

Department of Applied Mathematics and Statistics
The Johns Hopkins University

SEMINAR

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February 28, 2008
304 Whitehead Hall
Refreshments: 3:30 p.m.
Seminar: 4:00 p.m.

**PERIODICITY AND OTHER STRUCTURE IN A FAMILY
OF NIM-LIKE ARRAYS**

ABSTRACT

We study aspects of the combinatorial and algebraic structure shared by a certain family of recursively generated arrays related to the operation of Nim-addition. In particular, these arrays display periodic behavior along rows and diagonals, and can be interpreted as the multiplication tables for monogenic loops in which nearly all elements are generators. We explain how various features of computer-generated graphics depicting these arrays are reflections of the theorems we prove.

(This is joint work with Dena Morton of Xavier University.)