D.N.R. COLLEGE OF ENGINEERING & TECHNOLOGY

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Academic Year 2020-21

Number of Research Papers Published per Teacher in the Journals Notified on UGC Care List

Sl. No.	Name of the Faculty Author	Title of the Paper	Name of the Journal	ISBN / ISSN Number	Volume / Month	URL / DOI
1.	Dr. S. Koteswari	Design & implementation of innovative IOT based smart agriculture management system for the efficient crop growth	Science And Technology	0377-9254	7 / July	https://jespublication.com/upload/2020-110789.pdf
2.	Dr. A Ramamurthy	An Innovative artificial intelligence approach using data mining clustering algorithm	Turkish journal of computer and mathematics education-	2168-2175	11 / November	https://www.turcomat.org/index.php/turkbilmat/article/view/12252
3.		Design and Implementation of Cloud Computing Based Mixed Big Data Mining	Test Engineering and Management	0193-4120	11 / November	https://dl.acm.org/doi/abs/10.3233/JIFS-190558
4.		Efficient System Performance for Data Replication in Cloud Computing International Journal of Engineering and Advanced Technology	IJEAT	2249 – 8958	8 / February	https://www.ijeat.org/wp-content/uploads/papers/v8i3/C5979028319.pdf
5.	Dr. Buddharaju Venkata Subrahmanya Varma	An innovative artificial intelligence approach using data mining clustering algorithm	Turkish Journal of Computer and Mathematics Education	2168-2175	11 / October	https://www.turcomat.org/index.php/turkbilmat/article/view/12252
6.		Design and Analysis of performance of cloud server embedded with cryptography and dynamic access control mechanism	Alochana Chakra Journal	2231-3990	9 / July	https://people.cs.pitt.edu/~bill/pubs/C16a.pdf
7.		Design and Implementation of Cloud Computing Based Mixed Big Data Mining	Test Engineering and Management	0193-4120	11 / Novembetr	https://dl.acm.org/doi/abs/10.3233/JIFS-190558
8.	G. N. D. Srinivas	Automatic power factor correction and monitoring system	International Journal of Innovative Technologies	2321-8665	8 / June	http://www.ijitech.org/uploads/243516IJIT17669-15.pdf
9.	N. Mary Leena	Design, fabrication and analysis of key-shaped micro strip patch antenna for ultra-wide band applications	IJARET	0976-6499	11 / June	https://iaeme.com/MasterAdmin/Journal_uploads/IJARET/VOLUME_11_ISSUE_6/IJARET_11_06_055.pdf
10.	K. Sekhar Babu	Design and Analysis of Micro strip Patch Antenna Using Aperture Couple Feeding in X-band for Tracking Applications	JES	0377-9254	11 / July	https://jespublication.com/upload/2020-1107103.pdf
11.	Dr. G.G. Rathnam	A study of maya angeiou,s poetry :still i rise	RESEARCH JOURNAL OF ENGLISH (RJOE)2020	2456-2696	5 / May	www.rjoe.org.in

12.	Dr. K B V S R Subrahmanyam	Mentoring approaches for various learning behaviours of the future engineers in professional education competency and commitment development	Journal of Engineering Sciences transformations	2394-1707	34 / January	https://dx.doi.org/10.16920/jeet/2021/v34i0/157192
13.		Parametric optimization of machining parameters by using coated copper wire electrode on wire electric discharge machining.	International Journal of Mechanical and Production Engineering Research and Development (IJMPERD)	2249–8001	10 / June	https://www.researchgate.net/profile/Ippili-Harish/publication/343381968_
14.		Parametric Optimization Of Machining Parameters By Using Brass Wire Electrode On Wire Electric Discharge Machining,	International Journal of Mechanical and Production Engineering Research and Development (IJMPERD)	2249–8001	10 / June	http://www.tjprc.org/view_paper.php?id=12889
15.	Dr. I. Harish	Parametric Optimization Of Machining Parameters By Using Annealed Copper Wire Electrode On Wire Electric Discharge Machining	International Journal of Mechanical and Production Engineering Research and Development (IJMPERD)	2249–8001	10 / June	http://www.tjprc.org/view_paper.php?id=12890
16.		Reused Sunflower Oil As Dielectric Fluid For Electric Discharge Machining Process.	International Journal of Mechanical and Production Engineering Research and Development	2249–8001	10 / June	http://www.tjprc.org/view_paper.php?id=12913
17.		A Hybrid grey-fuzzy logic approach for optimization of process parameters in wire electrical discharge machining of D2 steel.	Journal of critical reviews	2394-5125	7 / March	https://www.researchgate.net/publication/343995448_
18.		A comparative study on the performance of wire EDM machining of D2 steel using uncoated, coated and annealed wire.	Journal of critical reviews	2394-5125	7 / March	https://www.researchgate.net/publication/343995382_
19.	K Venkanna Naidu	Tracking and automation of images by colour	JES	0377-9254	11 / Augest	https://jespublication.com/issue.php?cid=22&scid=61

DESIGN & IMPLEMENTATION OF INNOVATIVE IoT BASED SMART AGRICULTURE MANAGEMENT SYSTEM FOR EFFICIENT CROP GROWTH

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Abstract— India is a land of agriculture. With rapid population growth and increasing food demand, boosting farm productivity and yield is essential. More than 70% of the population is involved directly or indirectly in crop production activities. This sector contributes to the Indian economy a great deal. It contributes over 17% of the total Gross Domestic Product (GDP). With the introduction of newer seed varieties, new methods of agriculture, and the use of efficient fertilizers, crop production has increased. But without using the smarter methods, the agricultural domain still remains in the backlogs. The conventional method involves a lot of human instincts which at times fail. And thus there is a need for a smarter way of crop production using Internet of Things (IoT) and Machine learning techniques. The proposed system is a smart agriculture management system (SAMS) which is automated to help farmers to increase the crop production. The system also helps in reduction of resource wastage by adopting a technique called precision agriculture. The system uses different sensors for data acquisition to measure various environmental factors which are required for crop production. The data obtained from these sensors is visualized in the form of graphs. Smart agriculture is a farming system which uses IoT technology. This emerging system increases the quantity and quality of agricultural products. IoT devices provide information about nature of farming fields and then take action depending on the farmer input. In this paper, an IoT based advanced solution for monitoring the soil conditions and atmosphere for efficient crop growth is presented. The developed system is capable of monitoring temperature, humidity, soil moisture level using NodeMCU and several sensors connected to it. Also, a notification in the form of SMS will be sent to farmer's phone using Wi-Fi about environmental condition of the field.

