Analytical(geometrical) and topological data can be extracted from these associated polynomials.

Schwinger-Feynman parametrization can be used in evaluation phase of integrals. (One can compute $I(n_1, n_2)$ of the bubble diagram using Schwinger-Feynman parametrization relatively easily, as a textbook exercise.) T. Bitoun et. al. recently showed that the number of Master Integrals can be computed as the Euler characteristic of a super surface determined by $\mathcal{G}$.

Baikov found a practical criterion for the irreducibility of a given integral using Baikov parametrization. Lee and Pomeransky extended Baikov's idea and showed the number of Master Integrals is the number of proper critical points of P.