



PRESIDENTIAL DREAM COURSE
The UNIVERSITY of OKLAHOMA

Engineering the Nature of Change

Featuring: Dr. Todd Bridges

6:30 PM February 7, 2023
David L. Boren Auditorium
National Weather Center

Engineering with
Nature: Innovating for a
More Resilient and
Sustainable Future

Public attendance encouraged. Free parking available.

The development of sustainable and resilient systems that support economies, communities, and ecosystems presents significant challenges and opportunities for institutions and practitioners. Up-scaled solutions are needed to address the climate crisis and create resilience. Equitable distribution of infrastructure investment is needed to sustain communities. The processes, services, and value to be found in nature can support these outcomes. Practical approaches are needed to integrate nature and engineering systems in a manner that achieves more socially acceptable, economically viable, and environmentally sustainable systems. The Engineering With Nature® Program is pursuing a collaborative approach to engineering that integrates science and engineering to produce operational efficiencies, and make effective use of natural processes to broaden the range of services and value provided by engineered systems and infrastructure. This approach is being applied to develop navigation infrastructure, flood risk management, water resilience, among other purposes. Case example projects in the United States and around the world will be used to illustrate the use of nature-based approaches and highlight opportunities to advance collective practice.

Engineering the Nature of Change is an in-depth exploration of Ecological Engineering, Engineering With Nature, Nature-Based Solutions, and Natural Infrastructure with world-renowned experts from academia, industry, government, and other sectors.

<https://www.ou.edu/dreamcourse/current-courses/engineering-the-nature-of-change>

Dr. Todd Bridges

Dr. Todd Bridges is the U.S. Army's Senior Research Scientist for Environmental Science. His research and leadership in innovation for the U.S. Army and U.S. Army Corps of Engineers (USACE) support national resilience and sustainability goals. Todd is the National Lead for the USACE Engineering with Nature® Program which includes a broad range of research, field-scale applications, collaborations, and communication activities to advance the delivery of nature-based solutions.



 **CREW**
Center for Restoration of
Ecosystems and Watersheds
University of Oklahoma


GALLOGLY COLLEGE OF ENGINEERING
SCHOOL OF CIVIL ENGINEERING
AND ENVIRONMENTAL SCIENCE
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For more information or accommodations, please contact Dayton M'Kenzie Dorman (dayton.m.dorman-1@ou.edu)