The system uses a network of several NodeMCUs (ESP8266) micro-controllers to monitor and control multiple systems over the cloud. The NodeMCUs constantly monitor the respective states of various elements of the farm and report the data to the central control unit. The user can then take appropriate actions from analyzing this data, i.e. assign their desired tasks to each of the micro-controllers separately.

Keywords— IoT, Machine Learning, Precision Agriculture, Data Acquisition, Crop Prediction, Soil fertility, Sensors, Microcontroller, control system, load management, water management, irrigation.

1. INTRODUCTION

With the recent development in the field of IoT, Big Data, Cloud and Mobile Computing, the world is moving towards smarter implementations to real-world problems. If speaking about the Indian context, agriculture happens to be the backbone of this developing nation's economy, making a transition from conventional agricultural methods to a much better and smarter method of agriculture will change the current scenario invariably. Improper maintenance of the crops leads to crop failure which in turn leads to huge loss for the farmers. Smart agriculture can thus help farmers in this aspect and make sure the economy of the country is improved when considered on a large scale. Smart agriculture employs a technique called precision farming where all the environmental aspects required by the crop to grow are constantly monitored. Monitoring alone cannot help the health of the crops and thus controlling these aspects if possible is also required. Besides, all this data is preserved and can be used for further prediction of the best suitable crop to be grown in that particular environment. The concepts of Machine Learning, IoT, Cloud computing can be used to develop a

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Page No:607

AN INNOVATIVE ARTIFICIAL INTELLIGENCE APPROACH USING DATA MINING CLUSTERING ALGORITHM

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ABSTRACT: Recently huge amount of data is present in internet as the network technology and the information technology has been developing rapidly. But there is lack of knowledge which becomes a serious problem. The Data mining in the cloud combines application of conventional data mining under the cloud computing. One of the most popular and widely used algorithms in this cloud data mining is the clustering algorithm. The clustering algorithm maps each and every data to one group which is called clusters and hence forms a clean partition of the specified data. In this paper an innovative artificial intelligence approach using Data mining clustering algorithm is introduced. One of the most popular unsupervised clustering algorithms is FCM algorithm. The FCM algorithm is developed based on the fuzzy entropy function. In this, Probability Based Matching (PBM) index as well as F-measure method is used to validate the clustering results. Because there is requirement in FCM algorithm to define the number of clusters and to define the different cluster values corresponding to different fuzzy partitions. From the results it can be shown that the introduced fuzzy c-mean algorithm with fuzzy entropy can achieve better performance compared with the traditional FCM algorithm and the optimum number of clusters can be determined automatically.

KEYWORDS: Data mining, Cloud Computing, Fuzzy K-means Clustering algorithm, Artificial Intelligence.

I. INTRODUCTION

At present an incredible speed of data is generated in the social media websites by this modern society because of its increased popularity and fast development. In addition with the ubiquitous social and community activities various types of data is generated constantly with the logical testing, logistic transmission, website access, mobile communication, etc., which indicates that users have entered into a new era of huge increasing of big data. Although this big data in a real time environment isn't just "big" it has an unpredictable data and difficult problems can be solved using the various data structures for technology requirements in data analysis. Big data is simply seemed in a literal point of view as increased data size. An analytical technology is require for this which filter outs the low density or low valued data and then extracts best of data into the high density or high valued data from knowledge [1].

Various types of new technologies, approaches and applications have been generated in the latest decades with the rapid development of informative industry. Those generated new technologies which contribute to the development of big data are of analytics, mass storage and Internet [2]. The data mining has been developed into an inter disciplinary subject over changing and developing from the last few decades in which various disciplines like databases, statistics, pattern recognition, machine learning, parallel computing and artificial intelligence of relevant information are integrated [3]. From the original normal data to today's messy and large amount of data, the objects of data that are examined have been evolved because of the development in the data mining. Thus, research scope has become broadened and the technical requirements became increase.

First a dataset is taken in this and select a set of documents (X). Each of those selected documents (X_i) have 'm' number of features or elements with a m-dimensional vector. Every

Design and Implementation of Cloud Computing Based Mixed Big Data Mining

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2Dr. A Ramamurthy, Professor, Dept. of CSE, DNR College of Engineering and Technology, Bhimavaram, A.P, India

ABSTRACT: With the application and popularization of Internet, the data of network resources are becoming more and more massive and diversified. The amount of digital data is increasing beyond any previous estimation and data stores and sources are more and more pervasive and distributed. So much data will undoubtedly bring people a vast amount of information, but the difficulty of finding useful knowledge for the enterprise or individual from the vast amount of data has increased. This paper elaborates the design and implementation of Cloud Computing based mixed Big Data Mining. Cloud computing platform can perform dynamic resource scheduling and allocation, with the characteristics of highly virtualization and high availability, which meets the needs of efficient data mining. Taking the multifunctional Hadoop big data mining platform as an example, this article analyses the internal workflow of big data mining. The performance of described model is evaluated through the execution of workflow-based data analysis applications on a pool of virtual servers hosted by a Microsoft Cloud data center. The experimental results demonstrated the effectiveness of the framework.

KEYWORDS: Cloud Computing, Data Mining, Cloud data center, Big Data.

I. INTRODUCTION

In recent years, with the continuous development of information technology, communication technology and network technology, and related network derivative

129

Efficient System Performance for Data Replication in Cloud Computing

A Ramamurthy, V.Goutham

Abstract: Unlike conventional superior registering condition, for example, group and supercomputers, the cloud processing is a gathering of interconnected and virtualized figuring assets that are figured out how to be one brought together high performance processing power. Be that as it may, the Cloud condition establishes a heterogeneous and a profoundly powerful condition. Dissatisfactions at the server ranches centers are standard as an option because of the broad size of real resources and information. Eventually, the cloud condition requires a gainful adaptable insights replication organization saving in musings the quit goal to advance to the natural ordinary for the Cloud circumstance. on this paper, we prompt a records replication way which adaptively picks the measurements data for replication with a specific surrender reason to decorate the general constancy of the system and to satisfy the ideal incredible of organizations. Likewise, the proposed strategy picks effectively the amount of generations and correspondingly the convincing information center points for replication. The generally realized actualities documents are chosen for replication in perspective of using a lightweight time-course of action procedure, which dismembers the proceeded with case of insights certainties requests, and offers estimates to the future realities demands. Exploratory outcomes uncover that the proposed system continues satisfactorily to improve the enduring pleasant of the Cloud structure underneath examination.

