Meraiah Martinez* (mmartinez26@huskers.unl.edu) and Christine Kelley (ckelley2@unl.edu). On quasi-dyadic LDPC codes and generalizations.

Reproducible codes are codes that can be represented using a limited number of rows in the parity-check matrix representation. This property is advantageous for applications such as code-based cryptography, where the representation affects the key size. One such family that has recently been proposed are quasi-dyadic LDPC codes. Understanding the properties of these codes and their performance under iterative decoding remains open. In this talk, we present some initial results on properties of codes based on (quasi)-dyadic (and more generally, n-adic) matrices. (Received August 09, 2021)