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Linda Brown Westrick* (westrick@uconn.edu). *Computation and information in sofic shifts.*

Any two-dimensional sofic shift can be described as the set of infinite tilings from a fixed tileset, in which some of the distinctions between the tiles have subsequently been erased. Classically, there are tilesets whose infinite tilings perform arbitrary computations, so in a sofic shift these computations can be hidden, even as they control what is visible. By contrast, in an effectively closed shift, the restrictions on what can happen are enumerated by an algorithm that does not have to share physical space with the patterns it controls. The sofic shifts are a proper subclass of the effectively closed shifts, but the exact limitations on the sofic computations are not well understood. Towards one direction of this question, we construct classes of “computationally-intensive.. sofic shifts.. (Received August 02, 2016)