

MATHEMATICS DEPARTMENT
North Carolina State University

ALGEBRA AND COMBINATORICS SEMINAR

Friday, August 22, 2008

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Generalizing “2”: The Combinatorics of
 ℓ -Sequences

ABSTRACT: The ℓ -sequences, cousins of the Fibonacci sequence, are defined by the recurrence $a(n) = \ell a(n-1) - a(n-2)$, with initial conditions $a(0) = 0$, $a(1) = 1$. They arise in diverse areas of combinatorics and we will highlight some of their fascinating properties.

Many fundamental identities in combinatorics involve binomial coefficients and their interpretations. We use ℓ -sequences to define the “ ℓ -nomial coefficient”, a generalization of the binomial coefficient, and consider extending classical binomial combinatorics to the “ ℓ -world”.

4:00 - 4:50 pm HA 335

Faculty, students and post-docs are encouraged to attend.