Index Choice: System availability, replication, adaptive, cloud computing

I. INTRODUCTION

Distributed computing is a substantial scale parallel and disseminated registering framework. It includes an aggregation of interconnected besides, virtualized preparing resources that are made sense of how to be one bound together enlisting resources. The gave dynamic, virtual resources, for instance, frameworks, servers, accumulating, applications and data, can be passed on as an organization. Organizations are passed on demand to the end-customers over quick Internet as three sorts of handling configuration, to be specific Programming as a Service (SAAS), Platforms as a Service (PAAS) and Infrastructure as an administration (IAAS). The primary objective is to provide customers progressively versatile corporations direct, greater less costly, flexible, substantially open and memorable enlisting resources[1].The software program as a service (SaaS) designing offers programming applications advocated and

supervised by means of a master affiliation for the quit-consumer superseding secretly run programs with internet groups programs. in the Infrastructure as a Service (IaaS), Service incorporates administration of equipment and programming for preparing, information stockpiling, systems and any required foundation for sending of working frameworks and applications which would typically be required in an information focus overseen by the client. In the Platform as a Service (PaaS), supplier contains programming tongues and mechanical assemblies and an utility transport level encouraged by method for the authority business venture to help advancement and movement of end-buyer programs[2]. at the point when all is said in accomplished, the Cloud Computing offers the item and contraption premise as organizations using gigantic scale insights centers[3]. at last, Cloud figuring moved away the estimation and records accumulating from the stop buyer and onto extensive wide assortment of server ranches establishment. This mitigates clients of the burdens of framework and readiness provisioning and organization. gadget and writing computer programs are passed on to clients as on-ask for advantages over the web. The Cloud structure can scale out the framework potential to fulfill the ideal non-helpful nature of organizations (QoS). be that as it may, it is endeavoring to give high enduring lovely and skilled get admission to the cloud server cultivates in perspective of the far reaching scale and dynamic nature of the Cloud. Replication is the way toward giving different impersonations of a comparable administration at different nodes[4]. Replication is a connected way inside the advanced restrictive fogs structures, for example, GFS (Google report system) and HDFS (Hadoop disseminated report gadget) [5, 6]. in the cloud, records replication is cultivated through records resource pool and the quantity of measurements duplicates is statically set in gentle of records and delight in[7]. additionally, it isn't urgent to make propagation for all measurements records, uniquely for those non a great deal of the time or as of past due used information insights. In this manner, it's miles vital to adaptively mirror the each now and again used realities data, decide the measure of information impersonations and the actualities center points regions wherein to put the new impersonations as shown by methods for the current cloud circumstances. on this paper, we exhort a flexible replication strategy in a cloud area that adaptively adjusts to the ensuing issues:

• What to duplicate to enhance the non-valuable QoS. The select framework is transcendently depends on assessing the historical backdrop of the measurements needs making utilization of a light-weight time-affiliation gauge estimation. using the normal information ask, we can recognize what information archives expect replication to adorn the structure constancy.

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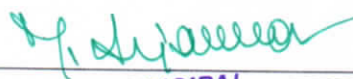
KEYWORDS: Data mining, Cloud Computing, Fuzzy K-means Clustering algorithm, Artificial Intelligence.

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Design and Analysis of Performance of Cloud Server Embedded with Cryptography and Dynamic Access Control Mechanism

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ABSTRACT

Now a day's almost all small scale and large scale organizations try to adopt the centralized cloud server for their data storage and accessing from the remote locations connected all together from a centralized server with the help of internet. As we all know that till now no cloud service provider is providing privacy for the data in terms of encryption and key access in order to provide data authorization. Enabling cryptographically enforced access controls for data hosted in untrusted cloud is attractive for many users and organizations. However, designing efficient cryptographically enforced dynamic access control system in the cloud is still challenging. In this paper, we propose Crypt-DAC, a system that provides practical cryptographic enforcement of dynamic access control. Here Crypt-DAC try to provide dynamic access for the cloud users based on their individual users request. If any user want to download the data ,he/she need to send request permission for the cloud server and cloud server in turn check the permissions are approved from the admin.Here the admin is the main person who can decide the preferences for the end users. manner. By conducting various experiments on our proposed model, our result clearly tells that our proposed system is practical and efficient.

Keywords

Cloud Computing, Crypt-DAC, Cryptographically, Dynamic Access Control, Data Integrity, Data Authorization, Centralized Server.

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Design and Implementation of Cloud Computing Based Mixed Big Data Mining

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ABSTRACT: With the application and popularization of Internet, the data of network resources are becoming more and more massive and diversified. The amount of digital data is increasing beyond any previous estimation and data stores and sources are more and more pervasive and distributed. So much data will undoubtedly bring people a vast amount of information, but the difficulty of finding useful knowledge for the enterprise or individual from the vast amount of data has increased. This paper elaborates the design and implementation of Cloud Computing based mixed Big Data Mining. Cloud computing platform can perform dynamic resource scheduling and allocation, with the characteristics of highly virtualization and high availability, which meets the needs of efficient data mining. Taking the multifunctional Hadoop big data mining platform as an example, this article analyses the internal workflow of big data mining. The performance of described model is evaluated through the execution of workflow-based data analysis applications on a pool of virtual servers hosted by a Microsoft Cloud data center. The experimental results demonstrated the effectiveness of the framework.

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129

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Automated Power Factor Correction And Monitoring System

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Abstract: This paper is mainly proposed for reducing the power loss in industries by using power factor compensation through a number of shunt capacitors. Power factor is defined as the ratio of real power to apparent power. So, the increase in reactive power (real power) increases the apparent power, so the power factor also decreases. By having low power factor, the industry needs more energy to meet its demand, so the efficiency decreases. In this system we proposed the time lag between zero voltage pulse and zero current pulse delay generated by suitable op-amp circuits in comparator mode and fed into two interrupt pins in microcontroller. Microcontroller displays the power loss due to inductive load on the LCD. This process is continuously actuate until the power loss would be zero by using relays which is used to bring the shunt capacitors into load circuit. 8-bit microcontroller is used in this project which belongs to 8051 family.

Keywords: VZCD, IZCD, PFC, LCD, Shunt Capacitors, Inductive Load.

