1125-33-634 **Maria Angeles Garcia-Ferrero**, **David Gomez-Ullate** and **Robert Milson*** (robert.milson@dal.ca), Dept. Mathematics & Statistics, Dalhousie University, 6316 Coburg Road, Halifax, NS B3H4R2, Canada. *Towards the classification of Exceptional Orthogonal Polynomials.*

Exceptional Orthogonal Polynomials are orthogonal polynomial families that arise as solutions for second-order eigenvalue problems. They generalize the classical families of Hermite, Laguerre, and Jacobi because they allow for polynomial sequences with a finite number of missing degrees. The fundamental technique for constructing such objects is the Darboux transformation, which can relate one of the above classical families with a family of orthogonal polynomials with a finite number of exceptional degrees. We will present a foundational theorem in this subject that asserts that *all* exceptional orthogonal polynomials arise in precisely this fashion. This result is an essential component of the ongoing classification programme for EOP. (Received September 08, 2016)