

1077-B1-2954 **Marcus Pendergrass*** (mpendergrass@hsc.edu), P.O. Box 174, Hampden-Sydney, VA 23901.
Semigroups, L-Systems, and Algorithmic Composition. Preliminary report.

A class of deterministic algorithms for generating musical compositions is presented. These algorithms take their inspiration from *Lindenmayer systems*, a class of symbolic dynamical systems from mathematical biology. *L*-systems have been used for composition by modern classical composers such as Tom Johnson and Hanspeter Kyburz. Our approach adds an extra layer of structure utilizing semigroup theory. Basic properties of these systems are drawn out, and example compositions are presented. (Received September 23, 2011)