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*MICC: A tool for computing short distances in the curve complex.*

The curve complex  $\mathcal{C}(S_g)$  of a closed orientable surface of genus  $g \geq 2$  is the simplicial complex having a vertex for each isotopy class of essential simple closed curves in  $S_g$ . Two vertices share an edge if each isotopy class contains a disjoint representative in  $S_g$ . A metric is obtained on the 1-skeleton of  $\mathcal{C}(S_g)$  by assigning unit length to each edge. Thus, the distance between two vertices,  $d(v, w)$ , corresponds to the length of a geodesic—a shortest edge-path between  $v$  and  $w$ . Although there are finite time algorithms for computing distance, their implementation is impractical. Recently, Joan Birman, Dan Margalit and the second author gave a new distance algorithm using *efficient geodesics*. In this note we introduce the software package MICC (*Metric in the Curve Complex*), a partial implementation of the Birman-Margalit-Menasco algorithm. We discuss the mathematics underlying MICC and give applications. In particular, we give examples of distance four vertex pairs in genus two and three. Previously, there was only one known pair, in genus two, due to John Hempel. (Received January 16, 2015)