I. INTRODUCTION

In the present technological revolution, power is very precious and the power system is becoming more and more complex with each passing day. As such it becomes necessary to transmit each unit of power generated over increasing distances with minimum loss of power. However, with increasing number of inductive loads, large variation in load etc. the losses have also increased manifold. Hence, it has become prudent to find out the causes of power loss and improve the power system. Due to increasing use of inductive loads, the load power factor decreases considerably which increases the losses in the system and hence power system losses its efficiency. Power factor is defined as the ratio of real power to apparent power. This definition is often mathematically represented as KW/KVA, where the numerator is the active (real) power and the denominator is the (active + reactive) or apparent power. It is a measure of how effectively the current is being converted into useful work output. A load with a power factor of 1.0 result in the most efficient loading of the supply and a load with a power factor of 0.5 will result in much higher losses in the supply system. A poor power factor can be the result of either a significant phase difference between the voltage and current at the load terminals, or it can be due to a high harmonic content or distorted/discontinuous current waveform. Poor load current phase angle is generally the result of an inductive load such as an induction motor, power transformer, lighting ballasts, welder or induction furnace.

A distorted current waveform can be the result of a rectifier, variable speed drive, switched mode power supply, discharge lighting or other electronic load. Automatic power factor correction techniques can be applied to industrial units, power systems and also households to make them stable. As a result, the system becomes stable and efficiency of the system as well as of the apparatus increases. Therefore, the use of microcontroller based power factor corrector results in reduced overall costs for both the consumers and the suppliers of electrical energy. Power factor correction using capacitor banks reduces reactive power consumption which will lead to minimization of losses and at the same time increases the electrical system 's efficiency. Power saving issues and reactive power management has led to the development of single phase capacitor banks for domestic and industrial applications. The development of this project is to enhance and upgrade the operation of single phase capacitor banks by developing a micro-processor based control system. The control unit will be able to control capacitor bank operating steps based on the varying load current. Current transformer is used to measure the load current for sampling purposes. Intelligent control using this micro-processor control unit ensures even utilization of capacitor steps, minimizes number of switching operations and optimizes power factor correction.

II. LITERATURE SURVEY

$$Pavg = VIcos\varphi$$

Where, φ is the phase angle between the voltage and current. The term $cos\varphi$ is called the power factor. Power factor is the ration between the KW and the KVA drawn by an electrical load where the KW is the actual load power and the KVA is the apparent load power. It is a measure of how effectively the current is being converted into useful work output and more particularly is a good indicator of the effect of the load current on the efficiency of the supply system.

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DESIGN, FABRICATION AND ANALYSIS OF KEY-SHAPED MICROSTRIP PATCH ANTENNA FOR ULTRA-WIDE BAND APPLICATIONS

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ABSTRACT

This work presents the design, fabrication and analysis of microstrip patch antenna for ultra-wide band applications. The proposed key shape resembled antenna consists of two asymmetric hexagonal cuts on the ground plane. The defected ground structure and partial substrate removal techniques as well as coplanar waveguide feeding techniques are used to enhance the gain of the designed antenna. An efficient microstrip patch antenna with ultra-wide bandwidth has been proposed in this paper. The antenna dimensions are 50 x 50 x 1.6 mm³. The FR4 substrate material with dielectric constant of 4.4 is used for the proposed antenna. The proposed antenna is simulated using high-frequency structural simulator (HFSS) software. The initial designed antenna is found to be exhibit wide band characteristics with a gain of 6.26 dB and bandwidth of 6.48 GHz. The decreased ground area (modified design) antenna shows wide band characteristics with an enhanced gain of 6.45 dB and bandwidth of 6.83 GHz. Fabricated MPA from modified design is also wide band characteristics with a gain of 6.55 dB and band width of 7.71 GHz. These values are showing a good agreement between results of theoretical and practical.

Key words: High Frequency structure simulator software; Microstrip patch Antenna; Co-planar waveguide feed technique; Defected ground structure technique; Ultra-wide band.

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http://iaeme.com/Home/issue/IJARET?Volume=11&Issue=6

1. INTRODUCTION

In recent years, the study of microstrip patch antennas (MPAs) has made great progress due to their advantages such as low cost, low weight, low profile, planar configuration, easy for fabrication and conformability with microwave integrated circuits [1], [2]. They have been extensively used in the civilian and military applications such as bio-imaging, television,

Design and Analysis of Microstrip Patch Antenna Using Aperture Couple Feeding in X-band for Tracking Applications

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Abstract— The main motive of general-purpose radar is to detect and evaluate the range of the target but in application such as radar seekers, tracking is an important task. For this purpose radar used for tracking by itself is a very complex system. The antenna is like an eye for the system. The design of such antenna is a very complex task as the demand of high gain, narrow beam width and low side lobes. There are many antennas are available in the literature which are designed specifically towards tracking application. Starting from very simple horn antenna to combination of different shaped horn antenna are discovered. Present day radar used very advanced technology especially for military application with the advanced digital signal processing and spread spectrum technology. Here it is desired to design and study of a wideband aperture coupled micro strip patch array is presented. The proposed design considers the frequency range 9GHz to 10GHz but may be adapted to other frequencies. A 16-element uniform array of the size of about 80mm by 80mm by 8mm provided gain 16.7dBi and beam width 21°-29°. The side lobe level is very crucial parameter in such application specified of said to be more than 12dB. It is decided that a uniform micro strip array would be the best choice. However, achieving a wider band width of more than 10% by a micro strip array is a different task. Hence it is proposed here to design aperture coupled feeding which has a property of wider band width, design, simulation, are in the scope of the present work having resonance frequency 9.5 GHz.

Keywords— Aperture Couple, High gain, MicroStrip, Patch Antenna, Tracking Applications.

1. INTRODUCTION

Recent days, Antenna play an important role in wireless communication system. Antenna is an integral part of any radar system, particularly in missile system. A radar seeker which is known to be an eye of the missile needs an antenna which has strict parameters to be implemented. The main motive of general-purpose radar is to detect and evaluate the range of the target but in application such as radar task seekers [1-3]. Tracking is an important task. Radar used for tracking by itself is a very complex system for which the antenna is like an eye for the system. The design of such antenna is a very complex task as the demand high gain, narrow beam width and low side lobes. This parameter though they are linked to each other needs to be achieve. There are many antennas are available in a literature which are design specifically towards the tracking application [4-6]. Starting from very simple Horn antenna to Combination of horn antenna. Slotted wave guide antenna and Microstrip arrays are present day development in tracking application [6-8]. Present day radar used very advanced technology especially for military application with the advance digital signal processing and spread spectrum technology. The requirement has taken a different orientation. This has put a higher demand for stricken antenna parameter too.

Microstrip antennas are used in arrays as well as single elements. Uniform array antenna designs have received wide attention due to their significant role in radar and satellite communication system. By using array in Microstrip antenna we enhance the performance of antenna like increasing gain, directivity and other functions which are difficult to do with the single element. And feeding of Microstrip array antenna is by series-feed network or corporate feed network [8-10].

