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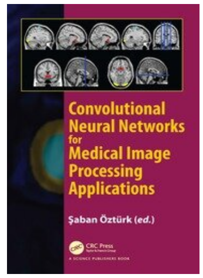

Convolutional Neural Networks for Medical Image Analysis

By Rajesh Gogineni (/search?contributorName=Rajesh Gogineni&contributorRole=author&redirectFromPDP=true&context=ubx), Ashvini Chaturvedi (/search?contributorName=Ashvini Chaturvedi&contributorRole=author&redirectFromPDP=true&context=ubx)

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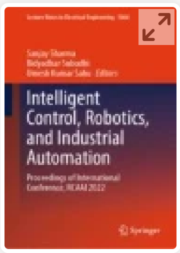

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Rajesh Gogineni, Y. Ramakrishna, P. Veeraswamy & Jannu Chaitanya

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Part of the Lecture Notes in Electrical Engineering book series (LNEE,volume 1066)

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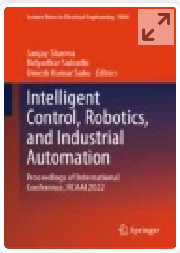

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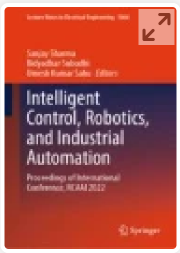

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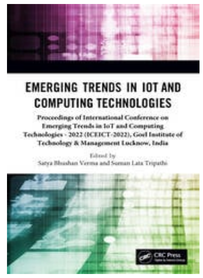

Performance evaluation of microgrid with renewable energy sources using hybrid PSO algorithm

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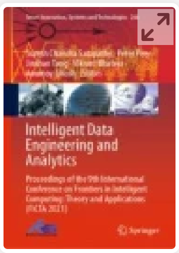

Intelligent Data Engineering and Analytics pp 379–387

Array Thinning Using Social Modified Social Group Optimization Algorithm

E. V. S. D. S. N. S. L. K. Srikala, M. Murali, M. Vamshi Krishna & G. S. N. Raju

Conference paper | First Online: 28 February 2022

Part of the Smart Innovation, Systems and Technologies book series (SIST,volume 266)

Abstract

The thinning in the antenna array involves reducing the number of elements with desired sidelobe level (SLL) and beamwidth (BW). In this paper, the linear antenna array (LAA) is chosen for thinning with the objective of obtaining the suppressing the SLL to the best possible level with the constraint of fixed uniform BW. The considered LAA shall have 40 elements in the full array configuration in which all the elements are switched ON. Further, the LAA is thinned with different magnitudes while the elements to be switched OFF are determined as per the objective using the social group optimization algorithm (SGOA). The process of thinning is perceived as the non-uniform spacing technique of suppressing the SLL with constraints. The results are analyzed in terms of radiation pattern plots. The simulations are carried out in MATLAB.

Keywords

Linear antenna array **SGOA** **Array thinning**

Radiation pattern

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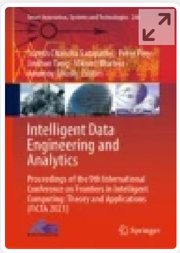

Intelligent Data Engineering and Analytics pp 351–358

PAPR Analysis of FBMC and UFMC for 5G Cellular Communications

T. Sairam Vamsi, Sudheer Kumar Terlapu & M. Vamshi Krishna

Conference paper | First Online: 28 February 2022

Part of the Smart Innovation, Systems and Technologies book series (SIST,volume 266)

Abstract

Orthogonal frequency-division multiplexing (OFDM) is a renowned multiple access technique for fourth-generation (4G) wireless cellular systems, as it provides good transmitting power efficiency, multipath propagation and high spectral efficiency. This OFDM is not satisfying some of the requirements for fifth-generation (5G) cellular systems as it has having limitations of more side band leakage power, more peak-to-average power ratio (PAPR) and out-of-band radiation (OOB). The main objective of this paper is to design an efficient waveform which provides high spectral efficiency and low PAPR for 5G Systems. The distinct sub-carriers and different QAM modulations are used to analyse PAPR of various multiplexing techniques like universal-filtered multicarrier (UFMC) and filter bank multicarrier modulation (FBMC) which serve 5G requirements in comparison with OFDM for 4G. At the end of the analysis, this paper describes which modulation is best suited for 5G that satisfies all basic requirements.

