3.3.1

Research Publications during the Assessment period 2018-2019 to 2022-2023

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S.No	Title of paper	Name of the author/s	Name of journal
1	SUBCLASS OF ANALYTIC FUNCTIONS CONNECTED WITH HURWITZ-LERCH ZETA FUNCTION	J.R.WADKAR, GANESH B. DAPKE, AND P.THIRUPATHI REDDY	Journal of Engineering and Technology Management 73 (2024)
2	CERTAIN SUBCLASS OF ANALYTIC FUNCTIONS INVOLVING HURWITZ-LERCH ZETA FUNCTION	P.Thirupathi Reddy, K.C.Deshmukh and Rajkumar N.Ingle	Palestine Journal of Mathematics
3	Univalence Criteria for Analytic Functions related to Hurwitz Lerch Zeta function	S.S.Howal , P.Thirupathi Reddy and K.Venkata Subbaiah	Int. J. Open Problems Compt. Math.,
4	SOME PROPERTIES OF ANALYTIC FUNCTIONS DEFINED BY POLYLOGARITHM FUNCTIONS	P. THIRUPATHI REDDY	Electronic Journal of Mathematical Analysis and Applications
5	A Deep Learning Method for Transformer-Based,	Mr.G JACOB JAYARAJ1 , Mrs.Geddam Prashanthi2 , Mrs.N.SOWJANYA3 , Mrs.K.ANUSHA4	International Journal of Information Technology and Computer Engineering
6	DESIGN EVALUATION AND MATERIAL OPTIMIZIATIONOF TRAIN BRAKE	1 DR.PAVAN BALAPPA BAGALI, 2 HEMANT KUMAR SAHU, 3 K POORNACHANDHAR, 4 M SOWMYA, 5 N VEERESHU, 6 U UPENDAR	International Journal of Techno-Engineering
7	MODELING AND STRUCTURAL ANALYSIS OFACAMSHAFT	1 DR.T.PRASAD, 2 CH RAVITEJA, 3 D NITHIN KUMAR, 4 J JITHENDER, 5 NUDAYKIRAN, 6 R BHOOPATHI	International Journal of Techno-Engineering
8	STUDY, MODELLING AND ASSEMBLEYOFASTIRLINGENGINE	1 BHUMIREDDY RAVINDRA REDDY, 2 M VAMSHI, 3 M ARCHANA, 4 P RAJESH, 5 VSAIKUMAR, 6 P DANIEL	International Journal of Techno-Engineering
9	DEVELOPMENT OF CAR BUMPER TECHNOLOGY	1 DR.T. PRASAD, 2 D HARIDURGA PRASAD, 3 D HARSHAVARDHAN VAMSI KRISHNA, 4 K SRISAILAM, 5 P MAHESH, 6 P SHIVAKALYAN GOUD	International Journal of Techno-Engineering
10	ROTARY POWER STEERINGSYSTEM	1 K.RAMASWAMY, 2 B PANDU, 3 M RAJASHEKAR, S	International Journal of Techno-Engineering

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13	DEVELOPMENT OF SHOCK ABSORBERINCATIA	1 BHUMIREDDY RAVINDRA REDDY, 2 B BHUPAL REDDY, 3 CH RAMESH, 4 CHSANJEEV KUMAR, 5 K SAI KIRAN,	International Journal of Techno-Engineering
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SUBCLASS OF ANALYTIC FUNCTIONS CONNECTED WITH HURWITZ-LERCH ZETA FUNCTION

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ABSTRACT. the Hurwitz zeta function plays a crucial role in mathematics and physics, offering insights into a wide range of phenomena and serving as a bridge between different areas of study. Making use of the Hurwitz-Lerch zeta operator, we introduce a new subclass of analytic functions defined in the open unit disk and investigate its various characteristics. Further, we obtain some usual properties of the geometric function theory such as coefficient bounds, extreme points,closure theorems,radius of starlikeness,convexity,partial sums and neighborhood results.

2020 Mathematics Subject Classification: 30C45.
Keywords and Phrases: analytic, starlike, convexity, partial sums, neighborhood.

1. INTRODUCTION

Let A denote the class of all functions $u(z)$ of the form

$$u(z) = z + \sum_{n=2}^{\infty} a_n z^n, \tag{1.1}$$

in the open unit disc $U = \{z \in \mathbb{C} : |z| < 1\}$. Let S be the subclass of A consisting of univalent functions.

A function $u \in A$ is a starlike function of the order ξ, $0 \leq \xi < 1$, if it satisfies

$$\Re\left\{\frac{zu'(z)}{u(z)}\right\} > \xi, \ z \in U. \tag{1.2}$$

We denote this class with $S^*(\xi)$.

A function $u \in A$ is a convex function of the order ξ, $0 \leq \xi < 1$, if it fulfils

$$\Re\left\{1 + \frac{zu''(z)}{u'(z)}\right\} > \xi, \ z \in U. \tag{1.3}$$

We denote this class with $K(\xi)$.

Note that $S^*(0) = S^*$ and $K(0) = K$ are the usual classes of starlike and convex functions in U respectively. For $f \in A$ given by (1.1) and $g(z)$ given by

$$g(z) = z + \sum_{n=2}^{\infty} b_n z^n \tag{1.4}$$

their convolution (or Hadamard product), denoted by $(u * g)$, is defined as

$$(u * g)(z) = z + \sum_{n=2}^{\infty} a_n b_n z^n = (g * u)(z), \ (z \in U). \tag{1.5}$$

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CERTAIN SUBCLASS OF ANALYTIC FUNCTIONS INVOLVING HURWITZ-LERCH ZETA FUNCTION

P.Thirupathi Reddy, K.C.Deshmukh and Rajkumar N.Ingle

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MSC 2010 Classifications: : Primary 30C45.

Keywords and phrases: analytic, starlike, convexity, partial sums, neighborhood.

Abstract Making use of the Hurwitz - Lerch zeta operator, we introduce a new subclass of analytic functions defined in the open unit disk and investigate its various characteristics. Further we obtain some usual properties of the geometric function theory such as coefficient bounds, extreme points, closure theorems radius of starlikness and convexity, partial sums and neighbourhood results belonging to the class.

1 Introduction

Let A denote the class of all functions $u(z)$ of the form

$$u(z) = z + \sum_{n=2}^{\infty} a_n z^n, \tag{1.1}$$

in the open unit disc $U = \{z \in \mathbb{C} : |z| < 1\}$. Let S be the subclass of A consisting of univalent functions.

A function $u \in A$ is a starlike function of the order ξ, $0 \leq \xi < 1$, if it satisfies

$$\Re\left\{\frac{zu'(z)}{u(z)}\right\} > \xi, \quad z \in U. \tag{1.2}$$

We denote this class with $S^*(\xi)$.

A function $u \in A$ is a convex function of the order ξ, $0 \leq \xi < 1$, if it fulfils

$$\Re\left\{1 + \frac{zu''(z)}{u'(z)}\right\} > \xi, \quad z \in U. \tag{1.3}$$

We denote this class with $K(\xi)$.

Note that $S^*(0) = S^*$ and $K(0) = K$ are the usual classes of starlike and convex functions in U respectively. For $f \in A$ given by (1.1) and $g(z)$ given by

$$g(z) = z + \sum_{n=2}^{\infty} b_n z^n \tag{1.4}$$

their convolution (or Hadamard product), denoted by $(u * g)$, is defined as

$$(u * g)(z) = z + \sum_{n=2}^{\infty} a_n b_n z^n = (g * u)(z), \quad (z \in U). \tag{1.5}$$

Note that $u * g \in A$. Let T denotes the class of functions analytic in U that are of the form

$$u(z) = z - \sum_{n=2}^{\infty} a_n z^n, \quad a_n \geq 0 \ \ (z \in U) \tag{1.6}$$

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Univalence Criteria for Analytic Functions related to Hurwitz Lerch Zeta function

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Abstract
In this paper we obtain sufficient condition for univalence of analytic functions defined by Hurwitz-Lerach Zeta function.

Keywords: *univalence, analytic, Hurwitz, convolution, integral operator, fractional derivative.*
2010 Mathematics Subject Classification: 30C45.

1 Introduction

Let A denote the class of analytic functions f defined on the unit disk $U = \{z : |z| < 1\}$ with normalization $f(0) = 0$ and $f'(0) = 1$. Such a function has the Taylor series expansion about the origin in the form

$$f(z) = z + \sum_{n=2}^{\infty} a_n z^n, \qquad (1)$$

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SOME PROPERTIES OF ANALYTIC FUNCTIONS DEFINED BY POLYLOGARITHM FUNCTIONS

P. THIRUPATHI REDDY

ABSTRACT. The main purpose of this paper, is to introduce a new subclass of analytic functions involving Polylogarithm functions and obtain coefficient inequalities, distortion properties, extreme points, radii of starlikeness and convexity, Hadamard product, and convolution and integral operators for the class.

1. INTRODUCTION

Let $\mathcal{A}$ denote the class of all functions $u(z)$ of the form

$$u(z) = z + \sum_{k=2}^{\infty} a_k z^k, \tag{1}$$

in the open unit disc $\mathbb{U} = \{z \in \mathbb{C} : |z| < 1\}$. Let S be the subclass of $\mathcal{A}$ consisting of univalent functions and satisfy the following usual normalization condition $u(0) = u'(0) - 1 = 0$. We denote by S the subclass of $\mathcal{A}$ consisting of functions $u(z)$ which are all univalent in $\mathbb{U}$. A function $u \in \mathcal{A}$ is a starlike function of the order ξ, $0 \leq \xi < 1$, if it satisfies

$$\Re\left\{\frac{zu'(z)}{u(z)}\right\} > \xi, \ z \in \mathbb{U}. \tag{2}$$

We denote this class with $S^*(\xi)$. A function $u \in \mathcal{A}$ is a convex function of the order ξ, $0 \leq \xi < 1$, if it satisfies

$$\Re\left\{1 + \frac{zu''(z)}{u'(z)}\right\} > \xi, \ z \in \mathbb{U}. \tag{3}$$

2020 *Mathematics Subject Classification.* 30C45, 30C50.
Key words and phrases. analytic, starlike, convex, distortion, convolution.
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A Deep Learning Method for Transformer-Based, Robust Bot Detection on Twitter

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***Abstract*—**

Due to the large number of bots on Twitter, there has to be a way to reliably and accurately identify bots, both lawful and malevolent. These approaches worked, but they didn't solve the following problems: (1) the impossibility of obtaining ground truth real-world datasets due to the large datasets needed to train a model to detect bots; (2) the difficulty of learning representations of a diverse attributed network such as Twitter; and (3) the ongoing evolution of bot accounts to avoid automatic detection. In this study, we provide ADNET, a new framework for anomaly detection in networks ascribed to Twitter with little labeled data. Our proposed topology-based active learning framework, which trains the model using a deep autoencoder and outperforms prior techniques in handling huge graphs, is an attempt to remedy the shortcomings of earlier approaches. While reducing the annotation cost in Twitter attribution networks, our experimental findings show that the suggested strategy outperforms state-of-the-art approaches in identifying anomalous bot accounts.

***Index Terms*—Twitter bot detection, Automated accounts, So- cial Media**

I. INTRODUCTION

A Twitter bot is an automated account that uses the Twitter API to either completely or partly manage the account's behavior. As a result of their special software management, such accounts may quickly produce a flood of material. Bots may legally use Twitter according to the rules of service, provided they declare their bot status in section 1 of their profile. This benefit has been well-received by news agency accounts, which are able to consistently post a large amount of news with their followers. On Twitter, malicious bots have used this capability to disseminate spam [3], objectionable material [4], and false news [1], [2].

