

1116-T1-2027      **Gabriella A Pinter\*** (gapinter@uwm.edu) and **Istvan G Lauko**. *Computational labs based on research papers from science journals in a mathematical modeling course.*

In this talk we present a series of computational labs that are used as a component of a mathematical modeling course sequence for science and mathematics majors. On one hand, these labs teach elementary programming skills so students could simulate and explore models extensively, on the other hand they illustrate practical methods of model building, parameter estimation and model selection. The majority of the labs is based on research papers from science journals, and provides a powerful way to present mathematical methods in a biological context. The use of current research literature motivates students to read and explore more, while the computational and mathematical techniques learned give them confidence to ask new questions and to investigate them. As the course progresses the labs become increasingly open-ended, and the students are asked to analyze and simulate models independently as well as to develop them further. Many of these papers could serve as a good starting point for individual research projects. (Received September 21, 2015)