1123-05-84 **Eva Czabarka**, **Laszlo A. Szekely*** (szekely@math.sc.edu) and **Stephan Wagner**. *The number of non-isomorphic subtrees of trees.*

There is continuing interest in the distribution of small subgraphs of graphs by isomorphism type. For trees, the corresponding question is the distribution of small subtrees by isomorphism type, as a small random subset of vertices in a tree likely has no edges at all. We prove the following conjecture of Bubeck and Linial: if in a sequence of trees, where the tree size goes to infinity, the proportion of k-vertex paths among k-vertex subtrees becomes negligible, then almost all k-vertex subtrees are stars. We also show that the maximum number of nonisomorphic subtrees (of all sizes) of trees on n vertices is $\Theta(5^{n/4})$. (Received August 18, 2016)