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Abstract: This paper presents a new component within the flexible ac-transmission system (FACTS) family, called distributed power-flow controller (DPFC). The DPFC is derived from the unified power-flow controller (UPFC). The DPFC can be considered as a UPFC with an eliminated common dc link. The active power exchange between the shunt and series converters, which is through the common dc link in the UPFC, is now through the transmission lines at the third-harmonic frequency. The DPFC employs the distributed FACTS (D-FACTS) concept, which is to use multiple small-size single-phase converters instead of the one large-size three-phase series converter in the UPFC. The large number of series converters provides redundancy, thereby increasing the system reliability. As the D-FACTS converters are single-phase and floating with respect to the ground, there is no high-voltage isolation required between the phases. Accordingly, the cost of the DPFC system is lower than the UPFC. The DPFC has the same control capability as the UPFC, which comprises the adjustment of the line impedance, the transmission angle, and the bus voltage. The principle and analysis of the DPFC are presented in this paper and the corresponding experimental results that are carried out on a scaled prototype are also shown.

Keywords: AC–DC power conversion, load flow control, power electronics, power semiconductor devices, power system control, power-transmission control.

References:

Abstract: In Wireless Sensor Networks, Traditional Aggregation Schemes were used to aggregate the ciphertext without decryption. Since it causes problems such as aggregation constraint and failure of data integrity, a new technique called Recoverable Concealed Data Aggregation was introduced. Here in this scheme, the base station can recover all the sensing data even these data has been aggregated. Such a property is called as ‘recoverable’. Also it suits well for both homogeneous and heterogeneous wireless sensor networks. In this paper, a comprehensive overview of all the supportive aggregation mechanisms was discussed briefly.

References:
Comparison of Micro-Holes Produced By Micro-EDM with Laser Machining

Abstract: In the MEMS and micro machining worlds, micro-hole making is among the most frequently performed operations. There are many machining processes such as electro-discharge machining (EDM), laser beam machining (LBM), electro-chemical machining (ECM) and ultrasonic machining (USM) etc., used for creating micro-holes. But each machining process has its advantages and disadvantages depending upon the hole diameter, aspect ratio and material used. In this research paper, micro-holes were produced using the laser machining process and these micro-holes were compared with micro-holes produced by micro-EDM. The comparison is done for MRR, dimensional accuracy (including diameter at the entrance and exit, overcut, taper angle and circularity) and surface topography of micro-holes.

Keywords: Micro-holes, micro-EDM, LBM.

References:

To Analyze the Performance of Optical Burst Switched Networks for Energy Savings

Abstract: In this paper we propose a multi-path selection approach to minimize the energy consumption of the optical core network, especially OCS. The wavelength routed paths may have to forgo minimum distance paths and choose a path which is at a larger distance. This tends to degrade the QoS like BER and delay. Given the service requirements, we propose to select the paths such that the overall energy consumed by the optical network decreases and at the same time maintain the service threshold conditions. By using an efficient optical control management mechanism, network nodes (WRN) can be set to ON or OFF states. We have developed a simple mathematical model which is used for the calculation of blocking probability of an OBS network.
Keywords: Anycast, OBS network, BER, Protocols.

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Authors: Pritesh Vora, Bhavesh Oza

Paper Title: A Survey on K-mean Clustering and Particle Swarm Optimization

Abstract: In Data Mining, Clustering is an important research topic and wide range of unsupervised classification application. Clustering is technique which divides a data into meaningful groups. K-mean is one of the popular clustering algorithms. K-mean clustering is widely used to minimize squared distance between features values of two points reside in the same cluster. Particle swarm optimization is an evolutionary computation technique which finds optimum solution in many applications. Using the PSO optimized clustering results in the components, in order to get a more precise clustering efficiency. In this paper, we present the comparison of K-mean clustering and the Particle swarm optimization.

Keywords: Clustering, K-mean Clustering, Particle Swarm Optimization.

References:

Authors: Rupali Mahajan, Rupali Jagtap

Paper Title: Energy Efficient Routing Protocols for Mobile Ad-Hoc Networks

Abstract: Ad hoc on demand distance vector routing protocol is specially designed for mobile ad hoc networks with reduced overhead using Expanding Ring Search technique. But energy consumption should also be considered in MANET due to battery constrain of the nodes. In this paper, we propose an energy efficient route discovery process for AODV based on ERS. Our approach saves energy of the nodes by avoiding the redundant rebroadcasting of the route request packets. The relaying status of the node is decided based on the broadcasting of its RREQ packets by its neighbors. And it helps in reducing routing overhead incurred during the route discovery process. Simulations are performed to study the performance of Energy Efficient AODV (E2AODV) protocol using GloMoSim, the Global Mobile Simulator. This E2AODV reduces energy consumption by 75-85% compared to AODV. It also reduces routing overhead of around 65-75% and there by reduces 60-70% collisions.

