

1125-Q1-3008 **Raina S Robeva*** (robeva@sbcc.edu), Department of Mathematical Sciences, Sweet Briar College, 134 Chapel Drive, Sweet Briar, VA 24595. *An Introduction to Mathematical Biology through Discrete Mathematics and Abstract Algebra.*

The entryway to mathematical biology through difference and differential equations has one significant disadvantage – many biology students are afraid of Calculus. Graphs and knots, on the other hand, feel natural to them – they remind them of the abundant cartoons populating their biology textbooks. The talk will highlight some relevant methods from discrete mathematics and abstract algebra appropriate for use in introductory courses in mathematical modeling and mathematical biology. As discrete and algebraic methods are being used successfully nowadays to address a wide range of research questions in biology including signaling networks and gene regulation, genome assembly, DNA, RNA and protein folding, drug resistance and control, ecological networks and food webs, this approach can also easily deliver topics and ideas for student research. We argue that using discrete and algebraic methods presents a viable and even preferable alternative to the Calculus-based approach. (Received September 20, 2016)