

1135-F1-1827 **Vincent J. Matsko*** (vince.matsko@gmail.com). *The Combinatorics of Binary Trees.*

Binary trees as considered in the literature are usually symmetric binary trees, where left and right branchings are simple scaled rotations. In these cases, the number of new nodes typically doubles with each iteration. When more general affine transformations are allowed for branchings, it is possible that different branching sequences produce the same node, so that the number of nodes at a given iteration is consistently less than twice that of the previous iteration. This talk will focus on how to force different branching sequences to produce the same node, and in such cases, how to count the number of nodes at a given depth. (Received September 25, 2017)