

# Symmetries and Colorings of Groups

Yuliya Zelenyuk

A symmetry on a group  $G$  is a mapping  $G \ni x \mapsto gx^{-1}g \in G$ , where  $g \in G$ . This notion has interesting relations to Ramsey theory and to enumerative combinatorics. We will discuss some old and new results in this field [1, 2, 3].

## REFERENCES

- [1] T. Banakh and I. Protasov, Symmetry and colorings: Some results and open problems, *Voprosy Algebra* - 17, Gomel, No 3 (6) (2001), 4–15.
- [2] I. Kashuba and Yu. Zelenyuk, The number of symmetric colorings of the dihedral group  $D_3$ , *Quaestiones Mathematicae*, accepted.
- [3] Yu. Zelenyuk, Symmetric colorings of finite groups, *LMS Lecture Note Series* **388** (2011), 580–590.

yuliya.zelenyuk@wits.ac.za  
University of the Witwatersrand  
South Africa