1046-03-1523   **John D. Clemens*** (`clemens@math.psu.edu`), Mathematics Department, Penn State University, University Park, PA 16802. *The isomorphism problem for subshifts.*

We use the theory of Borel equivalence relations to analyze the equivalence relation of topological isomorphism among one-dimensional subshifts. We show that this equivalence relation is a universal countable Borel equivalence relation, i.e., it admits no definable complete invariants fundamentally simpler than the equivalence classes. We also see that the classification of higher dimensional subshifts up to isomorphism has the same complexity as for the one-dimensional case. (Received September 15, 2008)