

## **Increasing the level of automation of the series of calculations of asymmetrical modes at selecting parameters for setting of relay protection devices.**

*Abakumov S. A., Vishtibeev A. V., Ponomarev E. A., Savvin D. N., Cheganova N. F., Erekeykin E. I.*

The article considers the features, main functions and capabilities of domestic software «ARU RZA» owned by JSC «STC UPS». The article describes the optimization methods applied for calculation algorithms in the program. The equivalence approach and optimization method of calculations multiple non-symmetrical states are considered. The paper also describes a binary search algorithm based on the example of calculating protection parameters according to matched conditions with the protection of an adjacent connection and an optimization method for determining fault location.

*Key words: software, short-circuit currents calculation, relay protection and automation devices, algorithm optimization, automation of calculations.*