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### Systems Microbiology: From Genomes to Ecosystems

Jizhong Zhou

University of Oklahoma, [jzhou@ou.edu](mailto:jzhou@ou.edu)

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**MONTCLAIR STATE**  
UNIVERSITY

The Doctoral Program in Environmental Science & Management  
and MSU Sustainability Seminar Series Present:

## Systems Microbiology: From Genomes to Ecosystems

Prof. Jizhong (Joe) Zhou  
University of Oklahoma

WHEN: September 28<sup>th</sup> 2020, 4:00 pm WHERE: CELS 120 lecture hall



Dr. Jizhong Zhou is a George Lynn Cross Research Professor and Presidential Professor in the Department of Microbiology and Plant Biology, School of Civil Engineering and Environmental Sciences, and Director for the Institute for Environmental Genomics, University of Oklahoma, Norman, OK. He has authored numerous publications, with total citations of > 41,000 and H-index of 107. He was listed as 2018, 2019 Global Highly Cited Researcher in Cross Field, 2019 World's most cited researcher (99% percentile) across all science & engineering fields, and most highly cited researcher (H-index > 100) according to their Google Scholar Citations. He received Presidential Early Career Award for Scientists and Engineers in 2001, R&D 100 Award in 2009 as one of 100 most innovative scientific and technological breakthroughs, Ernest Orlando Lawrence Award in 2014 – the highest scientific recognition in the U.S. Department of Energy, and the 2019 ASM Award for Environmental Research. He is a senior Editor for *ISME J*, *mBio*, and a former Editor for *Applied and Environmental Microbiology*. He is a Fellow of the American Academy of Microbiology, Ecological Society of America, and the American Association for the Advancement of Science.

Twenty-first century microbiology faces several grand challenges, e.g., linking structure to functions, mechanisms controlling extremely high diversity, information scaling from genomes to ecosystems, modeling simulation and predictions. With the recent advances of omics technologies, microbiologists have begun to tackle some of these challenges. In this talk, I will report the most recent progresses in these areas at the Institute for Environmental Genomics, with respect to genomic technologies, global microbial diversity and biogeography of wastewater treatment plants, climate warming, community assembly and network tool development, and ecosystem modeling.

For more information contact Dr. Michelle Zhu at [zhumi@montclair.edu](mailto:zhumi@montclair.edu)