

iFAST: The International Forum on Advanced Environmental Sciences and Technology

A series of distinguished seminars by eminent scientists

8 a.m. CDT, 9 a.m. EDT, 1 p.m. GMT, 9 p.m. China
Wednesday, Sept. 3, 2025



BRUCE HUNGATE
NORTHERN ARIZONA
UNIVERSITY
[https://ecoss.nau.edu/team/
bruce-hungate/](https://ecoss.nau.edu/team/bruce-hungate/)

Bruce Hungate is a scientist and storyteller exploring the interplay between the microscopic and the planetary and between data and narrative. A Regents' Professor at Northern Arizona University, director of the Center for Ecosystem Science and Society, and McAllister Chair in Community, Culture, and the Environment, he has spent decades uncovering how Earth's smallest organisms shape the largest systems. Now, he's bringing that same curiosity to connecting scientific insight with human story. From his leadership as chair of the U.S. Department of Energy's Biological and Environmental Research Advisory Committee to his keynote talks weaving climate science with personal narrative, Hungate creates spaces where ideas collide, surprising connections emerge, and complex science becomes vivid and memorable. His work blends the precision of the lab with the reach of story, inviting audiences to see our place in the living world in new ways.

From Microbes to Meaning: Science, Story, and the Choices Before Us

Abstract Isotopes of oxygen can measure growth in wild microbes, and qSIP can tell not just who is growing but how fast, revealing a measurable link between biogeochemistry and biodiversity, and opening a way to connect basic questions in quantitative microbial ecology with the global processes they help shape. In this talk, I'll share how microorganisms regulate planetary processes, and how tools like quantitative stable isotope probing connect individual microbial taxa to global climate feedbacks. I'll also bring you inside the conversations at the U.S. Department of Energy's Biological and Environmental Research Advisory Committee, which I chair, a setting where the future of such research is debated within the limits of political systems, human psychology, and intersecting visions of what's possible. I'll explore how science and story together can help us think ahead, navigate constraints, and expand the range of futures we can still reach.



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Zoom webinar ID: 934 8142 2012 (zoom.us/j/93481422012)

More details and previous iFAST seminar videos are available on www.ou.edu/ieg/seminars.

Organizing Committee Chair: Jizhong Zhou (University of Oklahoma, USA; www.ou.edu/ieg)

Xueduan Liu, Huaqun Yin (Central South University, China)

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