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

Hosseini H., Farsadi M., Khalilpour M., Razmjooy N.


ABSTRACT: In the 21st century because of expensive fossil fuels, usage of clean energy such as solar energy, wind energy, etc. will be increased. Therefore, design of a suitable system for the usage of such energy is essential. In this paper, to use the available energy from wind and solar energy, a hybrid system from wind turbine, photovoltaic (PV), genetic algorithm (GA), maximum power point tracking (MPPT), 12-pulse inverter, and optimal control has been designed and simulated. The genetic algorithm is used to control the pitch angle of the wind turbine in order to extract maximum energy from high wind speed. This hybrid system is capable of reaching the target power through the best settings.

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 ... simulation show that the SVC with PID controllers is more effective in damping LFO compared to PSS with PID controllers.

### Hot paper
**PII:** S232251141200003-1

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

Lip detection is used in many applications such as face detection and lips reading. In previous works, researchers have used different methods for this purpose. Kalbkhani and Chehel Amirani in this paper propose a new algorithm for lip detection. The proposed algorithm is tested 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.
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. The process of cleaning images is the preprocessing for system handwritten recognition that we do this work in this paper.

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

PII: S232251141200005-1

Video Streaming over Wireless Mesh Networks

Original Research, A5
Kalbkhani H and Zali. B.


ABSTRACT: Wireless mesh networks (WMNs) have emerged as a key technology for next-generation wireless networking. Wireless mesh networks offer a promising approach for providing robust, scalable, and reliable wireless connectivity. These networks can be used in various 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
ABSTRACT: A long transmission line needs controllable series as well as shunt compensation for power flow control and voltage stability. These objectives can be achieved by installing the SVC. 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

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. In this study, a novel method is introduced for three area AGC system which is composed of a synchronous wind generator based wind turbine. Finally the operation of two controllers have been compared.

Keywords: 3 to 5 keyword or phrases.

PII: S232251141200008-1

A Novel Method for Designing PSS-AVR by Imperialist Competitive Algorithm (ICA) for three-area AGC System

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... |
| **Keywords:** | Automatic Generation Control (AGC), proportional Integral Derivative (PID), Automatic Voltage Regulator (AVR), imperialist competitive algorithm (ICA) |