# ORTHOGONAL POLYNOMIAL ALIASING IN GAUSSIAN QUADRATURE

EVA RICCOMAGNO

In this presentation we discuss a representation of some polynomials, including those of degree $2n-1$, as sum of an element in the polynomial ideal generated by the roots of a Hermite polynomial of degree n and of a remainder. From this, the expectation of some polynomial combinations of random variables normally distributed is computed. This is related to quadrature formulas and has strong links with designs of experiments. Generalization to other classes of orthogonal polynomials will be discussed. (joint work with G Pistone)

Universita di Genova. Italy
*E-mail address*: riccomag@dima.unige.it