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*Structure of strongly regular vertex- and edge-transitive graphs*

I will discuss the use of normal quotient reduction to analyse families of vertex-transitive, edge-transitive graphs. This method has been used extensively by Cheryl Praeger and others. In this talk, we apply the method to strongly regular graphs that are vertex- and edge-transitive.

In this talk, I will present some analysis of graphs in this family whose normal quotient is a complete graph, and the result that irreducible graphs in this family have quasiprimitive groups of automorphisms. Our main result is that no graph in this family can have a holomorphic simple group of automorphisms.

This is joint work with Cheryl Praeger and Pablo Spiga.