

# Construction of automorphisms of 3-ary necklaces

I. A. Krepkiy

The concept of the sandpile group of graph will be described. Connection between necklaces and irreducible polynomials over the finite fields will be presented. The construction of group of automorphisms of necklaces based on this connection will be described. A direct approach for calculation of this group implies a calculation of minimal polynomials for elements of finite fields. An idea for modification of algorithm that will allow to avoid a calculation of minimal polynomials will be considered. Hypothesis about relation between automorphism groups of 3-ary necklaces and the sandpile groups of 3-ary de Bruijn graphs will be stated.

## References

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I. A. Krepkiy  
Mechanics and Mathematics Department  
Saint Petersburg State University

e-mail: [feb418@gmail.com](mailto:feb418@gmail.com)