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. To convert wind energy into electrical energy, wind turbines are used. This paper aims to use genetic algorithm for optimal control of pitch angle at high speed of wind. 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)
Original Research, A2

Hosseini H., Tusi B., Razmjooy N., Khalilpour M.


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.

Hot paper
PII: S232251141200003-1

An Efficient Algorithm for Lip Segmentation in Color Face Images Based on Local Information
Kalbkhani H, Chehel Amirani. M.


ABSTRACT:

Lip detection is used in many applications such as face detection and lips reading. In previous works, researchers have ... 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.

Enhancement and Cleaning of Handwritten Data by using Neural Networks and Threshold Techniques
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 image. 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
ABSTRACT: Wireless mesh networks (WMNs) have emerged as a key technology for next-generation wireless networking. Wireless mesh networks, with their unique characteristics, such as video coding and wireless channel specifications, have given rise to a variety of applications. This paper presents a comprehensive overview of the state-of-the-art in wireless mesh networks, focusing on video surveillance systems. The authors provide a detailed analysis of the benefits and challenges associated with wireless mesh networks, with special emphasis on video surveillance applications. The paper concludes with a discussion of future directions and potential areas for further research.

Keywords: Wireless mesh network; Client; Router; Video; Surveillance

PII: S232251141200006-1
A Lak, Nazarpour D, Ghahramani H.


ABSTRACT: A long transmission line needs controllable series as well as shunt compensation for power flow control and voltage stability improvements. The series compensation technique includes thyristor controlled series capacitors (TCSC). The shunt compensation technique is Static VAR Compensator (SVC). An effective technique is to install one or both types of series and shunt compensators for improving power quality. This paper illustrates the effects of each compensation technique and shows how adding these compensations affects the power system. 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 Wind-Steam Turbine with TCSC Based Fuzzy Logic Controller and Adaptive Neuro Fuzzy Inference System Controller

Original Research, A7

Hosseini H. and Tousi B.
The increasing requirement to the clean and renewable energy has led to the rapid development of wind power systems. The controllers play an important role in maintaining the stability and efficiency of the system. This paper proposes a novel method for designing the Power System Stabilizer (PSS) and Automatic Voltage Regulator (AVR) using Imperialist Competitive Algorithm (ICA). The method is applied to a three-area AGC system. The controllers are designed separately, and then the stability of the system is evaluated by comparing the operation of the controllers. The results show that the proposed method is effective in improving the stability and performance of the system.
### ABSTRACT:
Abstract – Automatic Generation Control (AGC) is a very important issue in power system operations for providing electric energy services. In this study, an adaptive automatic generation control (AGC) based on Automatic Voltage Regulator (AVR) parameters by using imperialist competitive algorithm (ICA) has been proposed. Finally, the results have been compared.

### Keywords:
- Automatic Generation Control (AGC)
- Proportional Integral Derivative (PID)
- Automatic Voltage Regulator (AVR)
- Imperialist Competitive Algorithm (ICA)