

## The Intersection Problem for Maximum Packings of $K_n$ with 4-Cycles

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In 1993, Elizabeth Billington solved the intersection problem for 4-cycle systems. The solution gives the set of integers  $k$  for which there exists a pair of 4-cycle systems of  $K_n$  having  $k$  cycles in common. We address the generalization to maximum packings of  $K_n$  with 4-cycles and present a solution for  $K_{8n+2}$  (no time for anything else).

Keywords: intersection problem, packing problem