

1023-68-1736

Homeira Pajooresh* (hpajooresh@georgiasouthern.edu), Department of mathematics,
Georgia Southern university, Statesboro, GA 30458. *Composition of comparison based algorithms
as an algebraic operation.*

Binary trees are very useful tools in computer science for estimating the running time of comparison based algorithms, that is, algorithms in which every action is ultimately based on a prior comparison between two elements.

We define the composition of binary trees as a commutative binary operation, $*$, such that for binary trees A and B, $A*B$ is the binary tree obtained by attaching a copy of B to each leaf of A. We show that for the collection T of binary trees, $(T, *)$ is a commutative po-monoid and investigate its properties. (Received September 26, 2006)