Quintics Chosen for CY Project

September 13, 2020

The following f's were chosen to represent various quintics for our study.

$$f_0 = z_0^5 + z_1^5 + z_2^5 + z_3^5 + z_4^5 + \psi z_0 z_1 z_2 z_3 z_4$$

$$f_1 = z_0^5 + z_1^5 + z_2^5 + z_3^5 + z_4^5 + \psi z_0 z_1 z_2 z_3 z_4 + \phi(z_3 z_4^4 + z_3^2 z_4^3 + z_3^3 z_4^2 + z_3^4 z_4)$$

$$f_2 = z_3 g(z) + z_4 h(z)$$

$$g = z_0^4 + z_1^4 + z_2^4 + z_3^4 + a z_0 z_1 z_2 z_3$$

$$h = z_0^4 + z_1^4 + z_2^4 + z_4^4 + b z_0 z_1 z_2 z_4$$

$$\mathrm{f}_3 = z_1^5 + z_2^5 + z_3^5 + z_4^5 + z_5^5 - \psi * (z_1 z_2 z_3 z_4 z_5) +$$
$$\alpha * (z_1^4 z_3 + z_2^3 z_1 z_5 + z_1 z_3 z_4 z_5^2 + z_4^2 z_2^3 + z_2^2 z_3^2 z_5 + z_1 z_2 z_3 z_4^2 + z_4^3 z_3 z_5 + z_2^4 z_1 + z_5^2 z_3^2 z_1 + z_5^3 z_2^2 +$$
$$z_1 z_3 z_4^3 + z_1^3 z_4 z_5 + z_2^3 z_5^2 + z_3 z_5 z_1 z_2^2 + z_2^2 z_4^3 + z_5^4 z_2 + z_2 z_3 z_1^3 + z_3^2 z_5^3 + z_3^4 z_5 + z_4^4 z_2)$$