

NUMBER THEORY SEMINAR

Zeros and limit functions of Stern polynomials

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WHEN: Wed 28 Sep 2011, 3:30 p.m.

WHERE: Chase 319

ABSTRACT:

In this talk I'll present the results of my research on the Stern polynomials. In the first half of the talk I'll describe the asymptotic character of their zeros using a combination modern and classical tools. In the second half I will switch to a more structural point of view, examining closely the sequence's recursive definition to deduce a "useful" form for what I consider the important subsequences. Using this I will show that these subsequences (there are uncountably many of them!) have unique limit functions which are analytic on the open unit disk. This expands the class of limit functions of the sequence beyond the two Fibonacci-inspired selections presented by Dr. Dilcher last week—in fact we will find his functions among those considered in this talk. I'll conclude with a few new open problems relating to these results.

Any questions, please e-mail: rnoble@mathstat.dal.ca.