue University Indianapolis (IUPUI) and in the Richard M. Fairbanks School of Public Health at Indiana University, and is the director of the Center for Urban Health.



**Rebecca L. Hale** is a PhD candidate in the School of Life Sciences at Arizona State University. Her research interests include the coupled hydrology and biogeochemistry of social-ecological systems. Her dissertation research addresses the roles of climate, hydrologic engineering, and increased nutrient inputs in driving nutrient export from human-dominated watersheds.



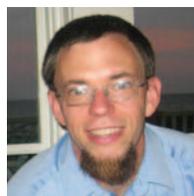
**Russell S. Harmon** is the director of the International Research Office of the Army Engineer Research and Development Center. He is a geochemist who has worked in the Lunar Receiving Laboratory of the NASA Manned Spacecraft Center, the Scottish Universities Research and Reactor Center, the UK Natural Environment Research Council, and the Army Research Office. He has

also held faculty positions at Michigan State University and Southern Methodist University. He is a Geological Society of America fellow, the current GSA Mineralogy, Geochemistry, Petrology, & Volcanology Division chair, and a past president of the International Association of GeoChemistry. He holds a BA from the University of Texas, an MS from Pennsylvania State University, and a PhD from McMaster University.



**Nico Hauwert** completed his PhD dissertation at the University of Texas, received an MS in geology from the University of Toledo, and a BS in geology from the University of Texas. He has studied various aquifers across the United States, including the northwest Ohio dolomites, the eastern Texas lignite mines, and the central Texas karst aquifers, as a consultant, as Assessment Program manager

for the Barton Springs/Edwards Aquifer Conservation District, and currently as senior hydrogeologist for the City of Austin Watershed Protection Department. His studies typically utilize injected tracers to examine the influence of the geologic framework and urbanization on cave drips, groundwater flow, and springs.



**Jeffery Landrum** is a professional hydrogeologist at Aspect Consulting, LLC, in Seattle, Washington. He completed an MS degree at the University of Texas in Austin, researching the behavior of arsenic and antimony at the El Tatio Geyser Field. He provides key support in the fate and transport of metals and in modeling analysis. His recent projects include multiphase analyses of mercury, nickel, and arsenic. With a solid background in hydrogeology and

*Cont'd on page 414*

## Meet the Authors

Cont'd from page 413

contaminant transport, Jeff provides technical support in cleanups of petroleum hydrocarbons, metals, and solvents. He also uses geochemical modeling in aquifer storage and recovery feasibility and pilot studies in Washington.



**W. Berry Lyons** is a professor and currently the director of the School of Earth Sciences at the Ohio State University. He is a past director of the Byrd Polar Research Center at Ohio State. His research interests include the impact of urbanization, suburbanization, and agricultural activities on water quality; the relationship between physical and chemical weathering rates; and the biogeochemistry of Antarctic aquatic systems. He has been involved with the

McMurdo Dry Valleys Long-Term Ecological Research site in Antarctica since its inception in 1993. He is a fellow of GSA, AAAS, and AGU. He is also currently the coleader of IAGC's Urban Geochemistry Working Group.



**Suzette A. Morman** is a research geologist with the U.S. Geological Survey in Denver, Colorado. She began her professional career as a registered nurse. She received a BS in geology (University of South Florida), an MS in geology (University of Alabama), and a master's degree in public health (University of Colorado). In her current research, she uses simulated biofluids to elucidate and estimate health risks from exposures to geogenic materials (soils, dusts, wildfire, and volcanic ash). Her other research interests include linking geological and public health databases to assess morbidity and the effects of climatic variability on drylands and the implications for human health.

moving to South Florida to work as an FDA management representative for a bioanalytical manufacturing company. Her work is focused on lead poisoning in urban children. She is a former two-year National Science Foundation fellow and currently a fellow of the Center for Urban Health.