Keywords

Spectral efficiency **Distinct sub-carriers**

Side band power

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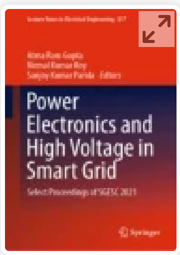

Power Electronics and High Voltage in Smart Grid pp 299–308

A Novel Hybrid GMPPT Scheme Based on P&O-MM with Reduced Output Power Oscillations Under PSC for PV System

Muralidhar Nayak Bhukya, P. T. Krishna Sai, Manish Kumar ✉, Shobha Rani Depuru & T. Sudhakar Babu

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Abstract

Traditional Perturb and Observe (P&O) controllers are preferred over metaheuristic algorithms during uniform irradiance conditions but fail to replicate the same performance during Partial Shaded Conditions (PSC). Hence, a novel hybrid GMPP Tracking (GMPPT) scheme based on Perturb and Observe and Mean Method (PO-MM), which gives effective performance under any weather condition with reduced output power oscillations, is proposed. During PSC, the P&O controller remains at the first obtained peak of the P–V characteristics. Therefore, the rest of the characteristics are examined by the Mean Method to attain exact GMPP.

Keywords

Perturb and observe **Mean method**

Power oscillations

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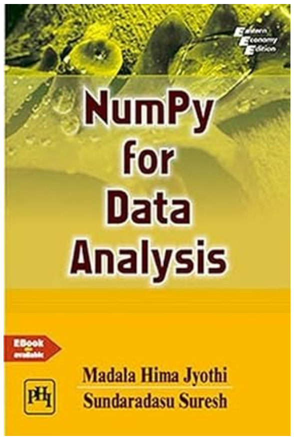

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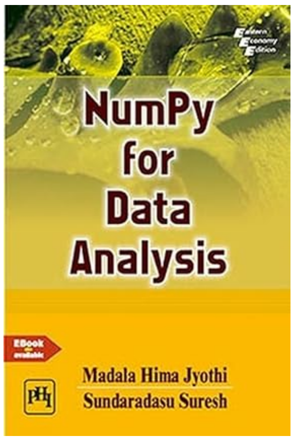

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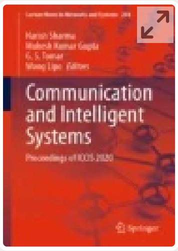

Communication and Intelligent Systems pp 201–209

Butterfly Optimization Algorithm-Based Optimal Sizing and Integration of Photovoltaic System in Multi-lateral Distribution Network for Interoperability

Thandava Krishna Sai Pandraju ✉ & Varaprasad Janamala

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Abstract

In this paper, a new and simple nature-inspired meta-heuristic search algorithm, namely butterfly optimization algorithm (BOA), is proposed for solving the optimal location and sizing of solar photovoltaic (SPV) system. An objective function for distribution loss minimization is formulated and minimized via optimally allocating the SPV system on the main feeder. At the first stage, the computational efficiency of BOA is compared with various other similar works and highlights its superiority in terms of global solution. In the second stage, the interoperability requirement of SPV system while determining the location and size of SPV system among multiple laterals in a distribution system is solved without compromises in radiality constraint. Various case studies on standard IEEE 33-bus system have shown the effectiveness of proposed concept of interline-photovoltaic (I-PV) system in improving the distribution system performance in terms of reduced losses and improved voltage profile via redistributing the feeder power flows effectively.

Keywords

Butterfly optimization algorithm

Interline-photovoltaic system **Interoperability**

Loss minimization **Radial distribution system**

Radiality constraint

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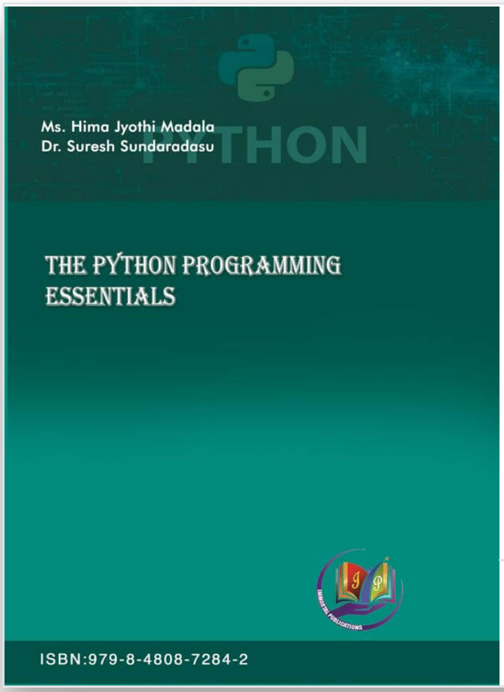