The remaining paper is structured as follows. Section 2 deals with the existing method of antenna

A STUDY OF MAYA ANGELOU'S POETRY: 'STILL I RISE'

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Abstract:

The factual African-American renaissance happened for the period of the last quarter of the twentieth century with the rise of subaltern theory and post colonial theory. The impact of African American artistic production an American and world culture is significant in the fields of films, theater, television, music and painting and literature. The galaxy of enormous African American women writers known as Toni Morrison, Rita Dove, Alice Walker Maya Angelou and many others have denounced the Eurocentric white dominant canon by establishing their own tradition of literary writings. The notable writers Toni Morrison is the first African American Nobel prize winner in Literature in the year 1993 and Alice Walker's theory of feminism has found a space for oppressed communities like blacks across the world. The institutionalization of African American literature as subject of academic inquisition ensured that these writers as well as their readers were devotedly aware of the tradition in which they have worked. African American Women's writing is stranded on their anguish due to their race, class and gender. Though not admitted in libraries or schools, they expressed themselves in a media allowed to them: cooking, gardening, storytelling and quilting. Contemporary African American women writers, therefore, reworked mother's stories in their writing to confront the patriarchal structure and thus decanter the center. The present paper is an endeavor to read Maya Angelou's poetry that faced a little critical attention then her auto biographies. The occupation of Maya Angelou is a testament both to her vivacity and power to endure. She has uttered her talents as dancer, producer, singer, composer, actor, journalist, teacher as well as writer. She was the first women honored by President Bill Clinton who read it on his inauguration on 21 Jan.1993. Her poetry deals with political and social issues connecting African American and confronts the vitality of traditional American values and myths. She also describes African-American women's struggles and raise voice against the gender codes of American society by celebrating African American women's self respect. Throughout her writings Angelou spread the message of love, hope sisterhood and peace across the world by singing, her notable poem "I am the dream and the hope of slave. I rise"

Keywords: African-American women's writing, class, race and gender, optimistic, and confident tone.

PRINCIPAL

D.N.R. College of Engg.

BHIMAVARAM-534 -

Mentoring approaches for various Learning behaviors of the future engineers in professional education: Competency and Commitment Development

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Abstract: Mentoring in higher education facilitates students to enhance the confidence level, improves the probability of academic accomplishment, and reduces chances of failure. Students depend on the expertise and involvement of mentors to support them graduate in a well-timed manner and guide on them to their best possible career. The mentoring significance is not always distinctly understood in education. Researchers are becoming gradually more sensible of its complexity. Choosing a mentor is critical in any career field, and engineering is no different. Mentors can offer future engineers' an instrumental guidance and assistance early in their careers.

This research study explores the different learning patterns of the engineering students and recommends the new approaches required for the successful mentoring of these millennial students. Project-based course 'Product Design Studio' is considered, and total strength of 50 students classified into 4 groups based on their competency and commitment levels. At least one student from each of these 4 groups combined and 11 project teams formulated for the execution of the project. Competency levels identified through a test based on the skillset required for the project execution. Four different training models are proposed in this paper for each of the groups formulated and these approaches successfully implemented by the mentors. The learning reflections of the mentors and mentees are presented in this paper. The final product demonstration by the students reflected the success of the novel approaches implemented by the mentors. Competency and Commitment are the key factors to be considered for analyzing the performance of the students. in addition to the mentoring students for improving their competency levels, the role assigned during the project execution promoted the 21st

century skillset among the students. There is a huge scope to research and develop the appropriate mentoring strategies for

the human resource management and development in the project-based courses.

Keywords: Competence, Commitment, Project-based courses, Mentor and Mentee

I. Introduction:

The current higher education system is moving towards a dynamic shift by incorporating more and more project-based courses. The significance of project-based courses is becoming very significant to equip the students with the 21st century skills like team leadership, communication and problem solving [1-3]. The role of mentoring in those courses is very critical as the student teams work systematically with the proper defined set of outcomes. Mentoring is basically to develop and sustain the motivation among the teams to progress their work continuously without any deviations. The identification of the available skillset among the teams is very important so that the skills which are missing can be developed through multiple training sessions. The portfolios required for the project management are team leadership, project manager, financial advisor, web master and the communicator. Product Design Studio (PDS) is the freshmen course initiated in the engineering curriculum which promotes the 21st century skills [4-5]. Service learning and Design thinking courses are the advanced versions of PDS course. The human resources required for these portfolios are to be managed by the mentor in a proper direction to obtain the desired outcomes of the projects [6-12]. This paper deals with the discovery of skillset available, the skill-development strategies and finally the performance evaluation tools.

II. Discover - Competence and Commitment test:

Mentoring is a cyclic process where mentor discovers the potential abilities and hidden skills of the learners based on

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PARAMETRIC OPTIMIZATION OF MACHINING PARAMETERS BY USING COATED COPPER WIRE ELECTRODE ON WIRE ELECTRIC DISCHARGE MACHINING

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ABSTRACT

In this work Coated Copper wire is used to find performance of Wire Electrical Discharge Machining (WEDM) on HCHCr Steel with input variables like T ON time, Input Current, T OFF time, spark gap set voltage, wire runoff time and Tension of the wire. The experiments are conducted as per the standard Taguchi's L27 orthogonal array. The multiple performances like metal removal rate(MRR), Tool wear ratio(TWR), Surface roughness and kerf width(KW) are optimized by employing a Multi criteria decision making method called Technique for order preference by similarity to ideal solution(TOPSIS). By the results, the optimal arrangement of input variables are T ON-time 120 µs, T OFF- time 45 µs, Spark gap set Voltage 15 volts, Input Current 180 amps, Wire Tension 8 Kg-f and Wire runoff 6 m/min. Later, Analysis of variance is implemented and it shows that the T ON-time is the most important parameter that affect the output performances.

