

# STERN POLYNOMIALS: IRREDUCIBILITY, CONTINUED FRACTIONS, AND GENERALIZATIONS

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The classical Stern (diatomic) sequence was in recent years extended to two different polynomial analogues. One of these polynomial sequences, which has particularly interesting arithmetic and combinatorial properties, was extensively studied by several authors, most notably by Schinzel, Ulas, and Gawron. In this talk I will present some extensions of known results, and offer some new results on the irreducibility, factorization, and certain continued fractions involving these polynomials. I will finish this talk with a natural generalization of the Stern polynomials, connected with hyperbinary expansions of positive integers.

**This is joint work with Larry Ericksen, Mohammad Kidwai,  
and Hayley Tomkins**