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Robert Milson*, rmilson@dal.ca, and **David Gomez Ullate** and **Yves Grandati**. *Exceptional Hermite Polynomials*.

Exceptional orthogonal polynomials (so named because they span a non-standard polynomial flag) are defined as polynomial eigenfunctions of Sturm-Liouville problems. By allowing for the possibility that the resulting sequence of polynomial degrees admits a number of gaps, we extend the classical families of Hermite, Laguerre and Jacobi. In recent years the role of the Darboux (or the factorization) transformation has been recognized as essential in the theory of orthogonal polynomials spanning a non-standard flag. In this talk we will focus on exceptional Hermite polynomials: their regularity properties, asymptotics of zeros and their relation to the recent conjecture that ALL exceptional orthogonal polynomials are related via factorization transformations to classical orthogonal polynomials. (Received July 15, 2014)