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DESIGN EVALUATION AND MATERIAL OPTIMIZIATION OF TRAIN BRAKE

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Abstract: *A moving train contains energy, known as kinetic energy, which needs to be removed from the train in order to cause it to stop. The simplest way of doing this is to convert the energy into heat. The conversion is usually done by applying a contact material to the rotating wheels or to discs attached to the axles. The material creates friction and converts the kinetic energy into heat. The wheels slow down and eventually the train stops. The material used for braking is normally in the form of a block or pad. The vast majority of the world's trains are equipped with braking systems which use compressed air as the force to push blocks on to wheels or pads on to discs. These systems are known as "air brakes" or "pneumatic brakes". The existing air brake system of Railway coach has the following drawbacks due to excessive brake force on the brake blocks - thermal cracks on wheel tread, brake binding and reduced life of brake block. The aim of the project is to overcome the above said drawbacks by reducing the effective brake force on the brake blocks without affecting the existing designed (Braking Function) requirements. To validate the strength of train brake, Structural and Modal analysis are to be done on the train brake. In structural analysis, ultimate stress limit for the design is found and in modal analysis, mode shapes of the train brake for number of modes can be analyzed. The analysis is done by applying two different materials Cast Iron and High Carbon Steel for train brake*

I. INTRODUCTION

The vast majority of the world's trains are equipped with braking systems which use compressed air as the force to push blocks on to wheels or pads on to discs. These systems are known as "air brakes" or "pneumatic brakes". The compressed air is transmitted along the train through a "brake pipe". Changing the level of air

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STUDY, MODELLING AND ASSEMBLEY OF A STIRLING ENGINE

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Abstract: *The Stirling engine is used to remove the electrical load from the internal combustion engine and thereby increasing the fuel efficiency of the engine. The Stirling engine is powered by the temperature difference at the radiator ends. Alternator is used to supply power to all the electrical and electronic appliances in the automobile. At present, the alternator's rotor is rotated by engine's shaft through belt. Now the Stirling engine is used to rotate the rotor of alternator. This paper is to show the increase in efficiency of an engine using Stirling engine. Worldwide attempts are being made to increase the use of our renewable energy sources as well as to use our current fossil fuel energy sources more efficiently. Waste heat recovery forms a substantial part of the latter and is the focus of this project. Stirling technology finds application in both the renewable energy sector and in waste heat recovery. Investigating the applicability of Stirling engines in the above-mentioned fields is relevant to develop\ more efficient external combustion units as well as to utilize our renewable energy sources. Developing a design analysis and synthesis tool capable of optimizing Stirling powered units forms the main objective of this project.*

I. INTRODUCTION

The Stirling motor - a heat engine which converts heat into work - is the second oldest heat engine. It has many positive properties, e.g. it only needs a temperature difference to work, irrespective of whether the difference is achieved by solar heating or conventional fuel. This makes it very flexible and beneficial to the environment. discuss the thermodynamic principles necessary for the understanding of the operating of the Stirling engines. Taking into account that we have built a -Stirling motor in this laboratory, The objective of this report is to provide a assessment of Stirling engine systems covering technical

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DEVELOPMENT OF CAR BUMPER TECHNOLOGY

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Abstract: *Automotive design with economy, safety and aesthetics have been a great challenge to design engineers. Augmenting to these factors today environment impact is an upcoming research area. The safety of the passengers during vehicle crashes can be ensured to a certain limit by using good bumpers. At the same time these automotive parts should not be massive in terms of weight contributing to the increase in total the weight of the vehicle. In this work, a bumper used for low passenger vehicle, Ambassador car is modeled by using the software CATIA V5R20. Then this model is imported into FEM impact as well as static analysis. The materials used for these analyses are Steel, Carbon/epoxy , Glass/epoxy shows the lowest deformation and maximum von misses stress value. After the impact analysis, the composite shows the highest stress value, lowest deformation and the lowest strain value on compared with above materials. The analysis under the dynamic loading shows this carbon composite has the maximum stress value and it having the highest strength to weight ratio and producing low deformation. From all these analysis, it can concluded that carbon composite is the best material which can use as the bumper material among all the other materials used here.*

I. INTRODUCTION

Nowadays, in development of technology especially in engineering field make among the engineers more creative and competitive in designing or creating new product. They must be precise and showing careful attentions on what they produce. Here, we concentrate on automotive industry. The greatest demand facing the automotive industry has been to provide safer vehicles with high fuel efficiency at minimum cost. Current automotive vehicle structures have one fundamental handicap, a short crumple zone for crash energy absorption One of the options to reduce energy consumption

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MODELING AND STRUCTURAL ANALYSIS OF A CAM SHAFT

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Abstract: *The idea of harnessing combustion to perform mechanical work is by no means a new one. The internal combustion engine, as we know it today, has its origins in the last century, however the idea for controlling combustion to perform mechanical work dates back to the Renaissance. Even with the advent of alternative sources of power for commerce and personal applications, the internal combustion engine represents a large portion of the power generation available in this country. There are numerous types of internal combustion engines, each with a variety of subsystems. Automotive cams can be manufactured as copied or original parts. Copied parts are typically produced on a rocker type cam grinder and the original parts are produced on a computer numerical control grinder. Therefore, various errors associated with these manufacturing techniques are studied herein. Installing cams with profile errors in an engine may result in the dynamic malfunction of its valve train. In order to study the effect of these profile errors, some of the error cam profiles that were predicted for the rocker grinder were manufactured and tested in an actual valve train. In addition, the effects of error cam profiles were investigated by using an existing valve train simulation model. In automobile and tractor engines, the camshafts (or cam lobes) are made of* ***chilled cast iron****, which is comparable to the alloyed steels used in the manufacture of bearings. The wear resistance of chilled cast iron is considerably higher of that of ductile cast iron. It was found by both experimentation and simulation that camshaft errors on the order of typical shop tolerances had little impact on the dynamics of high speed valve trains.*

I. INTRODUCTION

Since the origination of the automobile, the internal combustion engine has evolved considerably. However, one

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DESIGN AND ANALYSIS OF DISK BRAKE ROTAR

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Abstract: *The aim of this paper was to investigate the temperature fields and also structural fields of the solid disc brake during short and emergency braking with four different materials. The distribution of the temperature depends on the various factors such as friction, surface roughness and speed. The effect of the angular velocity and the contact pressure induces the temperature rise of disc brake. The finite element simulation for two-dimensional model was preferred due to the heat flux ratio constantly distributed in circumferential direction. We will take down the value of temperature, friction contact power, nodal displacement and deformation for different pressure condition using analysis software with four materials namely cast iron, cast steel, aluminum and carbon fiber reinforced plastic. Presently the Disc brakes are made up of cast iron and cast steel. With the value at the hand we can determine the best suitable material for the brake drum with higher life span. The detailed drawings of all parts are to be furnished.*

I. INTRODUCTION

In today's growing automotive market the competition for better performance vehicle is growing enormously. The racing fans involved will surely know the importance of a good brake system not only for safety but also for staying competitive. The disc brake is a device for slowing or stopping the rotation of a wheel. A brake disc usually made of cast iron or ceramic composites includes carbon, Kevlar and silica, is connected to the wheel and the

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COMPUTER AIDED ROBOT

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Abstract: *A robotic arm is a robotic manipulator, usually programmable, with similar functions to a human arm. The links of such a manipulator are connected by joints allowing either rotational motion or transnational displacement. The links of the manipulator can be considered to form a kinematic chairman robot may be designed to perform any desired task such as welding, gripping, spinning etc., depending on the application. For example robot arms in automotive assembly lines perform a variety of tasks such as welding and parts rotation and placement during assembly. A rotation of 99 degrees is given to the robot arm in a minimum time (.02seconds) by supplying power to the robot arm using a switch. Further the arm will settle down with critical damping to an angle of 90degrees. The FE modal analysis has been performed for the robotic arm to find the natural frequency. Transient analysis is performed to note the displacement, velocity and accelerations during its Motion. However, the use of feedback can lead to an unstable system whose output may oscillate or even go to infinity with a small input signal. Stability determination is therefore an important design consideration. One specification for absolute stability requires that the poles of the transfer function must be in the left half of the s-plane. Absolute stability, often specified in the frequency mine is essential but not necessary but sufficient.*

I. INTRODUCTION

A robotic arm is a robot manipulator, usually programmable,with similar functions to a human arm. The links of such manipulator are connected by joints allowing either rotational motion (such as in an articulated robot) transnational (linear) displacement. The links of the manipulator can be considered to form a kinematic chain.The business end of the

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DESIGN AND ANALYSIS OF IC ENGINE PISTON USING CATIA

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Abstract: *Piston is considered to be one of the most important parts in a reciprocating engine in which it helps to convert the chemical energy obtained by the combustion of fuel into useful mechanical power. The purpose of the piston is to provide a means of conveying the expansion of the gases to the crankshaft via the connecting rod, without loss of gas from above or oil from below. Piston is essentially a cylindrical plug that moves up and down in the cylinder. It is equipped with piston rings to provide a good seal between the cylinder wall and piston. Although the piston appears to be a simple part, it is actually quite complex from the design standpoint. The piston must be as strong as possible; however, its weight should be minimized as far as possible in order to reduce the inertia due to its reciprocating mass.*

I. INTRODUCTION

The piston is a critical part of a reciprocating engine that converts the chemical energy produced by burning fuel into mechanical effort. No fuel or oil is lost since the force of the expanding gases is transferred from the piston to the crankshaft through the connecting rod. The piston is only a plug of cylindrical material that moves up and down. To provide a snug fit between the piston and the cylinder wall, piston rings are installed. The piston may seem straightforward, but its assembly is really rather complex.

The piston's strength is essential, but it must also be as light as possible to reduce the inertia introduced by the mass of the piston as it reciprocates.

Considering the multitude of engine types and the largely different operating requirements for many applications, a great number of piston types are developed and in use today.

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ANALYSIS OF AN INTEGRATED BUCK - ZETA CONVERTER

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Abstract: *Analyses of the Integrated buck-zeta converter in continuous conduction mode (CCM) are presented here. Rather of using a standard zeta converter, this one uses a buck converter. To elaborate, this circuit is based on the DISO zeta converter architecture, but it removes the H-bridge cell transistor and diode. Keeping the converter's number of parts to a minimum improves its performance. In contrast to multi-port buck-boost and cook topological, the output voltage polarity of both zeta and buck stages is positive. Serializing the input voltage sources is a key benefit of the integrated buck zeta converter, which leads to larger levels of DC voltage at the output, enhances reliability, and guarantees enough redundancy when compared to multi-port boost and SEPIC converters. Because of this, the converter may be used with reliable power sources. In the steady state, the converter's modeled state-space equations may be derived. The average current through an induct-or and the average voltage across a capacitor may then be calculated by applying the averaging techniques to the state-space equations. Finally, the circuit is simulated in the MATLAB-Simulation environment to confirm the results of the analysis and computations.*

I. INTRODUCTION

In some applications, DC-DC typologies called multi input converters have several outputs to supply various electric loads simultaneously with different voltage levels. On the other hand, in other applications, such as uninterrupted power supplies, typologies named multi output DC-DC converters require more than one input voltage source to ensure an adequate redundancy or increase

the overall input voltage level. The combination of these two types of converters yields multi-port DC-DC power

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TIED ELECTRIC VEHICLE CHARGING SYSTEM USING DC-DC CONVTER

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Abstract: *Research into automotive applications of battery charging systems powered by renewable energy sources for electric vehicles (EVs) has increased rapidly in recent years. This study investigates the feasibility of solar P-powered EVs in great detail. Battery storage for ground vehicles has various advantages, including the elimination of pollution, the ability to recover energy while braking, load leveling, and efficient transient functioning. To achieve these goals, a bidirectional DC-DC converter must be used to connect the dc-link of the PV to the dc-link of the battery. There are two modes of operation that a P-powered electric vehicle must support: charging and discharging. In this research, the Maximum Power Point Tracking (MPPT) method is used to extract the greatest energy possible from solar PV. In addition, a closed-loop control circuit is described in this study for DCDC converters with bidirectional output. The system's effectiveness is verified using MATLAB simulations.*

