

- TUNA ALTINEL, *On the actions of finite permutation groups on groups of finite Morley rank*.

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Ever since the work of Borovik and Cherlin on permutation groups of finite Morley rank ([4]), there has been growing interest in faithful actions finite groups on various types of groups of finite Morley rank. This interest is due to various motivations: classifying highly generically transitive actions on sets ([1]), highly generically transitive representations ([2]), definable actions of finite groups on groups of finite Morley rank, automorphisms of groups of finite Morley rank. In my talk, I will give an overview of these lines of research and detail a recent result joint with Joshua Wiscons on lower bounds in the case of faithful actions of the alternating group on a nonsolvable group of finite Morley rank that does not contain involutions.

[1] TUNA ALTINEL AND JOSHUA WISCONS, *Recognizing PGL_3 via generic 4-transitivity*, *Journal of the European Mathematical Society*, vol. 20 (2018), no. 6, pp. 1525–1559.

[2] AYŞE BERKMAN and Alexandre Borovik *Groups of finite Morley rank with a generically sharply multiply transitive action*, *Journal of Algebra*, vol. 368 (2012), no. X, pp. 237–250.

[3] AYŞE BERKMAN and Alexandre Borovik *Groups of finite Morley rank with a generically multiply transitive action on an abelian group*, *Arxiv*, (2021), eprint 2107.09997.

[4] ALEXANDRE BOROVİK AND GREGORY CHERLIN, *Model theory with applications to algebra and analysis. Vol. 2, Model theory with applications to algebra and analysis. Vol. 2* (H. Dugald Macpherson, editors), Cambridge Univ. Press, Cambridge, 2008, pp. 30–50.

[5] LUIS JAIME CORREDOR AND ADRIEN DELORO AND JOSHUA WISCONS, *Sym(n)- and Alt(n)-modules with an additive dimension*, *Arxiv*, (2022), eprint 2111.11498.