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Application of the Rastrygin's Method in Modeling of Complex Electrical Systems

The paper considers the stochastic optimization method, which can be used for dynamic processes modeling in complex electrical systems, which are described by input- output models. As the main method, Rastrygin's guide cone method is considered. Limitations for this method are formulated for the practical usage when solving applied optimization problems. In order to improve the method, modifications of its algorithm are proposed. The effectiveness of these algorithms is verified on test objective functions. The results of numerical experiments made it possible to conduct a comparative analysis of these algorithms.

Authors: MELNYK, Bohdan (Ivan Franko National University of Lviv); MELNYK, Nataliya (Ivan Franko National University of Lviv); HOHOLYUK, Oksana (Lviv Polytechnic National University); Prof. HAMOLA, Orest (Lviv Polytechnic National University); STAKHIV, Petro (Lviv Polytechnic National University); MADAY, Volodymyr (Lviv Polytechnic National University)

Presenter: HOHOLYUK, Oksana (Lviv Polytechnic National University)

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