I. INTRODUCTION

Governments, corporations, and individuals alike are shifting their focus towards establishing industries in which renewable energy is viewed as one of its strongest foundations due to rising environmental concerns, energy conservation, and global warming. For example, EV has quickly become a hot topic among both the general public and academics [1]. Renewable energy sources include wind and solar power as well as hydel, ocean, and thermal sources [2, 3]. Boost converters and DC-DC bidirectional converters are two examples of power electronic converters that may be used to control the flow of renewable energy for various purposes [4, 5]. In order to use these energy, converters are required. All of these converters were formerly controlled by silicon controlled rectifiers. Modern switches, such as MOSFETs and

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BIO-METRIC BASED VOTING MACHINE

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Abstract: *The Arduino platform was used to create a fingerprint voting system. A voter may cast his ballot with ease using this system. To register for this system, a voter has to fill out a registration form with the use of a user id and password, which are saved in this database server. In order to verify this data, the database server will be consulted. If there is a discrepancy in the voter's profile, the system will not let the voter to cast a ballot. Voters will appreciate how much time is saved with this technique. This is the safer option. The user's fingerprint serves as a crucial identifier. The Finger Voting System is simple to use. It offers a straightforward design, instantaneous replies, and a shorter polling cycle. Transporting ballots from the voting place to the counting area is a breeze. Vote tallying is simplified, and fewer people are needed to do the tall*

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CONTROLLING AND MONITORING OF INDUSTRIAL PROCESS

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Abstract: *The goal of this project is to develop a GM-based wireless system for real-time monitoring and control of industrial processes, with the goal of eliminating the need for human intervention. Different machines in factories will have to be run depending on the condition of others. A load monitor should be hired for this specific reason. However, there is always the potential that they may forget to actually do the operation. These devices need strong currents and a lot of power, making them difficult for a human to operate by hand. This project provides the finest answer for such cases, and it will also entirely do away with the need for human operation. The idea behind this app's development is wireless connectivity. As an example of a wireless communication system, the GSM system is taken into account here due to its low cost and ease of implementation. The connection to the outside world is made possible using a GSM modem. It employs a serial link to the network to carry device protocols invisibly. An example of a wireless modem that is compatible with GSM networks is the GSM modem. This GSM Modem works precisely like a mobile phone, complete with its own phone number and the ability to take SIM cards from any GSM network provider. The RS232 connection on this modem will be useful for developing embedded programmers and communicating with other devices. Easy application development allows for features like SMS Control, data transmission, remote control, and logging. The modem may be wired to a micro controller, or it can be linked straight to a PC's serial port. In this project, we will automate a business process by keeping tabs on boiler temperatures and water levels. In this project, we will use an 8-bit micro controller to read data from a temperature sensor and three water-level sensors. The controller will communicate serially with a GSM modem. There will be three water level sensors installed at various heights inside the boiler, and an analog-to-digital converter (ADC) will connect the temperature sensor to*

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SMART OTP BASED DEVICE CONTROL SYSTEM

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Abstract: *In this project, we are going to make a smart OTP-based locking system. This smart lock can generate a new password every time you unlock it, which further enhances your security level. This new device is much safer than the traditional key-based system and electronic wireless lock system. If you are still using the key-based system, you are likely to land in a big problem if your key gets lost or stolen. The electronic wireless lock system is not safe either. You might forget the password and there is also a high risk being hacked. The main objective of this project is to set up a basic devices control system in an Arduino Uno with a 4x4 keypad, 16x2 LCD and Relay, DC fan, Led, every time we enter a random password it checks with the controller whether the OTP is correct or not. If it is a correct OTP, the Fans & lights ON. Once that is ready, I have used an ESP8266 which gets connected to the WiFi network and sends string values to the Twilit API.*

I. INTRODUCTION

An embedded system is a special-purpose computer system designed to perform one or a few dedicated functions, sometimes with real-time computing constraints. It is usually embedded as part of a complete device including hardware and mechanical parts. In contrast, a general-purpose computer, such as a personal computer, can do many different tasks depending on programming. Embedded systems have become very important today as they control many of the common devices we use.

Since the embedded system is dedicated to specific tasks, design engineers can optimize it, reducing the size and cost of the product, or increasing the reliability and performance. Some embedded systems are mass-produced, benefiting from economies of scale.

Physically embedded systems range from portable devices such as digital watches and MP3 players, to large

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EXPERIMENTAL INVESTIGATION ON WEAR PROPRTIES OF RICE HUSK ASH AND FLY ASH REINFORCEMENT IN ALUMINIUM (Al 6061) METAL MATRIX COMPOSITES

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ABSRACT:

The applications of Aluminum metal matrix composites are growing rapidly in various engineering fields due to their good mechanical properties. In the present study it is proposed to fabrication of aluminum alloy metal matrix reinforce with locally available inexpensive rice husk and fly ash. A rice husk and fly ash particles of 5%, 10% and 15% each by weight are proposed to develop metal matrix composites using stir casting technique. The mechanical properties like tensile strength, hardness, and percentage elongations are to be studied for aluminum metal matrix composites.

KEYWORDS:

Aluminum 6061, Rice Husk, Fly Ash, Stir Casting.

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DESIGN AND ANALYSIS OF DISC UNDER MECHANICAL LOADS

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Abstract: *A brake is a mechanical or electronic device that is designed to impede or halt the motion of a machine or vehicle. The antithetical constituent of the aforementioned mechanism is a clutch. The subsequent sections of this manuscript are allocated to diverse classifications of automotive braking systems. The predominant mechanism employed by brakes for the conversion of kinetic energy into heat is friction, although alternative methods of energy conversion may also be utilized. In order to store and use energy for later use, regenerative braking turns a large amount of kinetic energy into electrical energy. Potential energy, which may be stored in a variety of forms like compressed air or pressurized oil, is the result of transforming kinetic energy, the energy in motion, into potential energy. Kinetic energy may be converted into other forms by the use of alternative braking methods, they can, for instance, provide power to the flywheel. Brakes typically serve to slow the speed of axles or wheels. They can, however, adopt a new form to alter the motion of a fluid, for instance, by using flaps within water or in air. Transportation systems that use a combination of wheel brakes and a parachute, as in drag racing, or wheel brakes and higher drag flaps, as in landing airplanes, are examples of hybrid deceleration systems.*

I. INTRODUCTION

The classification of braking systems can be broadly categorized into three distinct types: friction-based, pump-based, and electromagnetic-based. A brake unit has the capacity to incorporate several principles, including the utilization of a pump mechanism to drive fluid flow through an orifice, resulting in the production of friction. The use of frictional brakes is widespread and may be divided into two categories: "shoe" and "pad" brakes that make use of a specially-

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EFFECT OF WELDING SPEED AND DEPTH OF PENETRATION IN BUTT WELD JOINT USING TIG WELDING

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Abstract: *Welding is the metal joining process in which two or more metal having same material or different can be joined by heating to a plastic state .It is mostly used for joining metals in process industry, in fabrication, maintenance, repair of parts and structures. The metal plates and pipes used in process industry and they have welding strength as their important parameter.*

In this thesis, the welding speed and geometry to find out tensile And hardness in case of butt weld joint will be done. For V-groove geometry different models of plate with various included angles from 30^0, 40^0, 50^0will be made from stainless steel (SS grade 304). Currently different welding speed and welding current are used in precision welding applications such as nuclear reactor pressure vessels, boilers etc. where welding accuracy as well as quality with strength is an important parameter. So in this project experimentation will be done on different welding speed such as 0.6 cm/sec, 1.10 cm/sec and 1.20cm/sec welding current 80A, 100A and 120A to prepare a V-groove butt weld joint. Generally the V-groove geometry with included angle up to 60^0 is in use.

I. INTRODUCTION

Welding is, at its centre, merely the way of bonding 2 objects of metallic. Whereas there are opportunity approaches in which to affix metallic (riveting, brazing and bonding, as an example), attachment has turn out to be the strategy of selection for its electricity, potency and flexibility.

There are loads of completely special attachment methods, and a number of are being unreal all of the time. Some methods use warmth to generally melt 2 objects of metal along, commonly including "filler

TAGUCHI METHOD USED IN TURNING OPERATION WITH DIFFERENT PARAMETERS

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Abstract: *One of the trickiest processes, cutting steel involves a lot of steps that all work together to produce a high-quality final product. Turning is one of the metal-reducing processes where the finished product's high quality largely depends on the machining parameters, such as speed, depth of cut, feed rate, kind of coolant used, type of inserts used, etc. Similar to how the job piece material is important in the steel cutting process.*

Therefore, processes that achieve good surface quality and low cutting pressures are most valuable. Numerous process parameters are involved, all of which have an impact on the item's surface roughness and cutting pressures in one way or another. Achieving the appropriate surface quality of the machined product is actually a challenging challenge in machining techniques. This is due to the fact that process parameters, whether directly or indirectly, have a significant impact on quality.

In this thesis, an attempt is made to use Taguchi optimization to improve cutting specifications when turning EN 31 tool and also H13 tool steel at high speeds using a concrete carbide cutting tool. For transforming job item EN 31 device steel and also H13 steel, the cutting criteria are cutting speed and feed rates. The best cutting speeds for this project are 1200 rpm, 2000 rpm, and 2500 rpm, and the best feed speeds are 120 mm/min, 250 mm/min, and 380 mm/min.

The aforementioned factors are taken into account when conducting an experiment. Experimental validation is used to validate trimming pressures and surface area roughness values. The experiment will be conducted using various cutting settings, parameters, and different goods, including EN31 steel and H13 steel. The criteria affecting the roughness of surface areas created during the converting process for the various materials investigated by

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DESIGN AND ANALYSIS OF CYLINDER HEAD GASKET

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Abstract: *Cylinder head gasket is used to improve the efficiency of automobile engines sealing the combustion gases and to avoid coolant or engine oil leaking into the cylinders. The cylinder head gasket should be designed in such a way that it creates sealing to the cylinder engine which should withstand the temperature generated by each combustion inside the cylinder at different loading conditions. The gas should not be escaped as the contact stresses subjected to the gasket should be analyzed depending on the size and shape of the cylindrical head. The gasket may fail due to overheating, abrupt change in temperature, incorrect installation, detonation, which may vary depends on material.*

In this research, we will design and model a single cylinder IC engine head gasket using Solid works, according to the specifications and size of a cylinder. The major approach of this dissertation is to conduct thermal analysis on the cylinder head gasket with different composite materials such as Copper and Asbestos, Steel and Asbestos, epoxy carbon and copper. Model is created in solid works and different temperatures analysis will be carried out through ANSYS using certain thermal loads (i.e.213^{0}c, 3130c and 413^{0}c). The results will be taken out and the area which experiences the maximum load will be shown, the analysis will be performed and compared between different materials as described, where the optimal performance of materials can be known.

Tools: Solid Works, Ansys

I. INTRODUCTION

Engine block

The internal combustion engine is an engine in which the combustion of a fuel (normally a fossil fuel) occurs with an oxidizer (usually air) in a combustion chamber. In an internal combustion engine, the expansion of the high-temperature and -pressure gases produced by combustion applies direct force to some component of

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OPTIMIZATION OF MACHINING PARAMETERRS FOR FACE MILLING OPERATING IN A VERTICAL CNC MILLING MACHINE USING TAGUCHI METHOD

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Abstract: *Milling machine is one of the important machining operations. In this operation the work piece is fed against a rotating cylindrical tool. The rotating tool consists of multiple cutting edges (multipoint cutting tool). Normally axis of rotation of feed given to the work piece Milling operation is distinguished from other machining operations on the basis of orientation between the tool axis and the feed direction; however, in other operations like drilling, milling, etc. the tool is fed in the direction parallel to axis of rotation. The cutting tool used in milling operation is called milling cutter, which consists of multiple edges called teeth. The machine tool that performs the milling operations by producing required relative motion between work piece and tool is called milling machine.*

I. INTRODUCTION

It provides the required relative motion under very controlled conditions. These conditions will be discussed later in this unit as milling speed, feed rate and depth of cut. Normally, the milling operation creates plane surfaces. Other geometries can also be created by milling machine. Milling operation is considered an interrupted cutting operation teeth of milling cutter enter and exit the work during each revolution. This interrupted cutting action subjects the teeth to a cycle of impact force and thermal shock on every rotation. The tool material and cutter geometry must be designed to bear the above stated conditions. Depending upon the positioning of the tool and work piece the milling operation can be classified into different types.

