1077-05-2176　　　　　**Melinda D. Lanius*** (`mlanius@wellesley.edu`) and **Andre Kuney** (`akuney@oberlin.edu`).
Universal Cycles Under Equivalence Relations.

Consider all possible length-k words taken from a size-n alphabet. It is classical that we can create a string such that the set of all length-k consecutive substrings of this string consists of each of our words exactly once; this string is called a universal cycle. We examine the question: can we create a universal cycle of length-k words under certain equivalence relations? In this talk, we will introduce a new way of constructing the De Bruijn-like graph that is used to prove the existence of universal cycles. (Received September 21, 2011)