John A. Lynch Lecture Series

THE GEOMETRY OF GENOME SPACE AND ITS APPLICATIONS

4:30 pm Friday, October 28
127 Hayes-Healy Center

Reception preceding event at
4 pm in 101A Crowley Hall

Stephen Yau, Ph.D.
Professor, Department of Mathematical Sciences,
Tsinghua University and Beijing Institute of
Mathematical Sciences and Applications

Genome sequences can be canonically embedded in a high-dimensional Euclidean space by means of their natural vectors describing the nucleotides distribution within the genome sequence. Genome spaces for viruses, bacteria, and plants are constructed as a subspace in a high-dimensional Euclidean space. Our convex hull principle for molecular biology can be viewed as a fundamental law of biology.

Stephen Yau, professor at Tsinghua University and a distinguished professor emeritus at the University of Illinois at Chicago, earned his doctorate from State University of New York at Stony Brook, and was a member of Princeton University's Institute for Advanced Study as well as an assistant professor at Harvard University. He founded the Journal of Algebraic Geometry in 1991. He received the ICCM Chern Prize in 2019. He is an American Mathematical Society Fellow and Institute of Electrical and Electronics Engineers Fellow and received Guggenheim and Sloan Research Fellowships.

UNIVERSITY OF NOTRE DAME | SCIENCE