Infinitesimal Torelli and rigidity results for a remarkable class of elliptic surfaces

Gregory PEARLSTEIN[1]

[1] Texas AM University, USA

I will discuss joint work with Chris Peters which extends rigidity results of Arakalov, Faltings and Peters to period maps arising from families of complex algebraic varieties which are non-necessarily proper or smooth. Inspired by recent work with P. Gallardo, L. Schaffler, Z. Zhang, I will discuss two classes of elliptic surfaces which can be presented as hypersurfaces in weighted projective spaces which have a unique canonical curve. In each case, we will show that infinitesimal Torelli fails for $H^2 of the compact surface, but is restored when one considers the pe$