1145-D1-2896   **Karl Kattchee*** (`kkattchee@uwlax.edu`). *Grid-Based Closed Paths from de Bruijn Sequences.* Preliminary report.

In recent years, I have experimented with different ways of drawing closed paths on $n \times n$ square grids. In 2016, Craig Kaplan (University of Waterloo) and I worked out convenient notation to describe what we call NLT paths. The notation is a $2 \times n$ array, where each row is a so-called "alternating" permutation of the set $\{0, 1, 2, \cdots, n-1\}$. In principle, any permutations can be used to construct the array. In my talk, I investigate the mathematics and art of the closed paths which arise when the permutations are derived from de Bruijn sequences, which are binary strings having certain special properties. (Received September 25, 2018)