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Patricia Cahn* (pcahn@smith.edu) and **Alexandra Kjuchukova**
(kjuchukova@math.wisc.edu). *Computing linking numbers of curves in dihedral branched covers*. Preliminary report.

Let M be a p -fold irregular dihedral branched cover along a knot K in S^3 , and $f : M \rightarrow S^3$ the corresponding covering map. The linking numbers of the components of the branch set $f^{-1}(K)$ are simple but powerful knot invariants. Building on an algorithm of Perko, which computes these linking numbers, we describe an algorithm for computing linking numbers of preimages of arbitrary curves in the complement of K . We will also discuss the motivation for our work, namely the classification of branched covers between four-manifolds with singular branching sets. This is joint work with Alexandra Kjuchukova. (Received August 30, 2016)