

WILLIAM BENTER DISTINGUISHED LECTURE SERIES

A Series of Distinguished Lectures in Pure and Applied Mathematics

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City University of Hong Kong

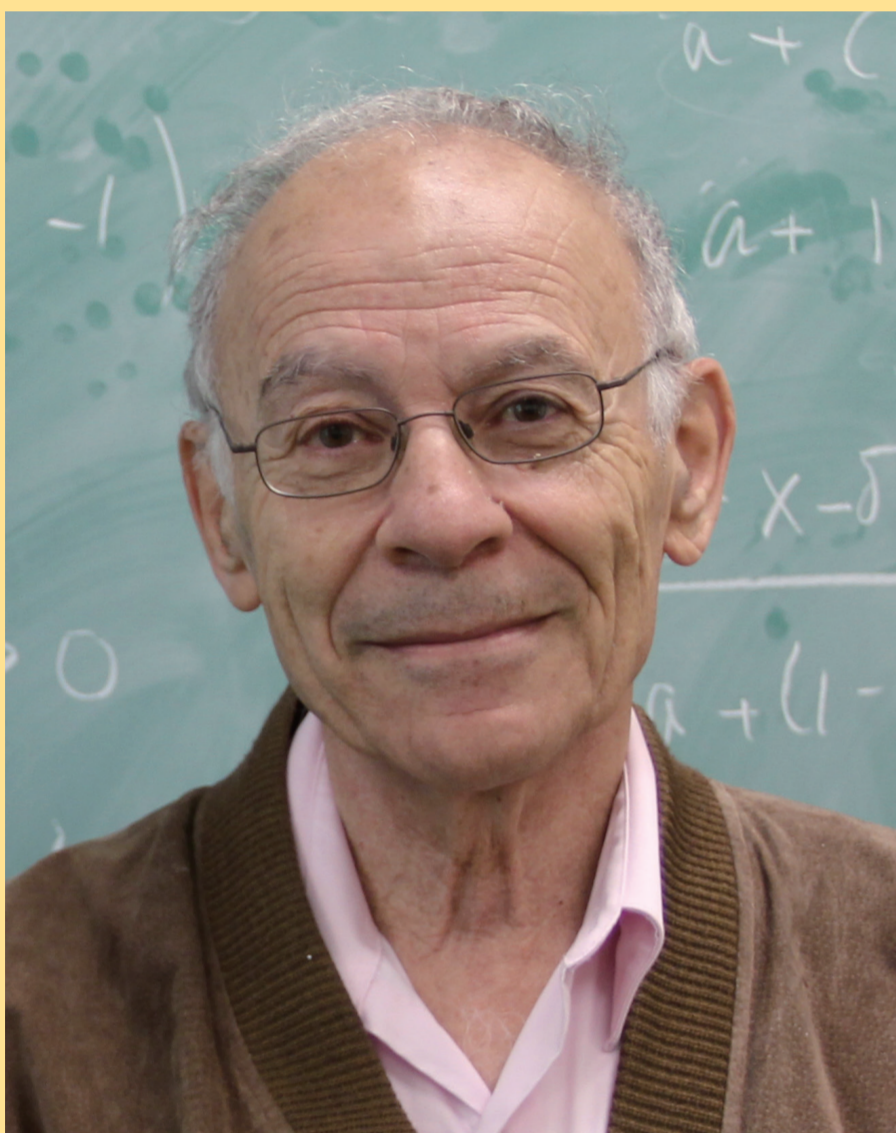
What is Mathematical Biology and how useful is it?

by

Avner Friedman

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Member of the National Academy of Sciences (USA)



Abstract

I shall define what is meant by “mathematical biology,” and then proceed to illustrate the degree of its usefulness by examples taken from wound healing, reconstructive surgery, tuberculosis as a disease with prognosis which depends on the age of the patient, and viral treatment of glioblastoma. All these examples are modeled by systems of differential equations, and the challenges are:

- 1) Researching the biological literature in order to set up a mathematical model;
- 2) Determining the rate parameters;
- 3) Simulating the model.

The final test is to show good fit with experimental results, after which the model can be used to suggest new hypothesis.

Date : Wednesday, 5 Dec, 2012

Time : 16:30

Venue : CSE Conference Room B6605,
Blue Zone, 6/F, Lift No. 3,
Academic 1,
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