KEYWORDS: *T ON time, T OFF time, Kerf Width (KW), Metal Removal Rate (MRR), Surface Roughness, AHP & TOPSIS*

Original Article

1. INTRODUCTION

Wire Electrical discharge machining (EDM) is a non-conventional machining which replaces the conventional machining and made revolutionary changes in the modern manufacturing industries. Now a days the use of these modern machines are very much useful to machine the hardest materials like High speed steels, heat treated steels, alloy steels, composites etc. As their capability of machining irregular shapes and geometrically complex shapes makes these machines very needful in industries, at the same time the precision and surface quality obtained in these machines is added advantage for the industries. Lot of research work was going on to optimize the machining conditions which will help the industries. [1] Sarat Kumar Sahoo and Sunita Singh Naik, investigated on the material removal rate, surface roughness, and kerf width of the high carbon and high-chromium steel during wire electrical discharge machining process. For this Taguchi's L_9 orthogonal array was used in order to analyze the effects of pulse on time, wire feed rate, and pulse off time on response variables, they observed that the machining performance is considerably changed by pulse on time and very less influenced by wire feed rate. [2] P. J. Pawar and M. Y. Khalkar uses multi-objective optimization of wire-electric discharge machining by using recently developed evolutionary optimization algorithm known as multi-objective artificial bee colony (MOABC) algorithm. In this work they considered MRR and wire wear ratio as responses to find the optimum process parameters in wire-electric discharge machining process. [3] Sanjeev Kumar Garg, Alakesh Manna & Ajai Jain

PARAMETRIC OPTIMIZATION OF MACHINING PARAMETERS BY USING BRASS WIRE ELECTRODE ON WIRE ELECTRIC DISCHARGE MACHINING

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ABSTRACT

In this work Brass wire is used to find performance of Wire Electrical Discharge Machining (WEDM) on D2 Steel with input variables like T ON time, Input Current, T OFF time, spark gap set voltage, wire runoff time and Tension of the wire. The experiments are conducted as per the standard Taguchi's L27 orthogonal array. The multiple performances like metal removal rate(MRR), Tool wear ratio(TWR), Surface roughness and kerf width(KW) are optimized by employing a Multi criteria decision making method called Technique for order preference by similarity to ideal solution(TOPSIS). By the results, the optimal arrangement of input variables are T ON-time 120 µs, T OFF- time 45 µs, Spark gap set Voltage 15 volts, Input Current 180 amps, Wire Tension 8 Kg-f and Wire runoff 6 m/min. Later, Analysis of variance is implemented and it shows that the T ON-time is the most important parameter that affect the output performances.

KEYWORDS: T ON time, T OFF time, Kerf Width (KW), Metal Removal Rate (MRR), Surface Roughness, AHP and TOPSIS

Original Article

1. INTRODUCTION

Wire Electrical discharge machining (EDM) is a non-conventional machining which replaces the conventional machining and made revolutionary changes in the modern manufacturing industries. Now a days the use of these modern machines are very much useful to machine the hardest materials like High speed steels, heat treated steels, alloy steels, composites etc. As their capability of machining irregular shapes and geometrically complex shapes makes these machines very needful in industries, at the same time the precision and surface quality obtained in these machines is added advantage for the industries. Lot of research work was going on to optimize the machining conditions which will help the industries. [1] Sarat Kumar Sahoo and Sunita Singh Naik, investigated on the material removal rate, surface roughness, and kerf width of the high-carbon and high-chromium steel during wire electrical discharge machining process. For this Taguchi's L9 orthogonal array was used in order to analyze the effects of pulse on time, wire feed rate, and pulse off time on response variables, they observed that the machining performance is considerably changed by pulse on time and very less influenced by wire feed rate. [2] P. J. Pawar and M. Y. Khalkar uses multi-objective optimization of wire-electric discharge machining by using recently developed evolutionary optimization algorithm known as multi-objective artificial bee colony (MOABC) algorithm. In this work they considered MRR and wire wear ratio as responses to find the optimum process parameters in wire-electric discharge machining process. [3] Sanjeev Kumar Garg, Alakesh Manna & Ajai Jain presents an experimental investigation of the machining characteristics and optimization of wire EDM process

PARAMETRIC OPTIMIZATION OF MACHINING PARAMETERS BY USING ANNEALED COPPER WIRE ELECTRODE ON WIRE ELECTRIC DISCHARGE MACHINING

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ABSTRACT

In this work Annealed Copper wire is used to find performance of Wire Electrical Discharge Machining (WEDM) on D2 Steel with input variables like T ON time, Input Current, T OFF time, spark gap set voltage, wire runoff time and Tension of the wire. The experiments are conducted as per the standard Taguchi's L27 orthogonal array. The multiple performances like metal removal rate (MRR), Tool wear ratio (TWR), Surface roughness and kerf width (KW) are optimized by employing a Multi criteria decision making method called Technique for order preference by similarity to ideal solution (TOPSIS). By the results, the optimal arrangement of input variables are T ON-time 120 μs, T OFF- time 30 μs, Spark gap set Voltage 20 volts, Input Current 210 amps, Wire Tension 10 Kg-f and Wire runoff 2 m/min. Later, Analysis of variance is implemented and it shows that the T ON-time is the most important parameter that affects the output performances.

KEYWORDS: T ON time, T OFF time, Kerf Width (KW), Metal Removal Rate (MRR), Surface Roughness, AHP and TOPSIS.

Original Article

1. INTRODUCTION

In the field of mechanical industry, the need for alloy materials having high rigidity, toughness and impact load resistance are growing. However, such materials are hard to be machined by traditional machining methods. Therefore, Non-Conventional machining methods like Electrical Discharging Machining (EDM) are replacing conventional machining operation. There are two main types of EDM: Die sinker and Wire. Die sinker EDM uses a tool which acts as cathode and runs along the work piece which acts as anode and the electrical current reacts to melt or vaporize the metal. As a result of the dielectric fluid, whatever little debris is produced washes away from the work piece. WEDM with a thin wire as an electrode transforms electrical energy to thermal energy for cutting materials. With this process, alloy steel, conductive ceramics and aerospace materials can be machined irrespective to their hardness and toughness. Furthermore, WEDM is capable of producing a fine, precise, corrosion and wear resistant surface. Kumar et. al. [1] uses four input parameters namely Input current, Ton time, Toff time & servo voltage and two performance characteristics namely MRR and surface roughness. They use response surface graphs to optimize multi-performance characteristics and desirability function employed. They find that low discharge energy and more value of Toff time results in low defects on machined faces. Patro et. al. [2] found the optimum parameters for the performance of WEDM by using Fuzzy modeling on D2 Steel. They conclude that modeled values are in accordance to the experimental values with more than 90 per cent accuracy. Ugrasen et. al. [3] uses

