

On colour-preserving automorphisms of Cayley graphs*Klavdija Kutnar**University of Primorska, Koper, Slovenia*

klavdija.kutnar@upr.si

This is joint work with Ademir Hujdurović, Edward Dobson, Dave Morris, and Joy Morris

We study the automorphisms of a Cayley graph that preserve its natural edge-colouring. In this talk recent results about colour-preserving automorphisms of Cayley graphs will be presented. More precisely, we are interested in groups G , such that every such automorphism of every connected Cayley graph on G has a very simple form: the composition of a left-translation and a group automorphism. We find classes of groups that have the property, and we determine the orders of all groups that do not have the property. We also have analogous results for automorphisms that permute the colours, rather than preserving them.