Hybrid Energy Production System with PV Array and Wind Turbine and Pitch Angle Optimal Control by Genetic Algorithm (GA)
Original Research, A1

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ABSTRACT: In the 21st century because of expensive fossil fuels, usage of clean energy such as solar energy, wind energy, etc. will increase rapidly. However, there are several problems in power systems such as stability and power quality. The wind power generation is one of the important renewable power sources. In order to optimal control of pitch angle at high speed of wind, genetic algorithm has been used.

Keywords: Wind Turbine, Photo Voltaic (PV), Genetic Algorithm (GA), Maximum Power Point Tracking (MPPT), 12-Pulse Inverter, Optimal Control.

PII: S232251141200002-1

Optimum Design of PSS and SVC Controller for Damping Low Frequency Oscillation (LFO)
ABSTRACT: The development of the demand for electrical energy leads to loading the transmission system close to their limits that may cause overloads. In this paper, we applied the SVC with PID controllers in order to dampen the low-frequency oscillation (LFO) in the system. Simulation results show that the SVC with PID controllers is more effective in damping LFO compared to PSS with PID controllers.

Keywords: 3 to 5 keyword or phrases.
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**ABSTRACT**

Lip detection is used in many applications such as face detection and lips reading. In previous works, researchers have used a color model to detect lips from face images. The efficiency of this detection is greatly dependent on the color model used. In this paper, we will discuss the color model used in previous works. We present a new algorithm for lip detection based on standard deviation. The algorithm is performed on CVL face database. Our experiments show that new algorithm gives better results than previous works on this database.

**Keywords:** lip detection, skin, saturation, standard deviation.

**PII:** S232251141200004-1

Enhancement and Cleaning of Handwritten Data by using Neural Networks and Threshold Techniques
ABSTRACT: This paper propose the use threshold technical

Keywords: threshold technical, artificial neural network, handwritten recognition.
ABSTRACT: Wireless mesh networks (WMNs) have emerged as a key technology for next-generation wireless networking. This paper focuses on the requirements, such as video coding and wireless channel specifications, with focuses on video surveillance systems.

Keywords: Wireless mesh network; Client; Router; Video

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Novel Methods with Fuzzy Logic and ANFIS Controller Based SVC for Damping Sub-Synchronous Resonance and Low-Frequency Power Oscillation
ABSTRACT: A long transmission line needs controllable series and shunt compensation for power flow control and voltage stability. The installation of the Static VAR Compensator (SVC) in power systems is known to be an effective method for power flow control. SVCs can be controlled in the steady state and transients. However, the SVC cannot solve the Sub-Synchronous Resonance (SSR) problem. In this paper, the impact of the SVC on the SSR problem is investigated, and thus, SSR can be mitigated. To do this, the SVC is controlled by Fuzzy Logic Controller (FLC) and also the Adaptive Neuro-Fuzzy Inference System (ANFIS). The MATLAB/Simulink software program was used to verify the effectiveness of each control method. Keywords: Sub-Synchronous Resonance (SSR), Static VAR Compensator (SVC), Fuzzy Logic Controller (FLC), Adaptive Neuro-Fuzzy Inference System (ANFIS), Fast Fourier Transform (FFT).
ABSTRACT: The increasing requirement to the clean and renewable energy has led to the rapid development of wind power systems all over the world. This paper presents a new method for designing a phase-locked loop controller for a synchronous wind generator using the imperialist competitive algorithm (ICA). The objective is to achieve a stable and efficient system. The proposed system consists of a combinational of synchronous wind generator based wind turbine. Finally, the operation of two controllers have been compared.

Keywords: 3 to 5 keyword or phrases.
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