REUSED SUNFLOWER OIL AS DIELECTRIC FLUID FOR ELECTRIC DISCHARGE MACHINING PROCESS

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ABSTRACT

Electro Discharge Machining (EDM) is an incredibly recognizable machining practice among as of unpredictable machining systems for perplexing, complex profiles in "very hard to machine" materials (which are electrically conductive). In EDM, the material ejection of the cathode is obtained through exact controlled electric pulse release, which happens the metals of two anodes into vapors, at the event of the breakdown of the dielectric medium. This exploration work, forms are done to discover the appropriateness of plant seed oils from reused sunflower oil as a dielectric liquid in the EDM procedure. And furthermore checked its reasonableness with EDM oil as alternate dielectric liquid for mechanical application. Electrode Wear Rate (EWR), Material Removal Rate (MRR), Surface Roughness (SR), and Tool Wear Rate (TWR) are the key execution highlights of EDM. The important objective of EDM is to get higher MRR close by achieving the reasonably great surface nature of the machined workpiece. The parameters that achieve the most shocking MRR rely upon the machining surface which is associating with the workpiece and apparatus. Dielectric is the hugest variable for getting brilliant outcomes for the abovementioned - expressed key highlights. These examinations came about that reused sunflower oil is an appropriate dielectric media, the outcomes acquired are great while contrasting and that of EDM oil and furthermore discover the impact of the geology of the workpiece and carbon particles dissolving is checked with SEM investigation for any deviations on work surface

KEYWORDS: Electric Discharge Machine (EDM), Electrode Wear Rate (EWR), Material Removal Rate (MRR), Surface Roughness (SR) & Tool Wear Rate (TWR)

1. INTRODUCTION

In the evolution of human civilization, mechanization followed by automation and then computerization process is also faced the problem of difficult to removal material from very hard materials, this is overcome by the application of non-traditional machining process. The best machining process is EDM process under non-traditional machining process. The material is expelled from the workpiece because of disintegration brought about by quickly repeating electrical sparkle between the workpiece and the cathode with a little gap between them and both are submerged in dielectric fluid (EDM oil, deionized water, and Kerosene oil). This productive technique is based on the repetitive waste management of controlled discharges. Because of its nature of contact, it became a general production process like, efficiency of machining materials, molding, instruments industry, precision industry, consumer industry, and medical field, regardless of their hardness and its specific surface design.

Murahari Kolli[1] studied PH 17-4 SS work piece which has high strength. It is difficult to make machines on conventional machining methods. In this way, the machining of progressive method is utilized. This work outlines a multi-reaction development procedure for controlling the machining properties on the EDM procedure while machining task of work piece. Normal metalworking, synthetic industries and space engineering purpose this

Original Article

A HYBRID GREY-FUZZY LOGIC APPROACH FOR OPTIMIZATION OF PROCESS PARAMETERS IN WIRE ELECTRICAL DISCHARGE MACHINING OF D2 STEEL

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ABSTRACT: Wire Electrical Discharge Machining (WEDM) is an extensively used non – traditional machining process for machining of hard and difficult - to - machine materials. In the present work, multi response optimization of the process parameters in WEDM machining of D2 Steel is carried out using hybrid Grey-Fuzzy logic technique. The input parameters such as Pulse ON time (T_{ON}), Pulse OFF time (T_{OFF}), Spark Voltage (SV), Peak Current (IP), Wire Feed (WF) and Wire Tension (WT) are used to optimize the output parameters like Material Removal Rate (MRR), Tool Wear Rate (TWR), Surface Roughness (SR) and Kerf Width. A set of 27 experiments are performed using Taguchi's Design of Experiment. Grey Relational Analysis (GRA) combined with Fuzzy Logic approach is used to find Grey Fuzzy Relational Grade (GFRG). The optimal combination obtained using this technique is found to be T_{ON} = 110μs, T_{OFF} = 45μs, SV = 15volts, IP = 210amps, WF = 6m/min and WT = 6 grams. Analysis of Variance (ANOVA) result shows that T_{ON} is having the highest significance on the output performance.

KEYWORDS: Material Removal Rate, Tool Wear Rate, Surface Roughness, Kerf Width, Grey Relational Analysis, Fuzzy Logic, Grey Fuzzy Relational Grade

I. INTRODUCTION

Wire Electrical Discharge Machining (WEDM) process is used for machining of hard and difficult-to-machine materials. The basic principle of WEDM process is the bombardment of electrons on the work piece surface causing the temperature on the surface to rise beyond melting point temperature leading to evaporation. WEDM is suitable for machining those materials which have some electrical conductivity. It is widely used in various industries for manufacturing of components generally in automobile, aerospace and machine tool industries. Various optimization techniques have been used to improve the output performance in the WEDM process. Bobbili et. al. [1] investigated the machining performance in WEDM during machining of Ballistic grade Aluminium alloy using Taguchi coupled with Grey Relational Analysis. They conclude that Pulse ON time, Peak Current and Spark Voltage are the significant variables in the WEDM process. Dongre et. al. [2] performed the multi response optimization based on Response Surface Method (RSM) technique during the machining of Silicon wafer using Molybdenum wire. They found that use of WEDM process reduces the kerf width from 250μm to 50μm. They also found that use of WEDM process improves the surface roughness to 2-3μm. Goswami et. al. [3] used the utility concept for multi response optimization during machining of Nimonic-80A using Brass wire. They found that the material removal rate and surface roughness increases with increase in pulse ON time and decreases with increase in pulse OFF time. Mohanty et. al. [4] investigated the machining of Inconel 718 using copper, graphite and brass electrodes using Utility concept and QPSO algorithm. It is observed that MRR can be improved through the use of graphite tool but SR and radial overcut are seriously affected due to higher discharge energy. Joshi et. al. [5] performed the machining of p-type polycrystalline silicon ingot using brass wire in WEDM. They used the RSM technique to get the optimal results. Their results show that the least wafer thickness of 140.5μm is obtained with the kerf width of 130μm and slicing rate of 0.96 mm/min. Puhan et. al. [6] adopted a hybrid approach combining Principal Component Analysis (PCA) and Fuzzy Inference System (FIS) to optimize the machining parameters during machining of Aluminium Silicon Carbide composite. From their analysis, it is observed that the process parameters such as discharge current, pulse ON time, duty factor and flushing pressure have the significant effect on the multi performance characteristics. Majumder et. al. [7] performed the machining of Inconel 800 using brass wire. They used the hybrid GRA-PCA technique to optimize the machining performance. The experimental result shows that with increase in the duration of charging cycle and servo voltage in WEDM, the cutting time reduces up to a

