## *Todd S. Bridges, Ph.D.*

**Senior Research Scientist (ST) for Environmental Science**
U.S. Army; U.S. Army Corps of Engineers;
U.S. Army Engineer Research and Development Center (ERDC)
Vicksburg, MS

Dr. Bridges is the US Army and US Army Corps of Engineers' Senior Research Scientist for Environmental Science. He became a Senior Professional (ST) within the US Army in 2006, where his responsibilities include leading innovation, research and development, and environmental initiatives. Dr. Bridges' responsibilities support goals related to resilience, sustainability, and environmental management. His primary areas of activity concern: 1) the science and engineering of sustainable infrastructure development; 2) risk and decision analysis methods applied to infrastructure and environmental systems; 3) management of sediment and environmental contaminants; and 4) natural systems engineering.

Dr. Bridges is the National Lead for the USACE Engineering with Nature® (EWN®) initiative, which includes a network of research, field-scale applications, and communication activities to promote sustainable, resilient infrastructure systems. He led a large international collaboration over five years that developed and published (in 2021) technical guidelines on the use of Natural and Nature-Based Features (NNBF) for coastal and fluvial flood risk management. Dr. Bridges is the technical lead and Program Manager for the Dredging Operations Environmental Research (DOER) program, one of the Corps' largest and longest-running R&D programs. In 2020, Dr. Bridges led a large multi-disciplinary team across ERDC to develop and apply analysis and modeling tools to support national responses to COVID-19. His work has been supported by programs within the USACE; the U.S. Army, Navy, and Department of Defense; other federal agencies; and the private sector. He has chaired international working groups and guidance development for the United Nations' International Maritime Organization and the World Association for Waterborne Transport Infrastructure (PIANC), where he currently serves as Chairman of PIANC's Environmental Commission.

Dr. Bridges and his work have been recognized through receipt of several national, Army, and USACE awards. In 2021, Dr. Bridges was recognized by President Biden in receiving the Distinguished Presidential Rank Award as a Senior Professional within the US government. Engineering News-Record selected Dr. Bridges as one of its 25 Newsmakers across the engineering and construction industry in 2021. The Secretary of the Army, Ryan McCarthy, awarded Dr. Bridges with the Army's Distinguished Civilian Service Medal in 2020. Other awards include the Army Engineer Association's Bronze Order of the de Fleury Medal in 2014, the Outstanding Practitioner Award from the Society for Risk Analysis in 2012, the Government Service Award from the Society of Environmental Toxicology and Chemistry in 2009, the Army's Meritorious Civilian Service Medals in 2008 and 2021, among other awards. The EWN® Initiative was awarded the 2013 USACE Environmental Award in Natural Resource Conservation, the 2014 USACE Sustainability Award for Green Innovation, and the 2019 Outstanding Achievement Award from the Renewal Natural Resources Foundation.

Dr. Bridges has served on the editorial boards for the journals of *Integrated Environmental Assessment and Management, Environmental Toxicology and Chemistry,* and *Dredging Engineering*. He is a member of the Society for Risk Analysis, the Society of Environmental Toxicology and Chemistry, PIANC, and is a member of the Board of Directors for the Western Dredging Association. Dr. Bridges also serves as an Adjunct Assistant Professor with the College of Engineering at the University of Georgia.

Over the last 30 years, Dr. Bridges has published more than 60 journal articles and several books, book chapters, and numerous technical reports. He received his B.A. (1985) and M.A. (1988) in Biology/Zoology from California State University, Fresno and his Ph.D. (1992) in Biological Oceanography at North Carolina State University.