OBJECTIVES:

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DESIGN AND ANALYSIS OF FOUR WHEEL STEERING SYSTEM

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Abstract: *The most conventional steering arrangement is to turn the front wheels using a hand–operated steering wheel which is positioned in front of the driver, via the steering column, which may contain universal joints (which may also be part of the collapsible steering column design), to allow it to deviate somewhat from a straight line.*

In this thesis, to turn the rear wheels out of phase to the front wheels. In order to achieve this, a mechanism which consists of two bevel gears and intermediate shaft which transmit 100% torque as well turns rear wheels in out of phase was developed.

The materials used for these analyses are Aluminium alloy, steel, and cast iron materials. Static analysis to determine the deformation, stress of the steering system at different rotational velocities (220,250,300&400rad/s), modal analysis to determine the natural frequency and deformation for 5 mode shapes

3Dmodelled by using the software CATIA and analysis done in ANSYS software.

I. INTRODUCTION

Steering is the collection of components, linkages, etc. which allows any vehicle (car, motorcycle, bicycle) to follow the desired course. An exception is the case of rail transport by which rail tracks combined together with railroad switches (and also known as 'points' in British English) provide the steering function. The primary purpose of the steering system is to allow the driver to guide the vehicle.

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DESIGN AND ANALYSIS OF COMBUSTION CHAMBER IN I.C ENGINE

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Abstract: *ICEs typically comprise reciprocating piston engines, rotary engines, gas turbines and jet turbines. The combustion process increases the internal energy of a gas, which translates into an increase in temperature, pressure, or volume depending on the configuration. In an enclosure, for example the cylinder of a reciprocating engine, the volume is controlled and the combustion creates an increase in pressure. In a continuous flow system, for example a jet engine combustor, the pressure is controlled and the combustion creates an increase in volume. This increase in pressure or volume can be used to do work, for example, to move a piston on a crankshaft or a turbine disc in a gas turbine. If the gas velocity changes, thrust is produced, such as in the nozzle of a rocket engine.*

I. INTRODUCTION

ICEs typically comprise reciprocating piston engines, rotary engines, gas turbines and jet turbines. The combustion process increases the internal energy of a gas, which translates into an increase in temperature, pressure, or volume depending on the configuration. In an enclosure, for example the cylinder of a reciprocating engine, the volume is controlled and the combustion creates an increase in pressure. In a continuous flow system, for example a jet engine combustor, the pressure is controlled and the combustion creates an increase in volume. This increase in pressure or volume can be used to do work, for example, to move a piston on a crankshaft or a turbine disc in a gas turbine. If the gas velocity changes, thrust is produced, such as in the nozzle of a rocket engine.

Petrol (gasoline) engine

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DESIGN AND ANALYSIS OF NON-PNEUMATIC TYRES

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Abstract: *The non-pneumatic tyre (NPT) with a hexagonal honeycomb structural design, which was initially created by the French tyre company Michelin, will be static and dynamically analysed in this research. The goal of the current review is to learn more about how airless tyres are made. In contrast to pneumatic tyres, airless tyres, often known as flat-proof tyres or tweels, are made with poly composite compound tread wrapped around a hub of flexible spokes. The fundamental benefit of this design is its durability because, unlike traditional tyres, airless tyres cannot blow out or deflate at highway speeds; therefore the driver does not need to worry about carrying a spare tyre. This tire's primary goal is to get rid of the tube. The tube inside a pneumatic tyre contains the air that causes the tyre to inflate and burst.*

I. INTRODUCTION

Tires that are not supported by air pressure are referred to as non-pneumatic tyres (NPT). They offer a safer place in the driving medium, are more practical, and are lasting. In terms of automobiles, the performance of the tyres determines the quality of the engine, transmission, and all other power train components. The predominant option for usage in automobiles subjected to various operating circumstances since Dunlop's discovery of the pneumatic tyre in 1888 has been this tire's many advantages, particularly:

1. Minimum rolling energy loss
2. Reduced vertical stiffness, which has a cushioning effect
3. Low mass,
4. Low contact pressure

Although it has a number of benefits, its biggest disadvantage to date is the possibility that it could become flat while in use. Michelin and Bridgestone are two tyre firms that have begun experimenting

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DESIGN AND ANALYSIS OF NATURAL CONVECTIVE OF HEAT TRANSFER OF NARROW INCLINED PLATES

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Abstract: *Natural Convection flow in a vertical channel with internal objects is encountered in several technological applications of particular interest of heat dissipation from electronic circuits, refrigerators, heat exchangers, nuclear reactors fuel elements, dry cooling towers, and home ventilation etc.*

In this thesis the air flow through vertical narrow plates is modelled using CATIA design software. The thesis will focus on thermal and CFD analysis with different Reynolds number (2×10^6& 4×10^6) and different angles (0^0,30^0,45^0&60^0) of the vertical narrow plates. Thermal analysis done for the vertical narrow plates by steel, aluminium & copper at different heat transfer coefficient values. These values are taken from CFD analysis at different Reynolds numbers.

In this thesis the CFD analysis to determine the heat transfer coefficient, heat transfer rate, mass flow rate, pressure drop and thermal analysis to determine the temperature distribution, heat flux with different materials.

3D modelled in parametric software CATIA and analysis done in ANSYS.

I. INTRODUCTION

Natural Convection

In natural convection, the fluid motion occurs by natural means such as buoyancy. Since the fluid velocity associated with natural convection is relatively low, the heat transfer coefficient encountered in natural convection is also low.

Mechanisms of Natural Convection

Consider a hot object exposed to cold air. The temperature of the outside of the object will drop (as a result of heat transfer with

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PERFORMANCE ANALYSIS OF PHOTOVOLTAIC FED SERIES ACTIVE POWER FILTER FOR POWER QUALITY IMPROVEMENT

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Abstract: This article presents a progressive topology of an active energy harvesting filter coupled with photovoltaic systems to convert the output voltage. The presence of high voltage quality problems has enough functionality to affect consumer electronics and raise various problems within the respective network. Minimizing these voltage problems is critical to achieving the desired satisfactory power output. Therefore, a suitable control algorithm is required for the generation of reference currents that are useful for signal generation. In this article, the method of unit vector template technology is applied for the generation of reference symbols. A hysteresis controller is used for the period of the trigger signal. The required voltage across the DC link during filter operation must be kept constant for high overall efficiency, considering that the PV system is installed and powered through the filter's DC link. The developed device is configured in the Simulink environment and the overall performance of the filter is evaluated by analysing the disturbances associated with different voltages under static conditions.

Keywords: power quality, Active filter, Control strategy, grid connected PV system, power quality issues

I. INTRODUCTION

Age of fossil fuel as source of energy is constantly getting extinct. Demand of fuel and energy is exponentially rising with time. At the same time energy cost is also continuously increasing. To overcome these critical situations, we can use renewable resources at our disposal from which energy can be tapped. Photovoltaic cells convert solar energy to direct electric energy. The advantages of solar energy are:

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SOLAR AND WIND BASED HYBRID ENERGY SYSTEM USING MODELING AND SIMULATION

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Abstract: This article is a simulation, designing and modeling of a hybrid power generation system based on nonconventional (renewable) solar photovoltaic and wind turbine energy reliable sources. The primary premeditated system is the solar electric generator, consisting of six models and series connected to each other, based on predicted-P&O and connected to a MPPT controller and DC/AC converter, system is associated with PMSG (permanent magnet synchronous generator). The main purpose of this article is to interconnect systems to generate maximum power for single auxiliary phase loading, as well as the solar PV generator and systems of wind turbines for simulation with execution use of Simulink / MATLAB. The results of this simulation indicate that the hybrid power system is planned for stability, reliability, efficiency and model. Solar PV generator and wind turbine from the use of a renewable energy source (for maximum voltage generation). The solar photovoltaic module executable in MATLAB / Simulink captures five parameters, series parameters and shunt resistance are an inverse photovoltaic saturation flow and an ideal factor.

Keywords: Solar power, Wind power, Micro hydro power, Hybrid energy systems, power generation.

I. INTRODUCTION

In electricity systems renewable energy sources are playing a significant and fundamental role, and utilization of photovoltaic solar energy is rising exceptionally day by day. Photovoltaic panels and electrical inverters are used to generate solar power. In nature, the output power generated. By the photovoltaic panels is discontinuous and varies depending on the level of irradiancy,

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DESIGN AND SIMULATION OF FUZZY LOGIC CONTROLLER BASED MPPT OF PV MODULE USING MATLAB SIMULINK

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Abstract: Maximum power point tracking System (MPPT) is so important in PV systems to increase the efficiency of solar cells. So many methods are proposed to generate the maximum voltage from PV modules under different weather conditions. This paper proposed an intelligent method for maximum power point tracking using the P & O algorithm. The model contains a PV module connected to DC-to-DC boost converter. The PV System is tested under disturbance in the solar irradiation and temperature level. The simulation results show the maximum power tracker could track the maximum power accurately and successfully in all conditions tested. Comparison of various working parameters such as: tracking efficiency and response time of the system shows that the proposed method gives higher efficiency and better performance than the conventional perturbation and observation method. The voltage, current, and power of the Module can be measured through the P&O Method. The Fuzzy logic based Mppt controller is proposed in this method to increase the voltage Pv module. The proposed method used the fuzzy logic-based controlled (FLC) to initiate the control command to the output buck-boost converter as there is a change in the voltage and current across the PV panel. The modelling of the FLC-based MPPT controller is done for the PV module with the help of MATLAB/SIMULINK.

Keywords: Boost converter, MPPT, Fuzzy Logic controller.

I. INTRODUCTION

Energy not only plays an important role in our life but also in the overall economy of the country. The requirement for energy is

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DEVELOPMENT OF ELECTRIC VEHICLE BATTERY CHARGING CONTROLLER USING BUCK CONVEERTER WITH MODIFIED PI CONTROL SYSTEM

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Abstract: *Research into automotive applications of battery charging systems powered by renewable energy sources for electric vehicles (EVs) has increased rapidly in recent years. This study investigates the feasibility of solar P-powered EVs in great detail. Battery storage for ground vehicles has various advantages, including the elimination of pollution, the ability to recover energy while braking, load leveling, and efficient transient functioning. To achieve these goals, a bidirectional DC-DC converter must be used to connect the dc-link of the PV to the dc-link of the battery. There are two modes of operation that a P-powered electric vehicle must support: charging and discharging. In this research, the Maximum Power Point Tracking (MPPT) method is used to extract the greatest energy possible from solar PV. In addition, a closed-loop control circuit is described in this study for DCDC converters with bidirectional output. The system's effectiveness is verified using MATLAB simulations.*

Keywords: *Battery charging controller, Asynchronous Buck Converter, Electric vehicle,*

I. INTRODUCTION

Governments, corporations, and individuals alike are shifting their focus towards establishing industries in which renewable energy is viewed as one of its strongest foundations due to rising environmental concerns, energy conservation, and global warming. For example, EV has quickly become a hot topic among both the general public and academics [1]. Renewable energy sources include wind and solar power as well as hydel, ocean, and thermal sources. Boost converters and DC-DC bidirectional converters are two examples of power

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ON A CERTAIN SUBCLASS OF ANALYTIC FUNCTIONS DEFINED BY GEGENBAUER POLYNOMIALS

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Communicated by R. K. Raina

MSC 2010 Classifications: Primary 30C45; Secondary 30C50.

Keywords and phrases: analytic function; coefficient estimates; distortion; partial sums.

Abstract The aim of this article is to introduce and investigate a new subclass of analytic functions involving Gegenbauer polynomials. We obtain for the introduced class various geometric properties giving the coefficient inequalities, distortion theorem, radius of close-to-convexity, starlikeness, convex linear combination, partial sums and convolution properties. Further, we obtain a neighborhood result for the class defined in the present paper.

1 Introduction

Let A specify the category of analytical functions f represent on the unit disc $U = \{z : |z| < 1\}$ with normalization $f(0) = 0$ and $f'(0) = 1$, such a function has the extension of the Taylor series on the origin in the form

$$f(z) = z + \sum_{n=2}^{\infty} a_n z^n. \tag{1.1}$$

Indicated by S, the subclass of A be composed of functions that are univalent in U.

Then a $f(z)$ function of A is known as starlike and convex of order ϑ if it delights the pursing

$$\Re\left\{\frac{zf'(z)}{f(z)}\right\} > \vartheta, \ \ (z \in U), \tag{1.2}$$

$$\text{and } \Re\left\{1 + \frac{zf''(z)}{f'(z)}\right\} > \vartheta, \ \ (z \in U), \tag{1.3}$$

for specific $\vartheta (0 \leq \vartheta < 1)$ respectively and we express by $S^*(\vartheta)$ and $K(\vartheta)$ the subclass of A be expressed by aforesaid functions respectively. Also, indicate by T the subclass of A made up of functions of this form

$$f(z) = z - \sum_{n=2}^{\infty} a_n z^n, \ (a_n \geq 0, \ z \in U) \tag{1.4}$$

and let $T^*(\vartheta) = T \cap S^*(\vartheta), C(\vartheta) = T \cap K(\vartheta)$. There are interesting properties in the $T^*(\vartheta)$ and $C(\vartheta)$ classes and were thoroughly studied by Silverman [6] and others.

The class $\mathcal{T}(\wp), \wp \geq 0$ has been implemented and analyzed by the subclass Szynal [10] of A consisting of type functions

$$f(z) = \int_{-1}^{1} K(z, \ell) d\mu(\ell), \tag{1.5}$$

where

$$K(z, \ell) = \frac{z}{(1 - 2\ell z + z^2)^{\wp}}, \ \ (z \in U, \ell \in [-1, 1]) \tag{1.6}$$

and μ is a probability measure at the interval $[-1, 1]$. The compilation of such $[a, b]$ calculation is denoted as $P[a, b]$.

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A NEW SUBCLASS OF ANALYTIC FUNCTIONS DEFINED BY LAMBDA OPERATOR

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Communicated by Ayman Badawi

MSC 2010 Classifications: : Primary 30C45, 30C80.

Keywords and phrases: analytic; coefficient bounds; partial sums.

Abstract In this work, we introduce and investigate a new class $k-\widetilde{U}ST_s(\mu,\varrho,\gamma,t)$ of analytic functions in the open unit disc U with negative coefficients. The object of the present paper is to determine coefficient estimates, neighborhoods and partial sums for functions u belonging to this class.

1 Introduction

Let A denote the class of analytic functions u defined on the unit disk $U=\{z:|z|<1\}$ with normalization $u(0)=0$ and $u'(0)=1$. Such a function has the Taylor series expansion about the origin in the form

$$u(z)=z+\sum_{\eta=2}^{\infty}a_\eta z^\eta, \tag{1.1}$$

denoted by S, the subclass of A consisting of functions that are univalent in U.

For $u\in A$ given by (1.1) and $g(z)$ given by

$$g(z)=z+\sum_{\eta=2}^{\infty}b_\eta z^\eta \tag{1.2}$$

their convolution (or Hadamard product), denoted by $(u*g)$. is defined as

$$(u*g)(z)=z+\sum_{\eta=2}^{\infty}a_\eta b_\eta z^\eta=(g*u)(z),\ \ (z\in U). \tag{1.3}$$

Note that $u*g\in A$.

A function $u\in A$ is said to be in $k-UST(\gamma)$, the class of $k-$uniformly starlike functions of order $\gamma, 0\le\gamma<1$, if satisfies the condition

$$\Re\left\{\frac{zu'(z)}{u(z)}\right\}>k\left|\frac{zu'(z)}{u(z)}-1\right|+\gamma,\ \ (k\ge 0), \tag{1.4}$$

and a function $u\in A$ is said to be in $k-UCV(\gamma)$, the class of $k-$uniformly convex functions of order $\gamma,\ 0\le\gamma<1$, if satisfies the condition

$$\Re\left\{1+\frac{zu''(z)}{u'(z)}\right\}>k\left|\frac{zu''(z)}{u'(z)}\right|+\gamma,\ \ (k\ge 0). \tag{1.5}$$

Uniformly starlike and uniformly convex functions were first introduced by Goodman [4] and studied by Ronning [6] and also see [12].

In [8], Sakaguchi defined the class ST_s of starlike functions with respect to symmetric points as follows:

Let $u\in A$. Then u is said to be starlike with respect to symmetric points in U if and only if

$$\Re\left\{\frac{2zu'(z)}{u(z)-u(-z)}\right\}>0,\ (z\in U).$$

A STUDY ON FACTORS INFLUENCING THE DISCONNECTION OF LAND LINES OF BSNL

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Abstract
Attempt to know the customer satisfaction of BSNL landline in Coimbatore city. Every Business targets its target customer and their optimal goal would be the satisfaction of their ultimate customer. In this competitive world of Business everything starts and ends with needs of the customer. The study contains questions regarding the various aspects and reasons for choosing BSNL, the customer's awareness about new schemes/offers, and the factors influencing disconnection of BSNL landline. Customer satisfaction is considered to be the most important factor as it involves the retention of the customer and creates brand loyalty and also it forms a base for attracting prospective customers. The study reveals that BSNL needs to focus on frequent line failure, supplementary sounds or line disturbances, poor response to complaints and temporary solutions to the maintenances problems and take measures for rectification.

INTRODUCTION

World telecom industry is an uprising industry, over the past few years' information and communications technology has changed in a dramatic manner and as a result of that world telecom industry is going to be a booming industry. Substantial economic growth and mounting population enables the rapid growth of this industry. In 2015 the global telecom industry continues to grow from strength to strength. While the operators may struggle to grow significant revenues; the underlying trends of mobile broadband; M2M; Cloud computing; OTT services and big data management continue to propel the broader telecom sector ahead. Fixed broadband is also making headway with the majority of countries now having a national broadband network plan or policy in place. Mobile penetration continues to vary widely throughout the world. In Europe, nearly 80% of the population was unique mobile subscribers at the end of 2014, while in Sub-Saharan Africa the figure was only 39%. But the developing regions are where we will see most growth in the years to 2020. Mobile broadband access using the 3G and now the 4G/LTE networks has continued to expand as users continue to add tablets, modems and phones to use alternative communication methods and cloud based services. In the longer term, with the increase in connected devices and the increased availability of mobile devices such as tablets and smartphones, the amount of mobile data downloaded is likely to at least double yearly for the next few years. NEED OF THE STUDY

- Customer satisfaction is must to understand the likes and dislikes of the customers regarding service
- To evaluate understand the channels and how they working.
- To know whether customer receive the service on time, and is it full filling their needs to the desired levels
- This would help to plan for the better channel and improve CRM activities which assure the customer to be satisfied

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Estimated Data Set for Partially Observed System Approximate Planning and Reinforcement Learning

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Abstract

Reinforcement learning methods may take use of asymmetry, which occurs during offline training in partly viewable virtual environments, to their advantage. If handled correctly, such private data may significantly improve the optimum convergence qualities. Nevertheless, the majority of the present research in asym-metric reinforcement learning relies on empirical assessment and is mostly heuristic, without theoretical guarantees or linkages to underlying theory. This paper first establishes the theory of Asymmetric Policy Iteration, a model-based dynamic programming solution technique; then, it applies relaxations that lead to Asymmetric DQN, a deep reinforcement learning process that does not rely on models. Experimental results corroborate and supplement our theoretical results, which were tested in settings with high levels of partial observability and demanding of information collection techniques and memorizing.

1 INTRODUCTION

One new paradigm in reinforcement learning (RL) is known as offline training and online execution (OTOE). This approach requires learning agents to undergo training in a simulated environment before they can be used in the "real" world. Our approach focuses on the many benefits of OTOE, which include safety guarantees, rapid training, flexibility, and access to sensitive information. In fact, OTOE has become the preferred paradigm in some research cliques due to all these reasons; for example, in multi-agent RL, it is often referred to as CTDE. Offline training provides access to privileged information that is inaccessible during regular online training and/or execution. Depending on the kind of control issue, this may manifest in many ways; for example, in multi-agent RL, it can take the shape of other agents' observations and actions; in partly observable RL, it can take the shape of the system's state; and so on.

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An Experimental Research On Friction And Wear Behaviour Of Compact Graphite Iron At Elevated Temperatures

S. Venugopal Rao, M. Venkata Ramana, A.C.S Kumar

Abstract: *Compact Graphite iron (CGI) is mainly used in automobile engine cylinder blocks and disc brakes. CGI has interconnected by vermicular shape graphite. Melting of steel and treatment of CGI is useful for getting sound castings. In automobiles the components manufactured by CGI are exposed to friction including wear, abrasion, thermal stresses and fatigue. Friction and wear characteristics at elevated temperatures are studied in the present study. Friction tests on CGI are conducted with pin on disc wear testing machine between CGI and hard steel disc. The deviations in frictional forces and wear behaviour are observed from the experimental results. The results shows that the wear rate and frictional forces of CGI at 400°C and 500°C temperatures was strongly influenced by the variation in induced temperatures. Scanning Electron Microscopy (SEM) is used to examine CGI pins surfaces. Temperature variations during experiments are influenced the CGI coefficient of friction.*

Keywords: *Compact Graphite Iron, Friction, Sliding wear, High Temperature, SEM Analysis.*

I. INTRODUCTION

Wear and friction behaviour studies of CGI cast iron will be useful in making of blow moulding mould materials and in automobile applications. Pin on disc wear testing tribometer was used to conduct wear tests. CGI samples for wear testing were taken from the prepared material and abraded against a hardened steel disc (EN 31). Sliding velocity, frictional force and contact time were taken as test variables. Weight loss of the tested samples was measured after conducting the wear tests at 400°C and 500°C. [1] CGI produced with addition of alloys in the melt to charge. Carbon content is adjusted by adding graphite and after reaching required level of carbon the melt is heated up to 1530°C and treated with magnesium. Holding time at maximum temperature will be reduced to minimize silicon loss, melt oxidation and carbon burn will be minimized by keeping melt holding time as minimum. Modularisation with magnesium treatment and Ferro silicon inoculation have been done with a special care. Production of CGI is includes pig iron as base iron, steel scrap, graphite and Ferro silicon alloy. This CGI material is used in engine piston rings, bearings, brakes, and seals. Y.Lyu [2] studied observations which shown wear behaviour CGI overcome other cast iron materials. Heat treatment processes like induction hardening will increase the wear behaviour of CGI. [3] Grey cast iron is the material which has been used in the applications where wear is considered primly. Dark graphite and bright pearlite matrix structure ferrite is observed. The distribution of graphite contains perlite and ferrite. Mo content is one of the important for the varying pearlite fraction. [4]Production rates and costs are depends on mould materials and its surfaces. [5] Nano crystalline oxide layers called glaze layers are response to low wear rates. Glaze layers are developed between pin and disc metal in pin on disc test. The CGI metal properties like wear resistance, corrosion resistance, machinability and temperature resistance can be improved by addition of copper, molybdenum, chromium, nickel and zirconium in the melt. From the wear spheroidal graphite iron experiment D. Gowda.[6]given that coefficient of friction and wear rates were measured and made conclusions that at initial time coefficient of friction varies and later converge to certain values due to the wear debris. The wear debris generated between pins and disc surface. Spheroidal graphite iron (SGI) shown high wear rates in dry and wet experimental conditions and graphite acts as lubricant.Sugwon Kim (10) studied wear behaviour of compacted graphite cast iron at elevated temperatures and results indicated that CGI can use in high temperature applications. High temperature abrasive wear properties of CGI and SGI cast irons have been studied by by E. Faculty [7] and concluded that SGI shown high wear losses than CGI, in abrasive conditions SGI is more useful. Strain ageing of subsurface layer during wear experiment at 150°C is the reason for increase in wear resistance CGI and SGI. Critical thickness of CGI casting, magnesium content in CGI and oxygen activity are influence the control of crystallization of graphite [8]G. Cui.[9] studied tribological properties of materials and concluded that hardness and solid lubricants like Ag, molybdates, chromates will influence the tribological properties of materials.M.S Skoinski[10] Conducted experiments at 290°C, 340°C and 390°C and concludes that CGI wear resistance is increased by decrease in abrasive as austempering temperature increased. [11] Interactions between metal particles are observed particularly due to the abrasive components of the friction material, like hard oxide particles, MgO. Plastic deformation and oxidative wear are dominantly observed at elevated temperatures.

