

The George Washington University Combinatorics Seminar

Wednesday, November 12, 2008, 4:15 - 5:15 p.m.

Monroe Hall, Room 267
2115 G Street, N.W., Washington, D.C.

Algebraic structure in a family of Nim-like arrays

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We study aspects of the algebraic structure shared by a certain family of recursively generated arrays related to the operation of Nim-addition. We first observe that each individual array represents a countably infinite, commutative loop (in the sense of quasigroups). We then prove that each loop in the family is monogenic (generated by a single element in a non-associative fashion), and use this to prove that the only loop homomorphisms between loops in the family are either trivial or an identity map.