MIT Chemical Engineering Department Fall 2020 Seminar Series

http://cheme.mit.edu/seminar-series/

Metabolic Complexity. Is there Music Behind it?



Doraiswami Ramkrishna
Harry Creighton Peffer Distinguished
Professor
School of Chemical Engineering
Purdue University

Friday, September 4, 2020 3:00pm

https://mit.zoom.us/j/95895239058

Abstract: The complexity of metabolic networks would appear to fit in more appropriately with a cacophonic scenario than anything remotely musical. However, this talk will attempt to show that a mathematical view can be had of this complex process in which the phenomenon of metabolic regulation can be likened to the conductor of a symphonic orchestra summoning combinations of instruments representing metabolic reactions towards superlative music. It will be the objective of this seminar to let this analogy lead the discussion of a cybernetic theory of cellular metabolism which interprets the diversity of gene expression as a targeted effort to maximize the organism's survival.