Respected

Editor

Journal of Power Technologies

WARSAW UNIV TECHNOLOGY, INST HEAT ENGINEERING, UL NOWOWIEJSKA, 21-25, WARSAW, POLAND,

Respected sir,

  In this regard please find enclosed herewith a revised version of the manuscript titled “A Fuzzy Logic System to Detect and Classify Faults for Laboratory Prototype Model of TCSC Compensated Transmission Line”, for your kind consideration for possible publication in Journal of Power Technologies.

 The manuscript has not been published elsewhere, nor is it under consideration for publication in any journal or conference.

 Authors declare that we have no conflict of interest in publishing this paper.

 The abstract is as follows:-.

 In this paper, an expert system-based fault detection and classification scheme is developed for a labora-tory prototype model of TCSC compensated long transmission line. The equivalent model of laboratory prototype system is simulated in MATLAB Simulink. An expert system based on fuzzy logic is developed by using three-phase voltage and current signals from single end measurements. Obtained voltage and current signals are pre-processed with Discrete Fourier Transform (DFT) to obtain the fundamental component of these signals. Further zero sequence current and obtained fundamental voltage and current signals are used to develop a fuzzy inference system (FIS) for shunt fault detection and classification task. There are three different FIS developed for three individual phases of the transmission system and one FIS is developed for zero sequence current signal, which provides ground involvement information. The combined binary output of the developed four FIS provides fault classification task. The performance of developed FIS is rigorously tested with the variation of different fault parameters, and different location of the TCSC. The simulated results indicate that the proposed scheme performance is reliable in its zone of protection.

Some of the references published in Journal of Power Technologies are as below:

[1].   Shuping Cai, Guohai Liu, ‘Study on Application of Fisher Information for Power System Fault Detection’, Accepted manuscript, Journal of Power Technology, pp. 692-701,2016

[2].   Chaitanya, B. K.; Soni, A.K.; Yadav, A. Communication Assisted Fuzzy based Adaptive Protective Relaying Scheme for Microgrid. Journal of Power Technologies. 2018, 98 (1), pp. 57–69.

**Suggested Reviewers:**

1. Mohammad Pazoki Ph.D

Assistant Professor, Department of Electrical Engineering , Damghan

University

pazoki.m@du.ac.ir

2. Ragab A. El Sehiemy Ph.D

Associate Professor,, Department of Electrical Engineering , Kafrelsheikh

University Faculty of Engineering

elsehiemy@eng.kfs.edu.eg

3. Dr. Almoataz Youssef Abdelaziz

Electrical Power & Machines Department

Faculty of Engineering, Ain Shams University

Abdo Basha square, Abbassia, 11517

Cairo, Egypt

E-mail: almoatazabdelaziz@hotmail.com, almoataz\_abdelaziz@eng.asu.edu.eg

Thank you for your time and consideration. I look forward to hearing from you.