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A STUDY ON INVENTORY MANAGEMNT

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ABSTRACT

Inventory Management System is important to ensure quality control in businesses that handle transactions revolving around consumer goods. Without proper inventory control, a large retail store may run out of stock on an important item. A good Inventory Management System will alert the retailer when it is time to reorder. Inventory Management System is also an important means of automatically tracking large shipments. For example, if a business orders ten pairs of socks for retail resale, but only receives nine pairs, this will be obvious upon inspecting the contents of the package, and error is not likely. On the other hand, say a wholesaler orders 100,000 pairs of socks and 10,000 are missing. Manually counting each pair of socks is likely to result in error. An automated Inventory Management System helps to minimize the risk of error. In retail stores, an Inventory Management System also helps track theft of retail merchandise, providing valuable information about store profits and the need for theft-prevention systems. Automated Inventory Management System work by scanning a barcode either on the item. A barcode scanner is used to read the barcode, and the information encoded by the barcode is read by the machine. This information is then tracked by a central computer system. For example, a purchase order may contain a list of items to be pulled for packing and shipping. The Inventory Management System can serve a variety of functions in this case. It can help a worker locate the items on the order list in the warehouse, it can encode shipping information like tracking numbers and delivery addresses, and it can remove these purchased items from the inventory tally to keep an accurate count of in-stock items. All of this data works in tandem to provide businesses with real-time inventory tracking information. Inventory Management System make it simple to locate and analyze inventory information in real-time with a simple database search.

I. INTRODUCTION

Inventory control is vitally important to almost every type of business, whether product or service oriented. Inventory control touches almost every facets if operations. A proper balance must be struck to maintain proper inventory with the minimum financial impact on the customer. Inventory control is the activities that maintain stock keeping items at desired levels. In manufacturing since the focus is on physical product, inventory control focus on material control.

"Inventory" means physical stock of goods, which is kept in hands for smooth and efficient running of future affairs of an organization at the minimum cost of funds blocked in inventories.

The fundamental reason for carrying inventory is that it is physically impossible and economically impractical for each stock item to arrive exactly where it is needed, exactly when it is needed.

Inventory management is the integrated functioning of an organization dealing with supply of materials and allied activities in order to achieve the maximum co-ordination and optimum expenditure on materials. Inventory control is the most important function of inventory management and it forms the nerve center in any inventory management organization. An Inventory Management System is an essential element in an organization. It is comprised of a series of processes, which provide an assessment of the organization's inventory.

A Study On Fixed Assets Management In Ultratech Cement

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ABSTRACT

Fixed Assets are the assets held with the intention of being used on continuous basis for the purpose of producing or providing goods or services and are not held for resale in the normal course of business.

E.g.: Land and Buildings, Plant and Machinery, Motor Vehicles, Furniture and Fixtures.

Valuation of fixed assets is important to have fair measure of profit or loss and financial position of the concern. Fixed assets are meant for use for many years. The value of these assets decreases with their use or with time or many other reasons. A portion of fixed assets are reduced by usage are converted into cash through charging depreciation. For correct measurement of income, proper measurement of depreciation is essential, as depreciation constitutes a Part of total cost of production.

I. INTRODUCTION

Financial transactions are recorded in the books, keeping in view the going concern aspect of the business unit. In going concern aspect it is assumed that the business unit has reasonable expectation of continuing the business for a profit for an indefinite period of time. This assumption provides much of the justification for recording fixed assets at original cost and depreciating them in a systematic manner without reference to their current realizable value

It is useless to record the fixed assets in the balance sheet at their estimated realizable values if there is no immediate expectation of selling them. So, they are shown at their book value (i.e., Cost –Depreciation) and not at current realizable value. The market value of the fixed assets may change with the passage of time, but for accounting purpose it continues to be shown in the books in historical cost.

The cost concept of accounting states that depreciation calculated on the basis of historical cost of old assets is usually lower than the amount calculated at current value/ replacement value. These results in more profits, which if distributed in full will lead to reduction in capital.

A PROJECT REPORT ON PRODUCT LIFE CYCLE AT KESORAM LTD

Deepika Kothari[1], Kondaparthi Harika[2], Dr.K.Venkata subbaiah[3]

Student[1], Guide[2], HOD[3]

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I. INTRODUCTION

Product/Service lifecycle management (PLM) is the process of managing the entire lifecycle of a product/Service from its conception, through design and manufacture, to service and disposal. PLM integrates people, data, processes and business systems and provides a product/Service information backbone for companies and their extended enterprise.

Product/Service lifecycle management (PLM) is more to do with managing descriptions and properties of a product/Service through its development and useful life, mainly from a business/engineering point of view; whereas product/Service life cycle management (PLCM) is to do with the life of a product/Service in the market with respect to business/commercial costs and sales measures.

Product/Service lifecycle management is one of the four cornerstones of a corporation's information technology structure. All companies need to manage communications and information with their customers (CRM-Customer Relationship Management), their suppliers (SCM-Supply Chain Management), their resources within the enterprise (ERP-Enterprise Resource Planning) and their planning (SDLC-Systems Development Life Cycle). In addition, manufacturing engineering companies must also develop, describe, manage and communicate information about their product/Services.

A form of PLM called people-centric PLM. While traditional PLM tools have been deployed only on release or during the release phase, people-centric PLM targets the design phase.

Recent (as of 2009) ICT development (EU funded PROMISE project 2004-2008) has allowed PLM to extend beyond traditional PLM and integrate sensor data and real time 'lifecycle event data' into PLM, as well as allowing this information to be made available to different players in the total lifecycle of an individual product/Service (closing the information loop). This has resulted in the extension of PLM into Closed Loop Lifecycle Management (CL_2M).

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A STUDY ON PERFORMANCE OF PRIMARY MARKET WITH REFERENCE TO FOLLOW ON PUBLIC OFFERING

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ABSTRACT:

The present study has been emphasized on the performance follow on public offering in Indian primary market examined with the help of secondary data from the period of 2008 – 09 to 2017-18. The review of literature in this area indicated limited research have been done. The Modigliani risk adjusted method has been applied in before and after period from the offering data and found that the majority of the FPOs returns performance got deteriorated in post listing period. The ordinary least square method has been applied and the result stated that the in pre and post listing period stocks are having the significant impact on the index performance. The ARCH model has been applied and the result reveals that the stocks volatility influenced the primary market bench mark volatility. This paper is useful to the equity investors, HNI, QIB, Regulators and academicians.

Key words: FPO, Primary Market, Investors, MM Approach and Secondary Market

i. INTRODUCTION

Primary demand is a demand because new issues yet monetary claims hence such is also referred to as so new trouble market. Primary market deals including lucre as are issued to the masses because of the advance period .in the primary market borrowers change current financial wherewithal because long term funds for this reason primary demand essential because metropolis formation. There are ternary ways within modern issue demand in conformity with develop their capital he are people issues, correct troubles and non-public placement.

In masses issues we bear joining kinds he are IPO (initial community offering), and FPO (further community offering).IPO yet FPO are no longer comparable at that place is quite difference within them. These twins kinds over people choices are tooled according to develop headquarters funds. IPO's (Initial commons offerings) are made with the aid of the agencies who the unlisted employer execute flourish theirs metropolis via presenting shares according to the public. Whereas the FPO's(follow of masses offerings)which a enterprise uses FPO then such has long past thru the manner over IPO yet decides in conformity with fulfil greater about its shares on hand in conformity with commons (or) to make bigger enterprise (or) in imitation of offshoot debt's.

The instruction is focused of follow over masses offerings(FPO) that is also referred to as further people choices which is an meanwhile listed corporation vivid according to flourish their funds by issuing shares after the public because bettering the enterprise and according to yielding debt's. The FPO's are labelled in according to couple sort's dilutive then non dilutive offerings. In the case concerning dilutive offering the corporation plank over administrators choice come after collect or the will decides after raise the share go with the flow because the purpose concerning selling greater fairness of the company. The new inflow about cash is would possibly keep old because enlargement of the enterprise or after yielding debt's

In the case regarding non dilutive offerings is so in private finished shares are presented via enterprise directors or mean insiders for sale. Right here ignoble insiders such as danger capitalists anybody can also

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An Opinion on AI with a Human Intermediary

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Abstract

Computers still struggle or fail miserably at many things that people can do effortlessly. An unparalleled amount of human-based computing power may be harnessed using crowdsourcing platforms such as Amazon Mechanical Turk. But as a general-purpose computing platform, they aren't very useful. It is challenging to coordinate complicated or interconnected processes due to the absence of full automation. Adding human workers to the schedule in order to decrease latency is an expensive endeavor, and works need to be tracked and rescheduled when workers don't finish their assignments. The amount of time and money needed to complete a project is also not always easy to foresee. Lastly, human-based calculations may not always provide trustworthy results due to the fact that human abilities and accuracy differ greatly and employees have a financial motive to limit their effort. In this article, we present AUTOMAN, the pioneering technology for completely autonomous crowdprogramming. Human-based calculations are seamlessly integrated into a regular programming language with AUTOMAN as conventional function calls. These functions may be freely combined with traditional ones. Programmers using AUTOMAN are able to concentrate on the logic of their code thanks to this abstraction. A budget and degree of confidence in the total calculation may be defined in an AUTO-MAN software. The AUTOMAN runtime system takes care of scheduling, pricing, and quality control in an open and transparent manner. AUTOMAN keeps human workers on time, checks their progress, reprices their labor, and restarts them as needed to get the appropriate degree of confidence. It also optimizes parallelism among human workers while keeping costs down.

Keywords Crowdsourcing, Programming Languages, Qual- ity Control

1. Introduction

There are a lot of things that computers still can't do well that humans can. When it comes to vision, motion planning, and interpreting natural language, for instance, humans absolutely crush computers [22, 26]. The majority of academics believe that computers will continue to struggle with these "AI-complete" activities for some time to come [27].

