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**Electric parameter identification of synchronous machine in disturbed mode.**

A method for the identification of the parameters of a synchronous machine on the basis of the Park – Gorev equations by processing the register transients is proposed. Proposed method was tasted with use of Matlab Simulink. The method is applicable for the wide range of disturbing effects, it allows to solve the problem of identifying machine parameters without interfering with its operational modes. The method can be used in electrical networks with distributed generation with automatic control and open network architecture.

*Keywords: synchronous machine, parameter identification, Park – Gorev equations, distributed generation.*