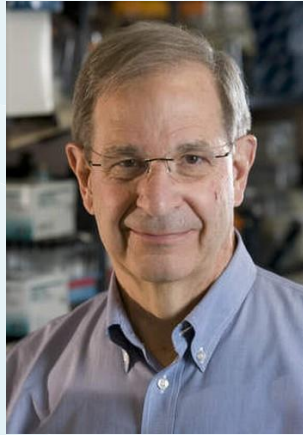


# iFAST: The International Forum on Advanced Environmental Sciences and Technology

*A series of distinguished seminars by eminent scientists*

**Wednesday, September 23, 2020 9:00 am EDT**

**Sep. 23 1:00 pm GMT; 8:00 am CDT; 9:00 pm Beijing**



**James Tiedje**

**Michigan State University**

[https://www.canr.msu.edu/people/james\\_m\\_tiedje](https://www.canr.msu.edu/people/james_m_tiedje)

Professor James Tiedje is University Distinguished Professor Emeritus of Microbiology and Molecular Genetics and of Plant, Soil and Microbial Sciences at Michigan State University, and was director of the Center for Microbial Ecology for 30 years. His contributions have been on microbial ecology, physiology and diversity, especially regarding the nitrogen cycle, biodegradation of pollutants and on the use of genomics and metagenomics to understand speciation, community structure and functions. He served as editor-in-chief of *Applied and Environmental Microbiology* and Editor of *Microbial and Molecular Biology Reviews* and *mBio*. He served on the Board on Life Sciences of the National Research Council, EPA's Science Advisory Panel and on DOE's Biological and Environmental Research Advisory Committee. He was president of the American Society for Microbiology and the International Society of Microbial Ecology. He has received numerous awards, including UNESCO's Carlos J. Finlay Prize in microbiology and ASM's Applied and Environmental Research Award. He is a member of the U.S. National Academy of Sciences, a Fellow of the AAAS, the American Academy of Microbiology, the Ecological Society of America, and the Soil Science Society of America.

## **Assessing the past and future of microbial ecology:**

### **The foundation of the biosphere**

The importance microbial ecology for environmental recycling processes was recognized in the 19th century and knowledge slowly expanded until the 1970s when new analytical, molecular and computation methods accelerated, revealing the vastness of the microbial world and its role in virtually all life and environmental processes. It has been a methods-enabled field and will be for some time. I will review the changes and catalysts over time and project what that might tell us about the future. That direction, however, will benefit from some guiding theory. I will tie these components together with some examples of success and some needs for the future, all important for sustaining a livable biosphere.



**INSTITUTE FOR ENVIRONMENTAL GENOMICS**  
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Xueduan Liu (Central South University, China)**