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An Experimental Research On Friction And Wear Behaviour Of Compact Graphite Iron At Elevated Temperatures

S. Venugopal Rao, M. Venkata Ramana, A.C.S Kumar

Abstract: *Compact Graphite iron (CGI) is mainly used in automobile engine cylinder blocks and disc brakes. CGI has interconnected by vermicular shape graphite. Melting of steel and treatment of CGI is useful for getting sound castings. In automobiles the components manufactured by CGI are exposed to friction including wear, abrasion, thermal stresses and fatigue. Friction and wear characteristics at elevated temperatures are studied in the present study. Friction tests on CGI are conducted with pin on disc wear testing machine between CGI and hard steel disc. The deviations in frictional forces and wear behaviour are observed from the experimental results. The results shows that the wear rate and frictional forces of CGI at 400°C and 500°C temperatures was strongly influenced by the variation in induced temperatures. Scanning Electron Microscopy (SEM) is used to examine CGI pins surfaces. Temperature variations during experiments are influenced the CGI coefficient of friction.*

Keywords: *Compact Graphite Iron, Friction, Sliding wear, High Temperature, SEM Analysis.*

I. INTRODUCTION

Wear and friction behaviour studies of CGI cast iron will be useful in making of blow moulding mould materials and in automobile applications. Pin on disc wear testing tribometer was used to conduct wear tests. CGI samples for wear testing were taken from the prepared material and abraded against a hardened steel disc (EN 31). Sliding velocity, frictional force and contact time were taken as test variables. Weight loss of the tested samples was measured after conducting the wear tests at 400°C and 500°C. [1] CGI produced with addition of alloys in the melt to charge. Carbon content is adjusted by adding graphite and after reaching required level of carbon the melt is heated up to 1530°C and treated with magnesium. Holding time at maximum temperature will be reduced to minimize silicon loss, melt oxidation and carbon burn will be minimized by keeping melt holding time as minimum. Modularisation with magnesium treatment and Ferro silicon inoculation have been done with a special care. Production of CGI is includes pig iron as base iron, steel scrap, graphite and Ferro silicon alloy. This CGI material is used in engine piston rings, bearings, brakes, and seals. Y.Lyu [2] studied observations which shown wear behaviour CGI overcome other cast iron materials. Heat treatment processes like induction hardening will increase the wear behaviour of CGI. [3] Grey cast iron is the material which has been used in the applications where wear is considered primly. Dark graphite and bright pearlite matrix structure ferrite is observed. The distribution of graphite contains perlite and ferrite. Mo content is one of the important for the varying pearlite fraction. [4]Production rates and costs are depends on mould materials and its surfaces. [5] Nano crystalline oxide layers called glaze layers are response to low wear rates. Glaze layers are developed between pin and disc metal in pin on disc test. The CGI metal properties like wear resistance, corrosion resistance, machinability and temperature resistance can be improved by addition of copper, molybdenum, chromium, nickel and zirconium in the melt. From the wear spheroidal graphite iron experiment D. Gowda.[6]given that coefficient of friction and wear rates were measured and made conclusions that at initial time coefficient of friction varies and later converge to certain values due to the wear debris. The wear debris generated between pins and disc surface. Spheroidal graphite iron (SGI) shown high wear rates in dry and wet experimental conditions and graphite acts as lubricant.Sugwon Kim (10) studied wear behaviour of compacted graphite cast iron at elevated temperatures and results indicated that CGI can use in high temperature applications. High temperature abrasive wear properties of CGI and SGI cast irons have been studied by by E. Faculty [7] and concluded that SGI shown high wear losses than CGI, in abrasive conditions SGI is more useful. Strain ageing of subsurface layer during wear experiment at 150°C is the reason for increase in wear resistance CGI and SGI. Critical thickness of CGI casting, magnesium content in CGI and oxygen activity are influence the control of crystallization of graphite [8]G. Cui.[9] studied tribological properties of materials and concluded that hardness and solid lubricants like Ag, molybdates, chromates will influence the tribological properties of materials.M.S Skoinski[10] Conducted experiments at 290°C, 340°C and 390°C and concludes that CGI wear resistance is increased by decrease in abrasive as austempering temperature increased. [11] Interactions between metal particles are observed particularly due to the abrasive components of the friction material, like hard oxide particles, MgO. Plastic deformation and oxidative wear are dominantly observed at elevated temperatures.

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International Journal of Research

A Study On "Working Capital Management" Submitted By Tata Motors

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Abstract

Administration of Alive Basic is one of the a lot of basic functions of accumulated management. Every alignment whether accessible or private, accumulation aggressive or not, behind hand of its admeasurements and attributes of business, needs acceptable bulk of alive capital. The accomplished alive basic administration is a lot of analytical agency in advancement existence, liquidity, solvency and ability of the any business organization. A aggregation needs acceptable accounts to backpack out acquirement of raw materials, transaction of anticipated operational costs and funds to accommodate these costs are calm accepted as alive capital. Keeping in appearance the accent of alive basic administration as ablah breadth of accumulated accounts function, an accomplishment has been fabricated to appraise the alive basic styles and practices aspect in PENNACEMENTS .

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A STUDY ON EMPLOYEE WELFARE AND EMPLOYEE SATISFACTION

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ABSTRACT

Welfare of employee and his family members is an effective advertising and also a method of buying the gratitude and loyalty of employees. Employee welfare is a comprehensive term including various services, benefits and facilities offered by the employer.
The basic purpose of labour welfare is to enrich the life of employees and keep them happy and contented. Welfare facilities enable workers to have a richer and more satisfying life. It raises the standard of living of workers by indirectly reducing the burden on their pocket.

Welfare of employee and his family members is an effective advertising and also a method of buying the gratitude and loyalty of employees. Employee welfare is a comprehensive term including various services, benefits and facilities offered by the employer.
The basic purpose of labor welfare is to enrich the life of employees and keep them happy and contented. Welfare facilities enable workers to have a richer and more satisfying life. It raises the standard of living of workers by indirectly reducing the burden on their pocket.

Organization is made up of people there for if people do not change then the organization cannot change for obtaining the full co-operation & enthusiastic support of the members in achieving the organizational objectives, the organization must satisfy their needs and insurer their feelings.

Every organization is different and less a unique feelings and character beyond its structures characters these each org, deals with its members in a distinct way through its policies on allocation of resources, commune action pattern reward and penalty leader ship and decision making style etc. the org policy and connection with regard to all these and a cluster of other related activities influence the feelings attitudes and behavior of its members and results in the creation of a unique organizational

This paper challenges the view of CEE labor as a uniformly weak actor. It argues that CEE unions' ability to shape the bargaining agenda and social policies depends largely on the degree of privatization, which overlaps with sectorial divisions. We find that unions in exposed sectors are unable to oppose greater flexibility even when there are no considerable wage gains, whereas workers in protected sectors manage to maintain their status and at times even enhance their welfare, both in terms of higher wages and better working conditions.

I. INTRODUCTION

Welfare includes anything that is done for the comfort and improvement of employees and is provided over and above the wages. Welfare helps in keeping the morale and motivation of the employees high so as to retain the employees for longer duration. The welfare measures need not be in monetary terms only but in any kind/forms. Employee welfare includes monitoring of working conditions, creation of industrial harmony through infrastructure for health, industrial relations and insurance against disease, accident and unemployment for the workers and their families.

Labor welfare entails all those activities of employer which are directed towards providing the employees with certain facilities and services in addition to wages or salaries.
Labor welfare has the following objectives:

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ROTARY POWER STEERING SYSTEM

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Abstract: *Demands for including more functions such as haptic guiding in power steering systems in road vehicles have increased with requirements on new active safety and comfort systems. Active safety systems, which have been proven to have a positive effect on overall vehicle safety, refer to systems that give the driver assistance in more and less critical situations to avoid accidents. Active safety features are going to play an increasingly important roll in future safety strategies; therefore, it is essential that sub systems in road vehicles, such as power steering systems, are adjusted to meet new demands. The traditional Rotary Power Assisted Steering, HPAS, system, cannot meet these new demands, due to the control unit's pure hydro-mechanical solution. The Active Pinion concept presented in this thesis is a novel concept for controlling the steering wheel torque in future active safety and comfort applications. The concept, which can be seen as a modular add-on added to a traditional HPAS system, introduces an additional degree of freedom to the control unit. Different control modes used to meet the demands of new functionality applications are presented and tested in a hardware-in-the-loop test rig. This paper also covers various aspects of Rotary power assisted steering systems in road vehicles. Power steering is viewed as a dynamic system and is investigated with linear and non-linear modeling techniques. The valve design in terms of area gradient is essential for the function of the HPAS system; therefore, a method involving optimization has been developed to determine the valve characteristic. The method uses static measurements as a base for calculation and optimization; the results are used in both linear and the nonlinear models. With the help of the linear model, relevant transfer functions and the underlying control structure of the power steering system have been derived and analyzed. The non-linear model has been used in concept validation of the Active Pinion. Apart from concept validation and controller design of the active pinion, the models have been proven effective to explain dynamic phenomena related to HPAS systems, such as the chattering phenomena and Rotary lag.*

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DEVELOPMENT OF SHOCK ABSORBER IN CATIA

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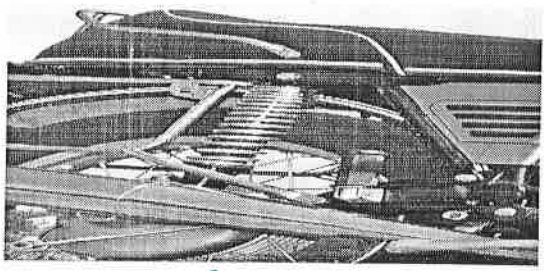
Abstract: *A shock absorbed or damper is a mechanical device designed to smooth out or damp shock impulse, and dissipate kinetic. The basic function of the shock absorbed is to absorb and dissipate the impact kinetic energy to the extent that accelerations imposed upon the air frame are reduced to a tolerable level. Existing shock absorbent can be divided into two classes based on the type of the spring being used: those using a solid spring made of steel or rubber and those using a fluid spring with gas or oil, or a mixture of the two that is generally referred to as oleo-pneumatic. The high gear and weight efficiencies associated with the oleo-pneumatic shock absorbed make it the preferred design for commercial transports. Based on the analysis procedure as outlined in this chapter, algorithms were developed to determine the required stroke and piston length to meet the given design conditions, as well as the energy absorption capacity of the shock absorbed.*

I. INTRODUCTION

Shock absorbents are an important part of automobile and motor cycles us pensions, aircraft gear, and the supports for many industrial machines Large shock absorbents have also been used in structural to reduce the susceptibility of structures to earthquake damage and resonance. A transverse mounted shock absorbed, called away helps keep railcard from swaying excessively from side to side and are important in passenger commuter railandrapid transit systems because they prevent railcard from damaging station platforms. The success of passive damping technologies in suppressing vibration amplitudes could be ascertained with the fact that it has a market size of around $ 4.5 billion.



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Some Applications of Analytic Functions Associated with Erdély-Kober Integral Operator by using Jack's Lemma

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Abstract

In this paper we study some properties of Erdély-Kober integral operator $\mathcal{I}_{\vartheta}^{a,c}v(z)$ belonging to some class by applying Jack's lemma.

Keywords and phrases: analytic, starlike, Integral Operator, convolution, jacks lemma .

AMS Subject Classification: 30C45; 30C50.

1 Introduction

The theory of analytic function undermines a field that is still actively investigated today despite being an old subject. Many studies on the privileged subject of inequalities in complex analysis have been conducted using the classes of analytical functions. The interaction of geometry and analysis in complex function theory is its most attractive characteristic. These connections between geometric behaviour and analytical structure have been the key area of attention for rapid development. The current work, which developed a new subclass of analytical functions related to the Erdély-Kober

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Abstract

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1 Introduction

The theory of analytic function undermines a field that is still actively investigated today despite being an old subject. Many studies on the privileged subject of inequalities in complex analysis have been conducted using the classes of analytical functions. The interaction of geometry and analysis in complex function theory is its most attractive characteristic. These connections between geometric behaviour and analytical structure have been the key area of attention for rapid development. The current work, which developed a new subclass of analytical functions related to the Erdély-Kober

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DESIGN AND ANALYSIS OF CAR RIM

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Abstract: *Archaeologies and historians of today see the introduction of the wheel as the real genesis of any old civilisation. The wheel is perhaps the most significant discovery of old times. The wheel has developed from nothing more than an oversized bearing to a fully integral part of any modem transportation vehicle. The modern vehicle is also seen today a fashion item to complement people's individual requirements. Motor vehicles are produced according to very strict rules to ensure the safety of the passengers. Every component is therefore designed according to the criticality of the component. Wheels are classified as a safety critical component and international cods and criteria are used or design a wheel.*

The purpose of the car wheel rim provides a firm base on which to fit the tire. Its dimensions, shape should be suitable to adequately accommodate the particular tire required for the vehicle. In this study a tire of car wheel rim belonging to the disc wheel category is considered. Design in an important industrial activity which influences the quality of the product.

3D modelling of the Volkswagen wheel which is different shape of rim (y-shape, u-shape and triangle shape) done in parametric software CATIA. Static, fatigue and modal analysis is done ANSYS. In static analysis calculates the stress and displacement by using two different materials namely aluminium alloy and forged steel. In modal analysis, to determine the deflections and frequencies.

