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D. Cooper, S. Tillmann and W. Worden* (william.worden@rice.edu). *The Thurston norm via spun normal surfaces.*

The Thurston norm is a norm on the second homology of a hyperbolic 3-manifold which, given a homology class, returns the minimal complexity over all surfaces representing the class. The unit ball for this norm is a polyhedron symmetric about the origin, and by understanding the surfaces representing the vertices of this polyhedron one gets a wealth of information about the embedded surfaces in the manifold. In 2008, Cooper and Tillmann gave an algorithm for computing the Thurston norm ball of a closed manifold, using normal surfaces. I will discuss an adaptation of their techniques to the case of cusped hyperbolic 3-manifolds using spun normal surfaces, and give a demonstration of a computer program, available at <https://pypi.org/project/tnorm/>, that implements this algorithm. This is joint work with Daryl Cooper and Stephan Tillmann. (Received March 02, 2020)