

EXPLORING FRONTIERS: *We invite the University community to a series of lectures that will explore the frontiers, promising directions, and challenges in the current Science. These seminars, which are part of a graduate course Lim5105: Frontiers in Environmental Science, are oriented towards a broad audience and will be followed by discussions. They will be taking place at 1 pm on most Thursdays of this semester.*

MWAH 195, Thursday, February 5, @1pm

Perspectives: Quantitative Approaches to Microbial Ecosystems

Sergei Katsev

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In the first talk of the series, I will attempt an overview of the directions in which progress has been achieved in quantifying the dynamics of microbial ecosystems and their effects on the chemistry of their environments. The 'omics' revolution in molecular genetic methods, in particular, has created fresh perspectives for modeling approaches that are based on low-level physical and chemical principles and can be potentially used to predict the flow of energy, genes, and substances through the environment. I will also present a "physicist's view" of these complex, thermodynamically open, systems.