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Distance enumerators of permutation groups

The *distance enumerator* of an error-correcting code is a polynomial which “counts” the number of codewords from a fixed word w . (For linear codes, this is often called the *weight enumerator*.) We consider the situation where the code is a group of permutations (where the codewords are permutations written in list form, and with the usual Hamming distance), in which case the distance enumerator is related to a more well-known polynomial, the cycle index.

This is joint work with J. P. Dixon (London/Sydney).