**Deborah Morrison** is a PhD student in the Department of Earth Sciences at Indiana University–Purdue University at Indianapolis (IUPUI). She completed her MPH in epidemiology (2007) at the Indiana University School of Medicine, Department of Public Health, and her MS in Earth sciences (2011) at IUPUI. She lived and worked in the Middle East for five years before

moving to South Florida to work as an FDA management representative for a bioanalytical manufacturing company. Her work is focused on lead poisoning in urban children. She is a former two-year National Science Foundation fellow and currently a fellow of the Center for Urban Health.



**Geoffrey S. Plumlee**, a research geochemist with the U.S. Geological Survey since 1987, received his BSc in geology from the University of New Mexico (1980) and PhD in geochemistry from Harvard University (1989). Growing upon his early work in economic geology and the environmental geochemistry of mineral deposits, his current research applies geochemistry to problems in human health

and to environmental disaster response/preparedness. He is an adjunct clinical assistant professor at the University of Colorado School of Public Health, chair of the American Geosciences Institute Environmental Geoscience Advisory Committee, and past chair of the Geological Society of America's Geology and Health Division.



**John M. (Jack) Sharp Jr.** is the Carlton Professor of Geology at the University of Texas at Austin. He has a bachelor of geological engineering degree from the University of Minnesota and MS and PhD degrees in geology from the University of Illinois. He has served as president of the Geological Society of America (GSA). His awards include GSA's Meinzer, the American Institute of Hydrogeology's

Theis, and the International Association of Hydrogeologists' President's awards. He is both a GSA and an Alexander von Humboldt fellow. His research covers flow in fractured and carbonate rocks, thermohaline free convection, sedimentary basin hydrogeology, subsidence and coastal land loss, groundwater management, and the effects of urbanization.



**Neil C. Sturchio** is a professor of geochemistry and director of the Environmental Isotope Geochemistry Laboratory in the Department of Earth and Environmental Sciences at the University of Illinois at Chicago (UIC). He received a BA in Earth sciences (1977) from Fairleigh Dickinson University and a PhD (1983) from Washington University. From 1983 to 2000, he was at Argonne

National Laboratory, where he carried out chemical and isotopic studies on active hydrothermal systems, and synchrotron X-ray scattering and spectroscopic studies on mineral–fluid interfaces. Since 2000 he has been at UIC, where he served as department head from 2001 to 2012.



**Kristin M. White** has over 8 years of experience with state environmental agencies in Texas and 18 years in private-sector environmental and geological consulting. She received bachelor's degrees from the University of Texas at Austin in geography (1992) and geological sciences (1999). She earned a master's degree in geosciences (hydrogeology) at the Jackson School of Geosciences at UT-Austin

(2005). She is a certified professional geologist (State of Texas) specializing in the hydrogeology of the Edwards Aquifer, and her experience includes geologic assessments, cave studies, karst investigations, cave-management plans, integrated pest management, endangered species habitat assessments, and environmental permitting.



**Wilfred M. Wollheim** is an assistant professor in the Department of Natural Resources and the Environment at the University of New Hampshire (UNH). He is also jointly appointed in the Earth Systems Research Center in the Institute for the Study of Earth Ocean and Space at UNH. As a co-principal investigator on the Plum Island Long-Term Ecological Research project in suburban

Massachusetts, USA, he studies the impacts of urbanization on biogeochemical fluxes and the role of river networks in controlling the amount and timing of those fluxes.



**Corinne I. Wong** is a PhD candidate at the University of Texas at Austin. She has a BS degree in geological sciences and a BA degree in environmental studies from the University of the Pacific (Stockton, California), and an MS degree in geological sciences from the University of Texas at Austin. She is a two-time recipient of the Environmental Protection Agency STAR fellowship.

In her research, she uses geochemical and isotopic approaches to investigate the natural variability of past climate and delineate the sources and processes that influence the quality of present surface-water and groundwater resources.



# From Lab to Field

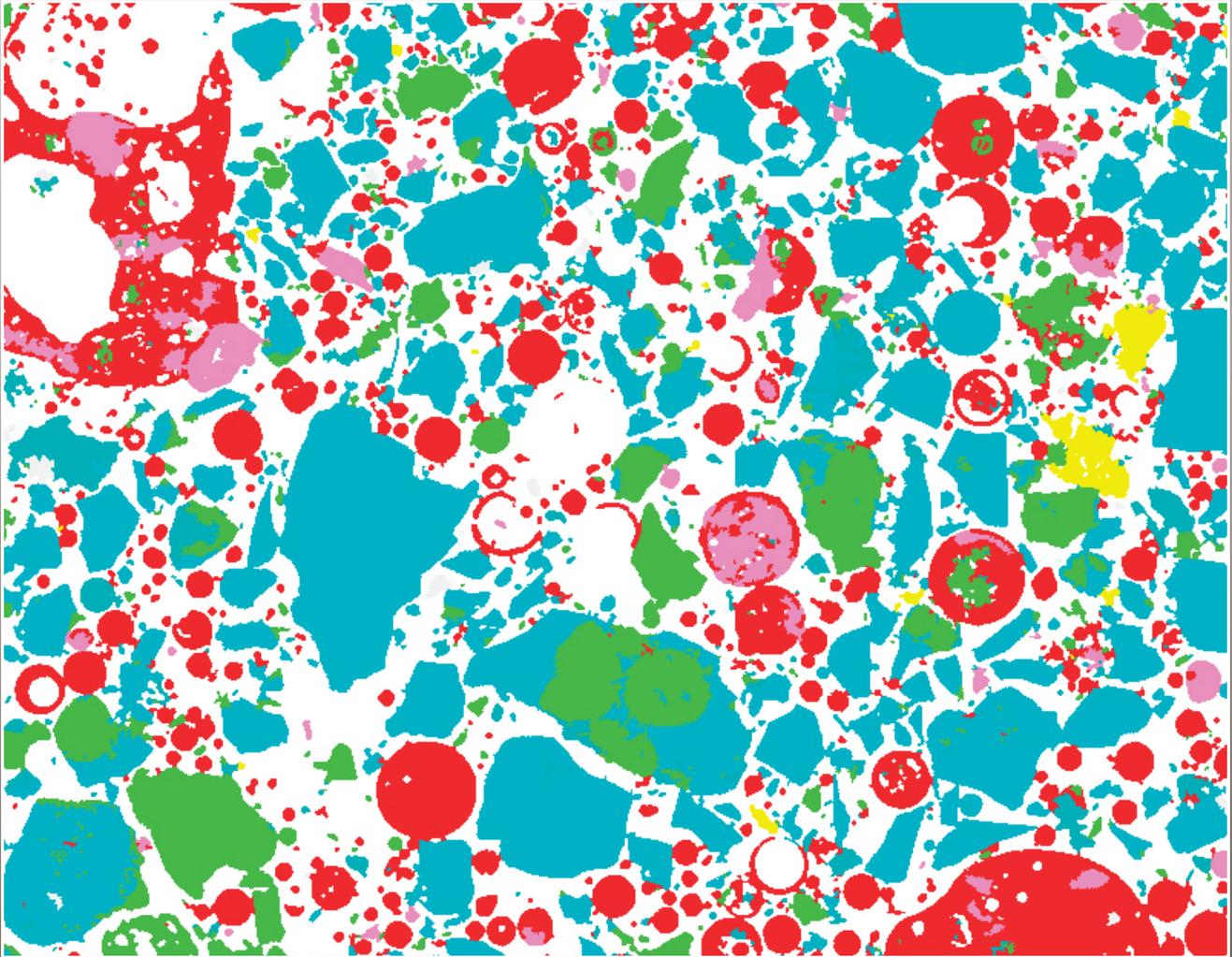
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*Crushed and ground cement clinker (blue and green), mixed with fly ash waste (red and purple).*

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