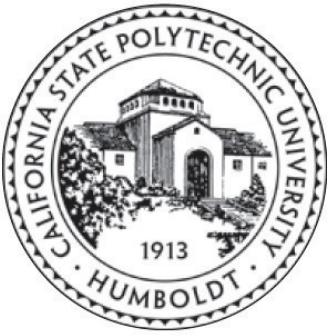




DEPARTMENT OF MATHEMATICS
Fall 2025 MATH Colloquium Series

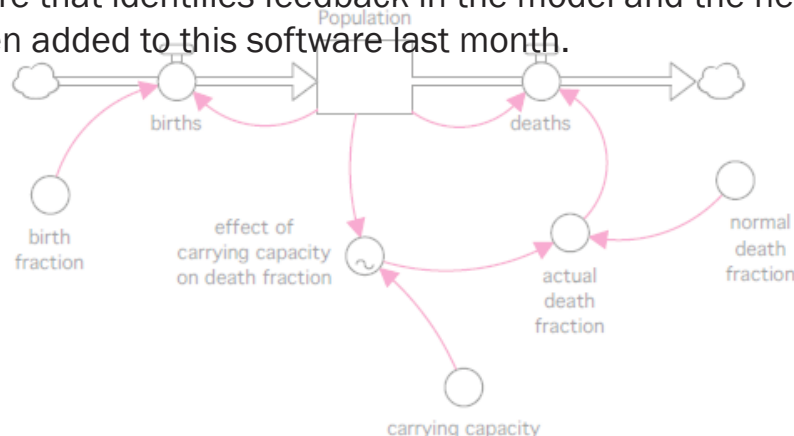
System Dynamics: An Analytical Computer Modeling Method to Enhance Understanding of Complex Systems

Dr. Diana Fisher

**Vice President, Precollege Education for the
Systems Dynamics Society**

System Dynamics (SD) is computer modeling method for analyzing complex, non-linear, dynamic systemic problems. The value of this approach is (1) the visual nature of the design of the structure of the systemic problem created by the modeler, (2) the relative ease of defining each component (mathematically), and (3) analyzing the feedback in the SD model structure to highlight leverage points useful in designing potential policies to mitigate undesirable systemic behavior.

This presentation will introduce the icons used in the SD modeling process, go through a set of slides that shows a simple carrying capacity to non-renewable resource to renewable resource model for a deer/reindeer population. There will be mention of the Stella SD modeling software feature that identifies feedback in the model and the new AI virtual assistants that have been added to this software last month.



THURSDAY
Oct. 30, 2025

4:00 PM
BSS302

FOR MORE INFO GO TO <https://math.humboldt.edu/get-involved/mathematics-colloquium>

**We cordially invite you to the PRE-COLLOQUIUM TEA in BSS#312
at 3:30 PM**