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On the Hamilton-Waterloo Problem with uniform cycle sizes

A $\{C_m^r, C_n^s\}$-decomposition of K_v asks for a 2-factorization of K_v, where r of the 2-factors consists of m-cycles, and s of the 2-factors consists of n-cycles. (For even v, it is a decomposition of $K_v - F$, where F is a 1-factor.) This is a case of the Hamilton-Waterloo Problem(the HWP) with uniform cycle sizes m and n. The HWP is an extension of the well-known Oberwolfach problem which asks for isomorphic 2-factors. Main focus of this talk will be on the HWP with uniform cycle sizes; some new results on the various lengths of cycles will be presented.