A COMPARATIVE STUDY ON THE PERFORMANCE OF WIRE EDM MACHINING OF D2 STEEL USING UNCOATED, COATED AND ANNEALED WIRE

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ABSTRACT: In the present work, a comparative study on the performance of Wire Electrical Discharge Machining of D2 Steel using Brass wire, Zinc coated Copper wire and Annealed Copper wire is carried out using Grey – Fuzzy Logic technique. The input parameters are Pulse ON time (T_{ON}), Pulse OFF time (T_{OFF}), Spark Voltage (SV), Peak Current (IP), Wire Feed (WF) and Wire Tension (WT). The output parameters like Material Removal Rate (MRR), Tool Wear Rate (TWR), Surface Roughness (SR) and Kerf Width are optimized. Using Taguchi's design of experiment, a set of 27 experiments is performed using each wire. The grey relational analysis followed by fuzzy logic is carried out to find Grey Fuzzy Relational Grade (GFRG) values. The optimal combination obtained using brass wire is T_{ON} = 110µs, T_{OFF} = 45µs, SV = 15volts, IP = 210amps, WF = 6m/min and WT = 6 grams. For zinc coated copper wire it is T_{ON} = 110µs, T_{OFF} = 60µs, SV = 21volts, IP = 210amps, WF = 6m/min and WT = 6 grams. Also, for annealed copper wire it is T_{ON} = 110µs, T_{OFF} = 30µs, SV = 21volts, IP = 210amps, WF = 6m/min and WT = 6 grams. It is found that the Material Removal Rate is higher using annealed copper wire compare to zinc coated copper wire and brass wire. Similarly, the Tool Wear Rate is found to be lower in annealed copper wire compared to other wires. Also it is observed that surface roughness and kerf width are nearly equal for all the wires.

KEYWORDS: Taguchi's design of experiment, Grey Relational Coefficient, Fuzzy Logic, Grey Fuzzy Relational Grade

I. INTRODUCTION

Wire Electrical Discharge Machining (WEDM) process is extensively used in industries as it is suitable for machining very hard and brittle materials with good finish. WEDM process works on the phenomena that the discharge electrons from the wire electrode collides the work piece surface leading to melting and vaporization. As the surface quality obtained is good in WEDM so researchers are working to improve the output performance. Gamage et. al. [1] performed the machining of Inconel 718 and Ti6Al4V composite using copper wire and brass wire electrodes and compared their machining performance. They conclude that lower pulse OFF time and higher voltage yields lower specific energy consumption and surface roughness for machining of Inconel. They also conclude that for Ti6Al4V composite also lower pulse OFF time is preferred with higher pulse ON time for the same optimization criteria. Dongre et. al. [2] investigated the machining of Silicon wafer using Molybdenum wire using multi response optimization based on Response Surface Method (RSM) technique. They concluded that WEDM process reduces the kerf width from 250µm to 50µm. They also found that the process improves the surface roughness to 2-3µm. Mohanty et. al. [3] performed the machining of Inconel 718 using copper, graphite and brass electrodes and compared using Utility concept and QPSO algorithm. It is found that MRR improves with the use of graphite tool but SR and radial overcut are seriously affected. Puhan et. al. [4] performed the machining of Aluminium Silicon Carbide composite and used a hybrid approach combining Principal Component Analysis (PCA) and Fuzzy Inference System (FIS) to optimize the machining parameters. They have found that the process parameters such as discharge current, pulse ON time, duty factor and flushing pressure have the significant effect on the multi performance characteristics. Saha et. al. [5] investigated the machining of Tubular coated nanocomposite based electrode (Nanocarb 110) using brass wire and zinc coated brass wire and utilized GRA-PCA hybrid technique to get the optimal results. It is observed that zinc coated brass wire is better compared to brass wire. Datta et. al. [6] performed the machining of D2 steel using zinc coated copper wire and used the RSM coupled with GRA technique to optimize the machining parameters. They utilized this technique to evaluate optimal parametric combination to achieve maximum MRR, minimum SR and minimum kerf width. Harish et.al. [7] performed the machining of D2 Steel in WEDM using brass wire and applied the TOPSIS approach to optimize the output performance. They also

TRACKING AND AUTOMATION OF IMAGES BY COLOUR BASED PROCESSING

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Abstract— Now a day all application sectors are moving for the automation processing and sensing . for example image processing in medical field ,in industrial process lines , object detection and Ranging application, satellite imaging Processing ,Military imaging etc, In each and every application area the raw images are to be captured and to be processed for human visual inspection or digital image processing systems. Automation applications In this proposed system the video is converted into frames and then it is get divided into sub bands and then background is get subtracted, then the object is get identified and then it is tracked in the framed from the video .This work presents a technique for automating the methodology of detecting and tracking objects utilizing color feature and motion. Video Tracking is the methodology of finding a moving object over the long distance using a camera. The main aim of video tracking is to relate target objects in consecutive video frames.

Keywords— Hue Saturation –Intensity, Hue Saturation Value, Cyan Magenta Yellow Black, Gaussian Mixture Model

1. INTRODUCTION

Image processing is any form of signal processing for which the input is an image, Such as a photograph or video frame; the output of image processing may be moreover an image or a set of uniqueness or parameters linked to the image. The majority image processing system involves treating the image as a two-dimensional signal and be appropriate standard signal-processing modus operandi to it.Image processing usually refers to digital image processing, but optical and analog

Image processing also is possible. This critique is about general modus operandi that apply to all of them. The acquisition of images (fabricate the input image in the first place) is referred to as imaging. In every research area, they analyze the problem, mostly image analysis involves maneuver the image data to conclude exactly the information compulsory to help to answer a computer imaging problem.

Digital image processing methods stems from two principal application areas: improvement of pictorial information for human interpretation, and processing of image data for tasks such as storage, transmission, and extraction of pictorial information

The remaining paper is structured as follows. Section 2 deals with the existing method of Image Processing. Section 3 deals with the proposed method of Image Processing. Section 4 deals the results and discussions. Finally, section 5 concludes the work done.

2. EXISTING METHODS OF IMAGE PROCESSING

A The perception of color starts with a chromatic light source, capable of emitting electromagnetic radiation with wavelengths between approximately 400 and 700 nm. Part of that radiation reflects on the surfaces of the objects in a scene and the resulting reflected light reaches the human eye, giving rise to the sensation of color. An object that reflects light almost equally in all wavelengths within the visible spectrum is perceived as white, whereas an object that absorbs most of the incoming light, regardless of the wavelength, is seen as black. The perception of several shades of gray between pure white and pure black is usually referred to as achromatic.

Objects that have more selective properties are considered chromatic, and the range of the spectrum that they reflect is often associated with a color name. For example, an object that absorbs most of the energy within the 565–590 nm wavelength range is considered yellow. A chromatic light source can be described by three basic quantities: