

Biographies of the Speakers at SCS2022

John F. Bratton is a Senior Science Officer and Geologist at LimnoTech. He received his Ph.D. in Geology from UC Berkeley in 1997. He has served as Acting Director of NOAA's Great Lakes Environmental Research Laboratory and research vessel fleet, and as a research group leader with the Coastal and Marine Geology Program of the U.S. Geological Survey in Woods Hole, Massachusetts. He also holds an adjunct faculty appointment at Wayne State University. Dr. Bratton has broad experience in earth and environmental sciences, including successful leadership of projects involving large ecosystem restoration with a nutrient reduction focus, remedial investigation/remedial design for contaminated sediment sites, data management and numerical modeling, and litigation support. He is the author or co-author of over 100 research papers.

Br. Guy Consolmagno is Director of the Vatican Observatory and President of the Vatican Observatory Foundation. A native of Detroit, Michigan, he earned undergraduate and masters' degrees from MIT, and a Ph.D. in Planetary Science from the University of Arizona. He was researcher at Harvard and MIT, served in the US Peace Corps (Kenya), and taught university physics, before entering the Jesuits in 1989. At the Vatican Observatory since 1993, his research explores connections between meteorites, asteroids, and the evolution of small solar system bodies, measuring meteorite physical properties in Castel Gandolfo and observing distant asteroids with the Vatican's telescope in Arizona. Along with more than 200 scientific publications, he is the author of six popular books including *Turn Left at Orion* (with Dan Davis), and *Would You Baptize an Extraterrestrial?* (with Paul Mueller).

Kerry Emanuel is Cecil & Ida Green Professor of Atmospheric Science at MIT, where he is also Co-Director of the Lorenz Center, an institute devoted to fundamental inquiry on climate. He received his Ph.D. in Meteorology from MIT in 1978. Professor Emanuel is the author or co-author of over 200 peer-reviewed scientific papers, and three books: *Divine Wind: The History and Science of Hurricanes* (Oxford University Press), *Atmospheric Convection* (Oxford Univ. Press), and *What We Know about Climate Change* (MIT Press). He was elected a member of the U.S. National Academy of Sciences in 2007, a member of the American Philosophical Society in 2019, and a Foreign Member of the Royal Society in 2020. Not a member of SCS, Prof. Emanuel is a Guest Lecturer at SCS2022.

Marie I. George is Professor of Philosophy at St. John's University, NY. She received her Ph.D. in philosophy from Laval University. She also holds Masters degrees in biology and in pastoral theology. An Aristotelian-Thomist, her interests lie primarily in the areas of natural philosophy and philosophy of science. She has received several awards from the John Templeton Foundation for her work in science and religion, and in 2007 was co-recipient of a grant from the Center for Theology and the Natural Sciences (CTNS) for an interdisciplinary project entitled "The Evolution of Sympathy and Morality." Professor George has authored over 70 peer-reviewed articles and two books: *Christianity and Extraterrestrials? A Catholic Perspective* (2005) and *Stewardship of Creation* (2009). She is editor of the Long Island Botanical Society newsletter. Prof. George is a Scholar Associate of SCS.

Paul Giesting is Assistant Professor of Mathematics and Sciences at Wyoming Catholic College. He received his Ph.D. in Geology from the University of Notre Dame in 2006. As a graduate student he studied mineral physics and the crystal structures of uranium compounds. He has worked as an environmental regulator and consultant, done research on carbon sequestration and the geology of Mars, and has taught physical science, first year geology, mineralogy, petrology, planetary science, and ore deposit geology. With his cohost William Schmitt, he runs the podcast *That's So Second Millennium*, which discusses issues at the boundary between faith and the sciences.

Robert Horton is a Distinguished Professor in the Agronomy Department at Iowa State University. He received his Ph.D. in Soil Physics in 1981 from New Mexico State University. His research program addresses soil physical processes and properties, with a focus on coupled heat and mass transfer in soil, and has had implications for climatology, water quality, agricultural production, ecosystem products and services, and environmental investigations. He received the Soil Science Research Award (2001) and the Don and Betty Kirkham Soil Physics Award (2002) of the Soil Science Society of America. He is author or co-author of over 400 research papers and co-author of the textbook book *Soil Physics* published by Wiley..

Lindsie McCabe is a Research Entomologist at the USDA-ARS Pollinating Insect Research Unit. She received her Ph.D. in Ecology from Northern Arizona University. She studies the biology, ecology, and behavior of bees and their community interactions, as well as the biodiversity and biogeography of bee species. Her research focuses specifically on how bee species interact with other species (both with other bees and plant interactions), how bee species can be affected by abiotic factors (such as warming temperatures), and what mechanisms drive these behaviors.

David Medvigy is Associate Professor in the Department of Biological Sciences at the University of Notre Dame. He received his Ph.D. in Applied Physics from Harvard University in 2006. He studies the structure, composition, and functioning of terrestrial ecosystems, especially the relationships between small-scale spatiotemporal ecosystem variability and large-scale ecosystem properties. He has developed state-of-the-science numerical models that are capable of predicting ecosystem responses to environmental change.

Timothy Raub earned his Ph.D. in Geology and Geophysics from Yale in 2008, held a postdoctoral position at Caltech, and was Lecturer in the School of Earth and Environmental Sciences at the University of St Andrews in Scotland, where he served as Director of Research on the university's Research Committee, and in other administrative capacities. He has over a hundred research publications. He currently directs the Geoheritage Research Institute, a research organization devoted to creating economic value from narrative and investigational geoscience in the US and internationally.

Sr. Damien Marie Savino is a Franciscan Sister of the Eucharist and Dean of Science and Sustainability and Associate Professor of Engineering at Aquinas College in Grand Rapids, Michigan. She received a B.S degree in Biogeography from McGill University, an M.S. in Soil and Plant Science from the University of Connecticut, an M.A. in Theology from The Catholic University of America, and a Ph.D. in Civil (Environmental) Engineering from The Catholic

University of America. As Dean she supervises the Biology, Chemistry, Physics, Geography and Environmental Studies Departments and the Center for Sustainability at Aquinas College. Her research interests include theology and science, ecology and theology, ecological restoration and resilience theory. She speaks frequently and writes extensively on science-faith questions.

Andrea Schreier is Director of the Genomic Variation Laboratory in the Department of Animal Science at UC Davis. She received her Ph.D. in Conservation Ecology from UC Davis in 2012. In her research, she applies genetic and genomic tools to improve management and conservation of fish and wildlife species, understand the role of polyploidy in vertebrate evolution, and improve aquaculture sustainability to protect fisheries resources. She has been working with sturgeon species for over a decade and is particularly interested in their conservation, ecology, and evolution.

Joshua Shutter is a Postdoctoral Associate at the University of Minnesota. He received his Ph.D. in Chemical Physics from Harvard University in 2021. His research focuses on comparing satellite-derived isoprene measurements obtained from the Cross-track Infrared Sounder (CrIS) with a global chemical transport model (GEOS-Chem) in order to better track isoprene's emission and subsequent oxidation in the atmosphere.