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Karl Dilcher* (dilcher@mathstat.dal.ca), Department of Mathematics & Statistics, Dalhousie University, Halifax, NS B3H 4R2, Canada, and **Kenneth B. Stolarsky**. *Stern polynomials and continued fractions*.

We derive identities for a polynomial analogue of the Stern sequence and define two subsequences of these polynomials. We obtain various properties for these two interrelated subsequences which have 0-1 coefficients and can be seen as extensions or analogues of the Fibonacci numbers. We also define two analytic functions as limits of these sequences. As an application we obtain evaluations of certain finite and infinite continued fractions whose partial quotients are doubly exponential. In a case of particular interest, the set of convergents has exactly two limit points. (Received September 23, 2012)