1112-03-644 **Joseph S. Miller*** (`jmiller@math.wisc.edu`), University of Wisconsin—Madison, Department of Mathematics, 480 Lincoln Drive, Madison, WI 53706-1388. *Subclasses of the K-trivial degrees.* Preliminary report.

I will talk about joint work with Greenberg and Nies on the fine structure of the class of K-trivial sets. The motivating example is the class of sets that are computable from both halves of a random sequence, which was already known to be a proper subclass of the K-trivial sets. We give several characterizations of this class and prove that it is an ideal generated by its c.e. elements. This work generalizes to the class of sets that are computable from the join of every k out of n parts of a random sequence. We call such a set a *k/n-base*. Ranging over rationals k/n, we get a natural dense family of subideals of the K-trivial sets. The union of these ideals is the ideal of sets that are robustly computable from some random sequence.

I will finish by describing a further generalization of k/n-bases. For example, consider a random sequence $Z = Z_1 \oplus Z_2 \oplus Z_3 \oplus Z_4 \oplus Z_5 \oplus Z_6$. Say that a set A is computable from every join of 3 out of 6 parts of Z, but also from $Z_1 \oplus Z_2$. Then we can conclude that A is actually a 3/7-base (as witnessed by a different random sequence), and this is the best possible conclusion. In general, arbitrary families of projections do not give us new subideals of the K-trivial sets. (Received August 11, 2015)