1116-T1-2715 **Raina S Robeva*** (rainarobeva@rmc.edu), Randolph-Macon College, Copley Science Center 231, Ashland, VA 23005-5505. *Embracing the Algebraic Approach to Mathematical Biology.*

Over the past 15 years, many advances in biology have utilized algebraic and discrete mathematical approaches. Relatively little progress has been made, however, in introducing those approaches to the mainstream undergraduate mathematical biology curriculum, even though for many of them the level of mathematical sophistication and the nature of the material are entirely appropriate. Thus, while the more traditional mathematical biology topics including difference equations, ODEs, and continuous dynamical systems have already successfully worked their way into classes and standard curriculum, discrete and algebraic techniques have remained relatively invisible. The talk will highlight some ideas and new educational resources for successfully bridging the gap between what is now common practice in research and the use of algebraic methods for biology at the undergraduate level. We further argue that adopting the algebraic approach offers distinct pedagogical advantages, since fundamental concepts including network interactions, long-term behavior, steady states, attractors, and multi-stability can be explained and analyzed without the prerequisite of calculus. (Received September 22, 2015)