1116-68-2254   **Erik D. Demaine*** (`edemaine@mit.edu`), MIT CSAIL, 32 Vassar St., Cambridge, MA 02139.
Computational Origami is Hard.

This talk surveys several new and old results about the computational complexity of optimal origami design and origami analysis. For example, it is NP-hard to decide whether a crease pattern folds flat or folds rigidly; to fold a square of paper into the largest scaled copy of a shape/tree; to fold even a 1D crease pattern to minimize the effect of paper thickness; or to refold a roadmap even by simple folds. We will also see complementary positive algorithmic results both to cope with this hardness and to highlight what makes the problems so difficult. (Received September 22, 2015)

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