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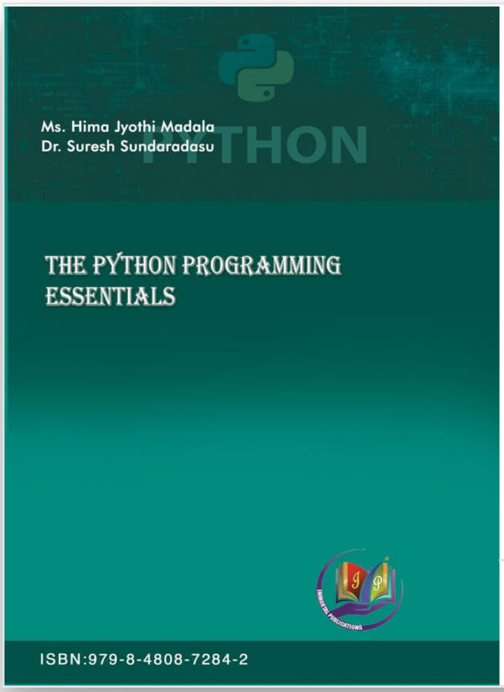

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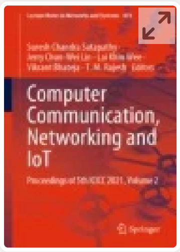

Computer Communication, Networking and IoT pp 235–243

High-Impedance Surface Backed Circular Patch Antenna for Wireless Communications

Akash Kumar Gupta, P. Satish Rama Chowdary & M. Vamshi Krishna

Conference paper | First Online: 05 October 2022

Part of the Lecture Notes in Networks and Systems book series (LNNS,volume 459)

Abstract

A multi-band antenna is a very attractive solution for wireless communication applications. A low-profile miniaturized compact circular patch antenna backed with a high-impedance surface antenna is presented in this work. A high-impedance surface-based ground plane is an effective method for suppressing the surface waves and hence improves the performance of a patch antenna. The HIS-based ground plane is designed on Fr-4 substrate with a rectangular patch of dimensions of 10 mm × 10 mm having protrusion at the center of the patch. A circular microstrip patch antenna is designed on Fr-4 substrate, and its performance is compared with metallic ground plane and HIS ground plane. The circular patch antenna backed with HIS ground plane radiates in multiple bands 1.63–1.66, 3.86–4.03, 4.19–5.12 GHz with bandwidths of 3–5% in all bands.

Keywords

Circular microstrip patch **High-impedance surfaces**

Multi-band

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4. Biohydrogen Production from Biomass

Authors : Lekshmi Gangadhar, Nalluri Abhishek, Putti Venkata Siva Teja, T. O. Daniel, Siva Sankar Sana, G. R. Arpitha, Anima Nanda

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Abstract

Dependence on fossil fuels as the key sources of energy has led to severe energy crisis and environmental issues, i.e., depletion of fossil fuel and emission of pollutants. Production of hydrogen plays a very important role in the hydrogen economy. One of the promising approaches to hydrogen production is the conversion from abundant, clean, and sustainable biomass. Alternative thermochemical (pyrolysis and gasification) and biological processes (biophotolysis, water-gas shift reaction, and fermentation) can be applied to the production of hydrogen in practice. Biomass research is receiving increasing attention recently due to the probable application of waste-to-energy. It is possible that converting biomass into gaseous and queous fuels, electricity, and especially hydrogen is a more efficient way of using biomass.

