1077-94-225   **Michael Robinson*** (`robim@math.upenn.edu`), 209 S 33rd Street, Philadelphia, PA 19104. *Sheaf invariants for temporal logic.*

A simple invariant of temporal logic gate networks is the truth table. Although easy to compute, a truth table contains no dynamical information about the associated network. On the other hand, a complete dynamical invariant can be obtained by exhaustive event-level simulation. In practical settings, this tends to be too unwieldy, and is subject to difficulties akin to the halting problem. Recently, an intermediate family of algebraic invariants have been discovered that arise from the theory of constructible sheaves on graphs. I will outline the mechanics of this emerging theory and some of its key findings. (Received August 15, 2011)