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Families of lattice polarized K3 surfaces with monodromy

The concept of lattice polarization for a K3 surface was first introduced by Nikulin. I will discuss ways in which his definition can be extended to families of K3 surfaces over a (not necessarily simply connected) base curve, with the aim of gaining control over the action of monodromy upon the Néron-Severi lattice of a general fibre. I will then present an application of this to the study of Calabi-Yau threefolds that admit fibrations by Kummer surfaces.