1046-05-546   **Eric S. Rowland*** (`erowland@math.rutgers.edu`), Department of Mathematics, Rutgers
University, Piscataway, NJ 08854. *Pattern avoidance in binary trees.*

Let T and t be binary trees. We say that T *avoids* t if T does not contain t as a (contiguous) subtree. Counting the number of n-leaf binary trees avoiding t can be done algorithmically, and the resulting generating function is always algebraic. Among the corresponding integer sequences we find the usual suspects (Catalan, Motzkin, etc.). The situation becomes interesting when we look at the analogue of Wilf equivalence — two tree patterns are equivalent if the trees that avoid them are equinumerous (i.e., their generating functions are the same). It is not straightforward to understand the equivalence classes. However, progress can be made with a method of restructuring trees in which all instances of one substructure are turned into another. This approach conjecturally succeeds to produce an explicit bijection for any two equivalent tree patterns. (Received September 07, 2008)