Research Title

Graphical Abstract

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Abstract

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PII: S232251141200001-1

Hybrid Energy Production System with PV Array and Wind Turbine and Pitch Angle Optimal Control by Genetic Algorithm (GA)
In the 21st century because of expensive fossil fuels, usage of clean energy such as solar energy, wind energy, etc. will increase. A small wind turbine with high speed of wind can be used to produce more clean energy. 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

**PII:** S232251141200002-1

**Optimum Design of PSS and SVC Controller for Damping Low Frequency Oscillation (LFO)**
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.
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,
Original Research, A4

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. The 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
Kalbkhani H and Zali. B.


**ABSTRACT:** Wireless mesh networks (WMNs) have emerged as a key technology for next-generation wireless networking. Wireless mesh networks can support a wide range of requirements, such as video coding and wireless channel specifications, with focuses on 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. The series compensation 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).

Mitigating SSR in Hybrid Wind-Steam Turbine with TCSC Based Fuzzy Logic Controller and Adaptive Neuro Fuzzy Inference System Controller

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 paper, a new control strategy is presented for the wind turbine. The control strategy consists of a classical controller and a Synchronous generator. The controller is a combination of a PI controller for speed control and a PID for pitch control. The performance of the proposed control strategy is compared with the classical controller. Finally the operation of two controllers have been compared.

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 customers in a proper manner. The AGC is used to control the generation of electric power by interacting with the power generating units and the frequency controllers. The AGC is designed to control the frequency of the power system by regulating the output of the generators. The AGC is used to maintain the frequency of the power system within a narrow band and to provide a stable and reliable source of electric power. The AGC is designed to operate in a dynamic environment and to respond to changes in the power system. The AGC is used to control the frequency of the power system by regulating the output of the generators. The AGC is designed to operate in a dynamic environment and to respond to changes in the power system. The AGC is used to maintain the frequency of the power system within a narrow band and to provide a stable and reliable source of electric power. |  |
| **Keywords:** | Automatic Generation Control (AGC), proportional Integral Derivative (PID), Automatic Voltage Regulator (AVR), imperialist competitive algorithm (ICA) |  |