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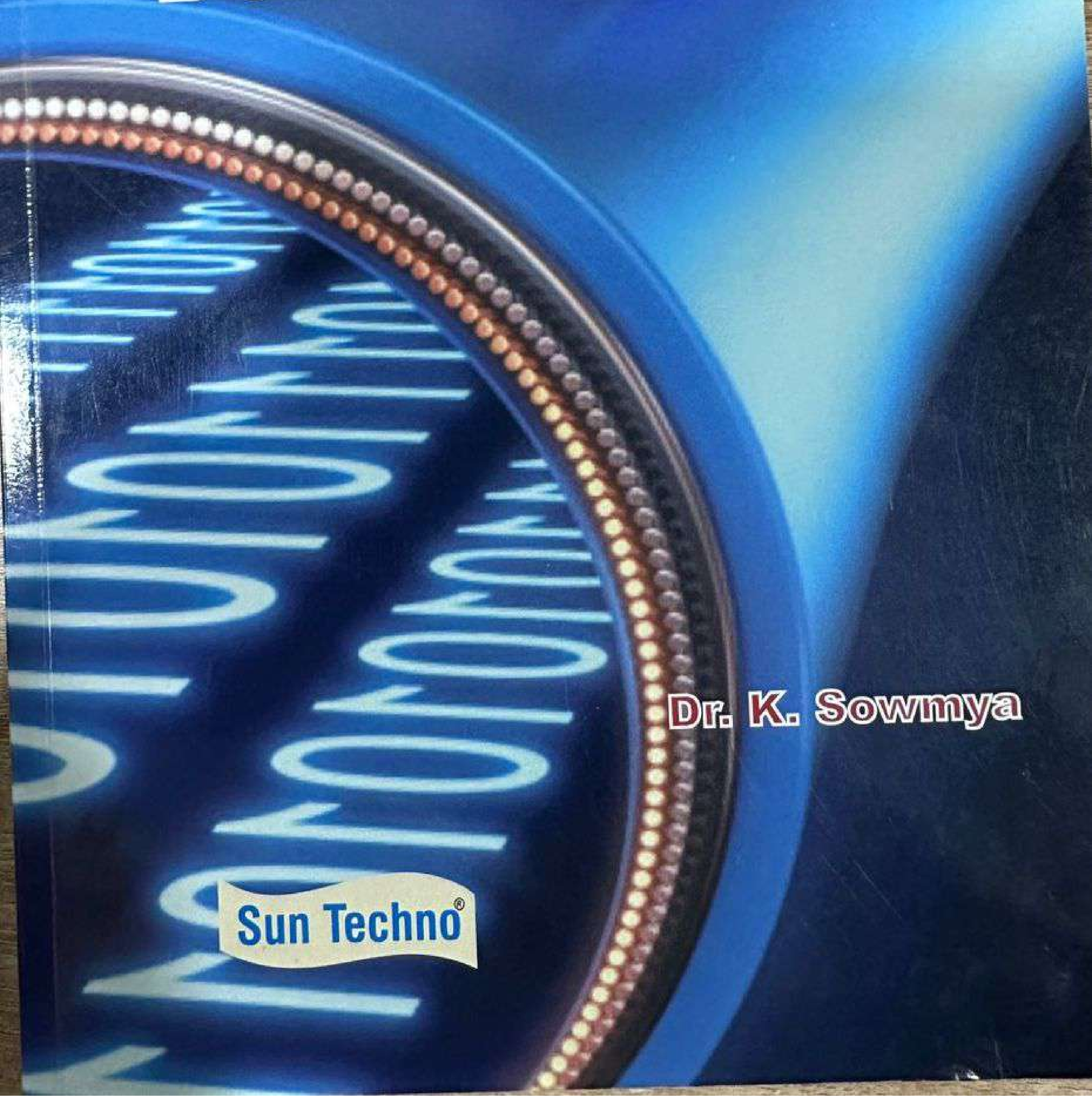

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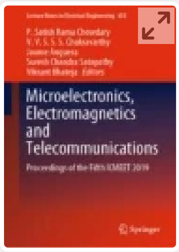

Microelectronics, Electromagnetics and Telecommunications pp 11–19

DGS-Based T-Shaped Patch Antenna for 5G Communication Applications

Akash Kumar Gupta ✉, Anil Kumar Patnaik, S. Suresh, P. Satish Rama Chowdary & M. Vamshi Krishna

Conference paper | First Online: 24 June 2020

Part of the Lecture Notes in Electrical Engineering book series (LNEE,volume 655)

Abstract

Technologies are advancing day by day after the successful implementation of 4G networks. Now, mobile technology is footed into 5G communication. To provide antenna solutions for 5G communications, a T-shaped multiband antenna has been proposed. The T-shaped microstrip patch antenna is intended to operate on 28/38 GHz frequency. T-shaped antenna has a compact size and planar geometry with high gain. To increase the bandwidth of the antenna, defected ground structures are used. These structures are formed by etching rectangular slots in ground.

Keywords

T-shaped antenna **Defected ground structure**

Multiband antenna **Dual-band frequencies** **Gain**

Radiation pattern

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8 - Drilling of glass fiber reinforced plastics (GFRPs): An experimental investigation and finite element study

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Abstract

The use of glass fiber reinforced plastic (GFRP) composites has increased manifold over the last few years. These are generally used in various fields like mechanical, aerospace, and electrical engineering. Recently, GFRP has extended its usage in the automotive and general engineering markets due to its endeavored properties like high stiffness, light weight, and high specific strength. Hole-making is an integral part of the product development cycle. Drilling of GFRP composite materials presents many questions to researchers and scientists. The research in the field has focused on optimization of machining parameters. In the present study, we carried out finite element analysis (FEA) of the drilling behavior of GFRPs. We used the LS-DYNA 13.0 solver in an attempt to investigate the statistical significance of drilling parameters on thrust force and torque. We performed the experiments based on the L_{27} Taguchi design method and we employed the ANOVA for response surface quadratic model to make assumptions for developing a FE model for prognosticating drilling-induced damage. We found the FE results to be in good agreement with the experimental results.

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