Keywords: Mobile Ad-hoc Networks, Ad-hoc On-Demand Distance Vector Routing Protocol, Expanding Ring Search, Energy consumption.

References:
Unified power flow controller (UPFC) is one of the most advanced flexible AC transmission system (FACTS) devices that can simultaneously and independently control both the real and reactive power flow in a transmission line. The utilization of UPFC can result in significant reliability benefits in modern power systems. This paper proposes a novel reliability network model for a UPFC, which incorporates the logical structure and the distinct operating modes of a UPFC. Two-state or three-state models have been used for UPFC by previous researchers. The proposed model divides the UPFC operating modes into four states, namely the UPFC up state, STATCOM state, SSSC state and UPFC down state, in order to improve the accuracy of the model by recognizing the practical operating states of a UPFC. The new model also incorporates an AC flow-based optimal load shedding approach to assess the impact of bus voltages and reactive power flow on UPFC in order to decide appropriate load curtailment in the reliability evaluation process. The performance of the proposed model is evaluated with results obtained from a computer simulation and from an experimental prototype.

Keywords: Low harmonic rectifier, power factor correction (PFC), single-stage single-switch rectifier, unity power factor (UPF).

References:

Authors: V. S. K. Sandeep, M. Divya Charitha, G. Uday Bhawan

Paper Title: Reliability Evaluation of Bulk Power Systems Incorporating UPFC

Abstract: Unified power flow controller (UPFC) is one of the most advanced flexible AC transmission system (FACTS) devices that can simultaneously and independently control both the real and reactive power flow in a transmission line. The utilization of UPFC can result in significant reliability benefits in modern power systems. This paper proposes a novel reliability network model for a UPFC, which incorporates the logical structure and the distinct operating modes of a UPFC. Two-state or three-state models have been used for UPFC by previous researchers. The proposed model divides the UPFC operating modes into four states, namely the UPFC up state, STATCOM state, SSSC state and UPFC down state, in order to improve the accuracy of the model by recognizing the practical operating states of a UPFC. The new model also incorporates an AC flow-based optimal load shedding approach to assess the impact of bus voltages and reactive power flow on UPFC in order to decide appropriate load curtailment in the reliability evaluation process. The performance of the proposed model is evaluated with results obtained from a computer simulation and from an experimental prototype.

Keywords: Low harmonic rectifier, power factor correction (PFC), single-stage single-switch rectifier, unity power factor (UPF).
verified using a test system, and compared with different reliability models of UPFC. Various operating schemes, such as different placement locations of UPFC, and different capacities of UPFC are used to illustrate the advantages of the developed models, and to examine the impacts of UPFC on the system reliability.

**Keywords:** Unified power flow controller; reliability evaluation; bulk power system; load curtailment model.

### References

Paper Title: **Green Approach to Corrosion Inhibition of Mild Steel Using Emilia Sonchifolia and Vitex Doniana In 2.5M HCl Medium**

**Abstract:** This research studied the use of leaves extract of Emilia sonchifolia and Vitex doniana as corrosion inhibitors of mild steel in 2.5M HCl medium using gasometric method at 30°C and 60°C. The result obtained showed that inhibition efficiency of Emilia sonchifolia leaves extract on the surface of the mild steel was 60.38% at 30°C and 53.13% at 60°C while that of Vitex doniana leave extract was 68.22% at 30°C and 54.98% at 60°C. Adsorption of Emilia sonchifolia leaves extract on the surface of the mild steel follows Langmuir, Temppkin and Freundlich adsorption isotherm while adsorption of Vitex doniana leaves extract on the surface of the mild steel obeyed Langmuir and Temppkin adsorption isotherm. Physical adsorption was proposed from the Ea, ΔH and ΔG calculated.

**Keywords:** Corrosion, inhibitor, mild steel, Emilia sonchifolia and Vitex doniana

**References:**

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Authors: K. Vijayasree, T. Rajasekhar

Paper Title: **The Grapheme-Personification Synaesthesia at Indian Glance**
Abstract: The present investigation of the study is to examine the grapheme-personifications in Indian context. The study deals the linguistic characteristics of letters and numbers with regard to gender, personality, appearance and social relations with the subjects who are Synaesthetes (Experimental group) and non-Synaesthetes (control group). The subjects are considered Synaesthetes who perceive together with different modalities. The subjects consist of 6. The means, SDs, correlation, Z tests are employed for the investigation of the study to find out relations/association of linguistic characteristics of letters and numbers with regard to gender, personality, appearance and social relations. The results indicate the significant relations influence partly of the linguistic characteristics of letters and numbers with regard to gender, personality, appearance and social relations. There is no phenomenological consistency in linguistic characteristics of letters and numbers with regard to gender, personality, appearance and social relations between synaesthetes and non-synaesthetes.

