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AG HALL 207





BAE SEMINAR SERIES

MICROBES IN ENGINEERED AND NATURAL ECOSYSTEMS: DIVERSITY AND FUNCTIONALITY



DR. RAMESH GOEL

ABSTRACT

Microbiology is the scientific discipline concerned with the study of microorganisms, encompassing investigations into their biochemistry, physiology, cell biology, ecology, and evolutionary dynamics. Microorganisms play a central role in numerous metabolic processes that are critical to both engineered and natural ecosystems. The performance of these ecosystems is not determined solely by the characteristics of individual microbial strains or taxa, but also by emergent properties that arise from complex interactions within microbial communities. The presentation will include findings from both engineered and natural ecosystems to illustrate the complex and emergent nature of microbial communities.

SPEAKER BIO

Dr. Ramesh Goel is an environmental engineering professor and holds the John Hendrix Chair in Engineering under the OSU School of Civil and Environmental Engineering. He researches the interface of process engineering, ecosystem sustainability, and environmental microbiology, explicitly focusing on nutrient management in municipal wastewater treatment, innovations in activated sludge processes, harmful algal blooms, virology, and computer bioinformatics. The United States National Science Foundation, USEPA, the US Department of Defense, the US Department of the Interior, several local agencies and water quality boards fund his research projects. Dr. Goel has published over 100 papers in Journals like Nature Communications, Environmental Science and Technology, Water Research, Bioresource Technology, Environmental Pollution, Chemosphere, Science of the Total Environment, Scientific Reports, and more. He is the associate editor of the Environmental Engineering Science Journal, Chemosphere, and Journal of Hazardous Materials Letters. He also serves as an editorial board member of several journals of international repute.