P. Diaconis. On Adding a List of Numbers.

When a column of digits is added in the usual way, "carries" accrue along the way. How many carries are typical (about 1/2?) and how are they distributed? The associated combinatorics turns out very neatly and extends to general central extensions. The associated processes are "stationary, one-dependent and determinental" (explanations provided). There are connections to Koszul algebras and much that is not understood. All of this is joint work with Alexi Borodin and Jason Fulman.