

PERSI DIACONIS, Stanford

Adding Numbers and Shuffling Cards

The usual way of adding two large numbers produces "carries" along the way. It is natural to ask: How many carries are typical and how are they distributed? This simple question has some nice mathematics hidden inside. The carries form a Markov chain with an "amazing" transition matrix (Holte). This same matrix comes up in the usual way of shuffling cards. I will review this subject ("The Seven Shuffles Theorem") and the connection. All of this is joint work with Jason Fulman.

