



International Conference “Mathematical logic and related problems of mathematics” on the occasion Bektur Baizhanov's 70th birthday



Dugald MacPherson Jordan permutation groups and treelike relational structures

A permutation group G on a set X is a Jordan group if there is a subset A of X (with certain non-degeneracy conditions) such that the pointwise stabiliser in G of the complement of A is transitive on A . This condition is akin to saying that all elements of A realise the same type over the complement of A , a model-theoretically strong condition. Jordan groups which are primitive (i.e. preserve no proper non-trivial equivalence relation) have been characterised in work of Adeleke, Macpherson, and Neumann. Key examples which arise are linear and circular orders, and certain treelike structures – very much the kinds of key examples in the work of Bektur Baizhanov's school related to weak o-minimality. I will discuss the theory of Jordan groups and the examples, including the 'limits of D-relations' from recent work with Almazaydeh.