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James S Wolper*, Department of Mathematics, Idaho State University, 921 S. 8th Ave., MS8085, Pocatello, ID 83209-8085. *Estimating the Genus of a Complex Affine Curve using Computational Topology.*

Persistent homology is used to attempt to estimate the genus of a complex algebraic curve represented by a point cloud constructed from an affine piece. Examples of point clouds on space curves depend on an amusing exercise in elementary algebraic geometry. Experimental results include affine plane and space curves. (Received November 14, 2012)