The long-term goal of molecular systems biology is to understand how the physiology of organisms arises through the dynamic interaction of the molecular constituents of life. Understanding the molecular networks formed in this way is an essential step toward solving many central problems related to human health, sustainable energy, a sustainable food supply, and a healthy environment. Mathematical and statistical models of the networks involved are an essential enabling technology for reaching this goal. This talk will provide some examples of the role mathematics plays in systems biology and will discuss some recent applications of algebraic geometry to this field. No background in mathematical biology is required, and the talk will be accessible to undergraduates and students and faculty from the life sciences.

There will be a reception for Dr. Laubenbacher at 3:15 in Allen 410.

Contact Len Miller, miller@math.msstate.edu or (662) 325-7138, for additional information.