Hybrid Energy Production System with PV Array and Wind Turbine and Pitch Angle Optimal Control by Genetic Algorithm (GA)
ABSTRACT: In the 21st century because of expensive fossil fuels, usage of clean energy such as solar energy, wind energy, etc. will increase. 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)

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 ... simulation 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.

PII: S232251141200003-1

An Efficient Algorithm for Lip Segmentation in Color Face Images Based on Local Information
ABSTRACT

Keywords: lip detection, skin, saturation, standard deviation.
Zali Varghahan B and Chehel Amirani M.


ABSTRACT: This paper propose the use threshold technical and artificial neural network (ANN) for clean and enhancement scanned images. Process of cleaning image is the preprocessing for system handwritten recognition that we do this work in this paper.

Keywords: threshold technical, artificial neural network, handwritten recognition, clean image, multilayer perceptron

PII: S232251141200005-1

Video Streaming over Wireless Mesh Networks

Original Research, A5
Wireless mesh networks (WMNs) have emerged as a key technology for next-generation wireless networking. Wireless mesh networks provide a robust, scalable, and cost-effective solution for wireless connectivity in various applications such as urban and rural areas, disaster recovery, and military operations. However, wireless channel specifications and video coding requirements pose significant challenges to the design and implementation of WMNs. This paper focuses on the design and implementation of a novel method for video surveillance systems using fuzzy logic and ANFIS controller based SVC for damping sub-synchronous resonance and low-frequency power oscillation. The proposed method aims to improve the stability and reliability of WMNs in the presence of disturbances and uncertainties. The effectiveness of the proposed method is evaluated through simulation studies and experimental results, demonstrating its potential for practical applications.
A Lak, Nazarpour D, Ghahramani H.


**ABSTRACT:** A long transmission line needs controllable series and shunt compensation for power flow control and voltage stability. The series capacitor and shunt reactor are used to control the power flow and voltage level. The combination of these controllers can lead to Sub-Synchronous Resonance (SSR). In this paper, the proper control of the series capacitor, shunt reactor and Static VAR Compensator (SVC) are studied. 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).

**PII:** S232251141200007-1

**Mitigating SSR in Hybrid C Based Fuzzy Logic Controller and Adaptive Neuro Fuzzy Inference System Controller**

**Original Research, A7**

Hosseini H. and Tousi B.
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 demand has led to the need for the improvement of the efficiency of the wind power systems. In this paper, a novel method for designing a Power System Stabilizer (PSS) for a synchronous wind turbine is presented. This method is based on the Imperialist Competitive Algorithm (ICA), which is a novel optimization algorithm. The proposed method is applied to a three-area automatic generation control (AGC) system. The results show that the proposed method can improve the stability and performance of the wind power system.

Keywords: 3 to 5 keyword or phrases.

Original Research, A8

Hosseini H. and Tousi B.
| **ABSTRACT:** | Abstract – Automatic Generation Control (AGC) is a very imperative issue in power system operation for providing electric power. The AGC is a network of devices that maintains the system frequency and tie-line power to within very narrow limits. This requires that automatic generation is able to co-operate and respond to the changes in the system conditions. |
| **Keywords:** | Automatic Generation Control (AGC), proportional integral derivative (PID), Automatic Voltage Regulator (AVR), imperialist competitive algorithm (ICA) |