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. This paper presents a study on the optimal control of the pitch angle of the wind turbine at high wind speeds. Genetic algorithm has been used to control the pitch angle of the blades of the wind turbine.

Keywords: Wind Turbine, Photo Voltaic (PV), Genetic Algorithm (GA)

PII: S232251141200002-1
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.

PII: S232251141200004-1

Enhancement and Cleaning of Handwritten Data by using Neural Networks and Threshold Techniques.
ABSTRACT: This paper proposes the use of threshold techniques and artificial neural networks for the cleaning and enhancement of scanned images. The cleaning process is a preprocessing step for handwritten text recognition, which is the focus of this work.

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

Video Streaming over Wireless Mesh Networks
Wireless mesh networks (WMNs) have emerged as a key technology for next-generation wireless networking. They provide a scalable and flexible infrastructure that can support a wide range of applications, including video surveillance systems.

Keywords: Wireless mesh network; Client; Router; Video

PII: S232251141200006-1

Novel Methods with Fuzzy Logic and ANFIS Controller Based SVC for Damping Sub-Synchronous Resonance and Low-Frequency Power Oscillation

Original Research, A6
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 enhancement. The presented study investigates a coordinated control of series and shunt compensating devices, shunt capacitors, and a Static VAR Compensator (SVC). The methodology was based on a hybrid model of a transmission line and a synchronous machine. The proposed control approach was investigated using a non-linear time-domain model. 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.
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 novel design method to design a novel power system stabilizer (PSS) and an automatic voltage regulator (AVR) for a three-area AGC system. The proposed controller is based on an improved Imperialist Competitive Algorithm (ICA) which is employed to optimize the controller parameters. Finally the operation of two controllers have been compared and the results show the robustness and effectiveness of the proposed controller.

Keywords: 3 to 5 keyword or phrases.
| **ABSTRACT:** | Abstract – Automatic Generation Control (AGC) is a very imperative issue in power system operation for providing electric power to the consumers. The controller design problem is a very important issue in power systems where the performance of the power system depends on the controller parameters. The tuned controller parameters are obtained by using the imperialist competitive algorithm (ICA). The tuning of the controller parameters by using the imperialist competitive algorithm (ICA) has been proposed. Finally the results have been compared. |
| **Keywords:** | Automatic Generation Control (AGC), proportional, integral, derivative, controller, imperialist competitive algorithm (ICA). |