Compositions provide a wonderful backdrop for a number of well-known families of numbers, especially the Fibonacci numbers. In this talk, we will gently introduce the idea of a composition of an integer (which is just an ordered sum of integers), and then discuss how various families of compositions give rise to the Fibonacci numbers, Jacobsthal numbers, and a host of generalizations. The talk will be completely self-contained and understandable by all, especially undergraduate students interested in mathematics. Conjectures and opportunities for possible undergraduate research will be discussed at the end of the talk.

James Sellers received his Ph.D. from Penn State University in 1992. After receiving his PhD, he taught at Cedarville University in Ohio for nine years before returning to his alma mater in 2001 to serve as a faculty member and the director of the undergraduate program in mathematics. In 2008, James served as a Visiting Fellow of the Isaac Newton Institute in Cambridge, and in 2012 he was privileged to be a Fulbright scholar, teaching and completing research at the Johannes Kepler University and the Research Institute for Symbolic Computation in Linz, Austria. Currently, James has over 100 papers listed in Mathematical Reviews, and he has won numerous awards from his department at Penn State and his section of the Mathematical Association of America for both his teaching and his service to the mathematical community. In February 2018, James turned his attention to a new and very exciting opportunity serving as the Secretary of the MAA!