SIMIODE Spring 2024 Webinar Series

17 April 2024, 3:30 – 5:00 PM Eastern USA Time

Title: Using Insightmaker to Enhance Understanding in a First ODE Course

Slides

Video

Speaker: Erich McAlister, Fort Lewis College, Durango CO USA

Abstract: In this webinar we will discuss the use of the system dynamics software Insightmaker (https://insightmaker.com/) in a first course in Ordinary Differential Equations (with a modeling emphasis). We will begin by exploring the equivalence of systems of ODE and stock-flow models through examples.

Through this exploration we will note ways in which stock-flow modeling can enhance the understanding of models, as well as establish some graphical ODE idioms (what this means will be explained). Time permitting, we will also discuss parsing Insightmaker files into Python (for more advanced analysis) and the underlying abstract mathematics of stock-flow diagrams (category theory).

Participants are encouraged to create FREE Insightmaker accounts in advance so that they can follow along and create their own insights and think about what modeling scenarios they might use them for.

You may also view slides and watch a presentation, “Teaching ODEs with Insight Maker,” by the presenter at SIMIODE EXPO 2024 conference at https://qubeshub.org/community/groups/simiode/expo/2024 .