

ABELIAN VARIETIES AND ACTIONS

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In this talk we will discuss some questions and answers on decompositions of abelian varieties.

We will recall the isotypical decomposition, for abelian varieties with group action, and describe its generalization to Hecke algebra actions.

We will then apply them to find new families of abelian varieties and Jacobians of curves admitting complex multiplication, and new families of Jacobians isomorphic to products of elliptic curves.