Abstract:

We construct abelian varieties with action by the classical integral quaternions using Prym varieties. We shall concentrate on the case of abelian fourfolds, which we decribe universally through elliptic curves with $\Gamma_0(2)$ level structure, and also (universally) with cubic threefolds with 9 nodes, first studied by C. Segre in the 19th century, and more; the work is joint with R. Donagi.