Keywords: Grapheme-personification, synaesthesia, synaesthetes, linguistic characteristics, gender, personality, appearance and social relations.

References:


Authors: Sakadasariya Achyut R

Paper Title: Survey of Resource and Job Management for Load Balancing In Grid Computing

Abstract: Load balancing is the process of load distribution, handling incoming requests and better resource utilization. In a distributed grid computing system it is desirable to achieve an efficient distribution of workload among systems so that each and every machine would have the same workload. No machine should remain idle while other machines are overloaded. Load distribution is done to achieve better response time, better resource utilization and thus improved performance. For improve the performance we have various load balancing algorithms, different types of load balancing strategies and techniques.

Keywords: Computational grid, resource utilization, request handling, data migration.

References:


15. AWARE JOB GROUPING

BASED SCHEDULING IN GRID C


31. AWARE JOB GROUPING

BASED SCHEDULING IN GRID C


33. AWARE JOB GROUPING

BASED SCHEDULING IN GRID C


35. AWARE JOB GROUPING

BASED SCHEDULING IN GRID C


changing the IT delivery model to provide on-demand self-service access to a shared pool of computing resources (physical and virtual) via broad network access to offer reduced costs, capacity utilization, higher efficiencies and mobility. Recently Distributed Denial of Service (DDoS) attacks on clouds has become one of the serious threats to this buzzing technology. Distributed Denial of Service (DDoS) attacks continue to plague the Internet. Distributed Denial-of-Service (DDoS) attacks are a significant problem because they are very hard to detect, there is no comprehensive solution and it can shut an organization off from the Internet. The primary goal of an attack is to deny the victim's access to a particular resource. In this paper, we want to review the current DoS and DDoS detection and defence mechanism.

**Keywords:** Cloud Computing, Distributed Denial of Service (DDoS) attack, TTL, Hop-count, and packet marking.

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Abstract: In this paper, a new parallel-connected single phase power factor correction (PFC) topology using flyback converter in parallel with forward converter is proposed to improve the input power factor with simultaneously output voltage regulation taking consideration of current harmonic norms. Paralleling of converter modules is a well-known technique that is often used in medium-power applications to achieve the desired output power by using smaller size of high frequency transformers and inductors. The proposed approach offers cost effective, compact and efficient AC-DC converter by the use of parallel power processing. Forward converter primarily regulates output voltage with fast dynamic response and it acts as master which processes 60% of the power. Flyback converter with AC/DC PFC stage regulates input current shaping and PFC, and processes the remaining 40% of the power as a slave. This paper presents a design example and circuit analysis for 300 W power supply. A parallel-connected interleaved structure offers smaller passive components, less loss even in continuous conduction inductor current mode, and reduced volt-ampere rating of DC/DC stage converter. MATLAB/SIMULINK is used for implementation and simulation results show the performance improvement.

Keywords: Circuit analysis, PFC, Power Conversion.

References:

Authors: Dhudem Santhosh, Jisha Bhubesh, Khaja Rafiulla

Paper Title: Parallel Power Flow AC/DC Converter with High Input Power Factor and Tight Output Voltage Regulation for Universal Voltage Application

16. 76-78

Abstract: A Network is a collection of many devices, where each node is said to be wired or wireless connection between them. And now a day’s most of the threat comes to the network either from outside or from a sort of situation which occurs internally due to many reasons. So the Intrusions or threat which occurs due to these situations are generally more damageable than the normal ones. This paper is introducing a technique to analyze various types of alerts & also generating attack graph for such alerts by using two algorithm i.e. correlation of isolated alerts to alert-pair, attack graph generation. And after analyzing the threat we are also performing evaluation technique to determine the seriousness of the threat and remove it. In this paper our vital focus is on alert analysis. In the current intrusion detection systems, it produces large volumes of alerts. These overwhelming alerts make it challenging to recognize and manage them. Therefore, we have to condense the amount of the alerts and external useful information from them. However, the NSA requires the alert analysis techniques to suggest high-level information such as how serious of attacks are and how dangerous of devices are and which attacks or devices require administrator to pay attention to. To deal with this problem we put forward a time and space based alert analysis technique which can correlate related alerts without background knowledge and offer attack graph to help the administrator understand the attack steps visibly and efficiently. And a threat evaluation is given to find the most hazardous attack, which further saves administrator's time and energy in handing out large amount alerts.

Keywords: DARPA IDS Evaluation Dataset, Intrusion Detection, NIDS, Snort.

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