

1096-05-2317 **Joshua N. Cooper***, 1523 Greene St., LeConte College, Columbia, SC 29210. *The Discrepancy of de Bruijn Sequences*.

We discuss aspects of the “discrepancy” of de Bruijn sequences, i.e., initial character sums over such sequences that measure the uniformity of distribution of its alphabet. The discrepancy of the lexicographically-least de Bruijn sequence is a natural question that has been studied in some detail, and it turns out to involve an unexpected family of Fibonacci-like sequences. Also, because of a surprising application of de Bruijn sequences to functional magnetic resonance imaging (fMRI), sequences which have specific frequency power spectra – detectable via character sums – are of particular interest. We present these topics and several related questions. (Received September 17, 2013)