Ursula A Whitcher* (ursula@math.washington.edu). K3 Surfaces and Modular Parametrizations.

The Griffiths-Dwork technique provides an algorithm for computing Picard-Fuchs equations for families of hypersurfaces in projective space. We use the Griffiths-Dwork technique to compute the Picard-Fuchs equations of a canonical family of lattice-polarized K3 surfaces, and relate the Picard-Fuchs equations to isogeny of elliptic curves.

This presentation describes joint work with A. Clingher, C.F. Doran, and J. Lewis. (Received August 25, 2008)