Key words: Car wheel rim, load analysis, CATIA software

I. INTRODUCTION

Automotive wheels have evolved over the decades from early spoke designs of wood and steel, carryovers from wagon and bicycle technology, to flat steel discs and finally to the stamped metal configurations and modern cast and forged aluminium alloys rims of today's modern vehicles.

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On a certain subclass of analytic functions involving Pascal distribution series

Bolineni Venkateswarlu [1] [2], *P. Thirupathi Reddy* [3], *G. Sujatha* [4], *S. Sridevi* [5]

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Abstract

The main purpose of this paper, is to introduce a new subclass of analytic functions involving Pascal distribution series and obtained coefficient inequalities, distortion theorem, convex linear combination, partial sums, convolution and neighborhood result for this class.

Keywords: analytic function; coefficient estimates; distortion; partial sums.

Resumen

El objetivo principal de este articulo es introducir una nueva subclase de funciones analíticas que involucran series de distribución de Pascal y desigualdades de

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CERTAIN SUBCLASS OF ANALYTIC FUNCTIONS INVOLVING HURWITZ-LERCH ZETA FUNCTION

Kishor C. Deshmukh, Rajkumar N. Ingle, Pinninti Thirupathi Reddy

Communicated by N. Nikolov

ABSTRACT. Making use of Integral operator involving the Hurwitz-Lerch zeta function, we introduce a new subclass of analytic functions defined in the open unit disk and investigate its various characteristics. Further we obtain some usual properties of the geometric function theory such as coefficient bounds, extreme points radius of starlikness and convexity, partial sums and neighbourhood results belonging to the class.

1. Introduction.

Let A denote the class of all functions $u(z)$ of the form

$$u(z) = z + \sum_{n=2}^{\infty} a_n z^n, \tag{1.1}$$

in the open unit disc $U = \{z \in \mathbb{C} : |z| < 1\}$. Let S be the subclass of A consisting of univalent functions and satisfy the following usual normalization condition

2020 *Mathematics Subject Classification:* 30C45
Key words: analytic, starlike, convexity, partial sums, neighborhood

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On A Certain Subclass Of Meromorphic Kummer Function Connected To Hurwitz- Lerch Zeta Function

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ABSTRACT
In this paper, we introduce and study a new subclass of meromorphic Kummer function defined by a Hurwitz-Lerch Zeta function operator and obtain coefficient estimates, growth and distortion theorem, radius of convexity,integral transforms, convex linear combinations, convolution properties and δ–neighborhoods for the class $\Sigma_p(\alpha)$.

Keywords and phrases:uniformly convex, uniformly starlike, meromorphic, coefficient estimates.

AMS Subject Classification: 30C45; 30C50.

1 INTRODUCTION

Let A denote the class of all functions $f(z)$ of the form

$$f(z) = z + \sum_{n=2}^{\infty} a_n z^n \qquad (1.1)$$

in the open unit disc $E = \{z \in C : |z| < 1\}$. Let S be the subclass of A consisting of univalent functions and satisfy the following usual normalization condition $f(0) = f'(0) - 1 = 0$. We denote by S the subclass of A consisting of functions $f(z)$ which are all univalent in E. A function $f \in A$ is a starlike function by the order α, $0 \le \alpha < 1$, if it satisfy

$$\Re\left\{\frac{zf'(z)}{f(z)}\right\} > \alpha \ (z \in E). \qquad (1.2)$$

We denote this class with $S^*(\alpha)$.

A function $f \in A$ is a convex function by the order α, $0 \le \alpha < 1$, if it satisfy

$$\Re\left\{1 + \frac{zf''(z)}{f'(z)}\right\} > \alpha \ (z \in E) \qquad (1.3)$$

We denote this class with $K(\alpha)$.

Let T denote the class of functions analytic in E that are of the form

$$f(z) = z - \sum_{n=2}^{\infty} a_n z^n \quad (a_n \ge 0, \ z \in E) \qquad (1.4)$$

and let $T^*(\alpha) = T \cap S^*(\alpha)$, $C(\alpha) = T \cap K(\alpha)$. The class $T^*(\alpha)$ and allied classes possess some interesting properties and have been extensively studied by Silverman [16] and others.

A function $f \in A$ is said to be in the class of uniformly convex functions of order γ and type β, denoted by $UCV(\beta,\gamma)$, if

$$\Re\left\{1 + \frac{zf''(z)}{f'(z)} - \gamma\right\} > \beta\left|\frac{zf''(z)}{f'(z)}\right|, \qquad (1.5)$$

ON SUBCLASS OF ANALYTIC FUNCTIONS ASSOCIATED WITH TOUCHARD POLYNOMIALS

Sujatha[1*], B. Venkateswarlu[2], P. Thirupathi Reddy [3]

Abstract:
This paper focuses on the establishment of a new subfamily of analytic functions including Touchard polynomials. Afterwards, we attempt to obtain geometric properties such as coefficient inequalities, distortion properties, extreme points, radii of starlikeness and convexity, Hadmard product and convolution and integral operators for the class.

AMS Subject Classification: 30C45; 30C50; 30C80.

Keywords and phrases: analytic function, coefficient estimate, starlike, convexity, Touchard polynomial.

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1.Introduction

The application of special function on Geometric function Theory is a current and interesting topic of research. It is often used in areas such as physics, engineering, and mathematics.As a result of De Branges', the classic Bieberbach problem is successfully solved by applying a generalized hypergeometric function. Several types of special functions, including generalized hypergeometric Gaussian functions (see [1,2,3]), and Gegenbauer polynomials (see[30]), have been studied extensively.

In combinatorics, the Bell numbers, usually denoted by B_k for $k \in \{0\} \cup \mathbb{N}$, where $\mathbb{N}$ denotes the set of all positive integers, count the number of ways a set with k elements can be partitioned into disjoint and nonempty subsets. These numbers have been studied by mathematicians since the 19th century, and their roots go back to medieval Japan, but they are named after Eric Temple Bell, who wrote about them in the 1930. The Bell numbers B_k for $k \geq 0$ can be generated by

$$e^{e^t-1} = \sum_{k=0}^{\infty} B_k \frac{t^k}{k!} = 1 + t + t^2 + \frac{5}{6}t^3 + \frac{5}{8}t^4 + \frac{13}{30}t^5 + \frac{203}{720}t^6 + \cdots$$

and the first ten Bell numbers B_k for $0 \leq k \leq 9$ are

$$B_0 = 1, B_1 = 1, B_2 = 2, B_3 = 5, B_4 = 15, B_5 = 52,$$
$$B_6 = 203, B_7 = 877, B_8 = 4140, B_9 = 21147.$$

In [15], it was pointed out that there have been studies on interesting applications of the Bell polynomials $B_k(x)$ in soliton theory, including links with bilinear and trilinear forms of nonlinear differential equations which possess soliton solutions. See, for example,[9,10,11] . Therefore, applications of the Bell polynomials $B_k(x)$ to integrable nonlinear equations are greatly expected and any amendment on multilinear forms of soliton equations, even on exact solutions, would be beneficial to interested audiences in the research community. For more information about the Bell polynomials $B_k(x)$, please refer to and closely related references therein.

The Touchard polynomials, studied by Jacques Touchard (1939), also called the exponential polynomials comprise a polynomial sequence of binomial type. It is a new algorithm for solving linear and nonlinear integral equations. Touehard in his work on the cycles of permutations generalized the Bell polynomials in order to study some problems of enumeration of the permutations when the cycles possess certain properties. And he introduced and study a class of related polynomials. An exponential generating function, recurrence relations and connections with other well-known polynomials are obtained. In special cases, relations with Stifling number of the first and second kind, as well as with other numbers recently studied are derived. Finally, a combinatorial interpretation is discussed.

In general, the integral equations are difficult to be solved analytically, therefor in many equations we need to get the approximate solutions, and for this case the "Touchard Polynomials method" for the solution linear "Volterra integro- differential equatio" is implemented. TheTouchard polynomials method has been applied in for solving linear and nonlinear Volterra (Fredholm) integral equations.

There has been research on interesting applications of the Touchard polynomials Tn(x) in nonlinear Fredholm-Volterra integral equations[12] and soliton theory in [9,10,11], including connections with bilinear and trilinear forms of nonlinear differential equations which possess soliton solutions. Therefore, applications of the Touchard polynomials $T_n(x)$ to integrable nonlinear equations are greatly expected and any amendment on multi-linear forms of soliton equations, even on exact solutions, would be beneficial to interested audiences in the community. For more information about the Touchard polynomials $T_n(x)$, see [15] . A Touchard polynomial is also known as an exponential generating polynomial created by Jacques Touchard [26]. (see[15]) or Polynomial sequences of Bell type (see [3]) are polynomial sequences of binomial type that represent a random variable X with a Poisson distribution with an expected value $\hbar$ then its n^{th} moment is $E(X_\varrho) = \Im(\varrho, \hbar)$, resulting in the type:

$$\Im(\varrho, \hbar) = e^{\varrho} \sum_{\ell=0}^{\infty} \frac{\varrho^{\ell} \ell^{\hbar}}{\ell!} w^{\ell}, \quad w \in U. \tag{1.1}$$

The result of the second force is presented using the coefficients of Touchard polynomials as follows:

$$\phi_{\varrho}^{\hbar}(w) = w + \sum_{\ell=2}^{\infty} \frac{(\ell-1)^{\hbar} \varrho^{\ell-1}}{(\ell-1)!} e^{-\varrho} w^{\ell}, \quad w \in U, \tag{1.2}$$

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A NEW SUBCLASS OF MEROMORPHIC KUMMER FUNCTION RELATED TO HURWITZ- LERCH ZETA FUNCTION

B. VENKATESWARLU, P. THIRUPATHI REDDY†, A. SHASHIKALA, AND SUJATHA

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Abstract. In this paper, we introduce and study a new subclass of meromorphic Kummer function defined by a Hurwitz-Lerch Zeta function operator and obtain coefficient estimates, growth and distortion theorem, radius of convexity,integral transforms, convex linear combinations, convolution properties and $\delta-$neighborhoods for the class $\Sigma_p(\alpha,\beta)$.

1. Introduction

Let A denote the class of all functions $f(z)$ of the form

$$f(z) = z + \sum_{n=2}^{\infty} a_n z^n \tag{1.1}$$

in the open unit disc $E = \{z \in \mathbb{C} : |z| < 1\}$. Let S be the subclass of A consisting of univalent functions and satisfy the following usual normalization condition $f(0) = f'(0) - 1 = 0$. We denote by S the subclass of A consisting of functions $f(z)$ which are all univalent in E. A function $f \in A$ is a starlike function by the order α, $0 \leq \alpha < 1$, if it satisfy

$$\Re\left\{\frac{zf'(z)}{f(z)}\right\} > \alpha \ (z \in E). \tag{1.2}$$

We denote this class with $S^*(\alpha)$.

A function $f \in A$ is a convex function by the order α, $0 \leq \alpha < 1$, if it satisfy

$$\Re\left\{1 + \frac{zf''(z)}{f'(z)}\right\} > \alpha \ (z \in E). \tag{1.3}$$

2010 *Mathematics Subject Classification.* 30C45, 30C50.
Key words and phrases. uniformly convex, uniformly starlike, meromorphic, coefficient estimates.
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Updated Estimates for Coalitional Manipulation According to Scoring Regulations

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Abstract

This study aimed to examine the accuracy of risk tolerance estimates made by financial advisors and their clients using a sample of 386 advisors and 458 clients. It also aimed to determine the reliability of these estimates by comparing demographic information with test items and finding a "paramorphic representation" of the decision-making process. The advisor's evaluation of the client and the customer's self-evaluation were correlated with a Pearson correlation of.40. Also, the client's risk tolerance score and the advisor's assessment were almost identical (r=.41). Additionally, the data demonstrated that customers outperform advisers in the job of calculating their own risk tolerance. The estimations might be paramorphically expressed using a small number of variables. When trying to gauge their clients' comfort level with risk, advisers tend to put too much emphasis on certain demographic factors.

Keywords: *Risk tolerance, paramorphic representation, financial advisors*

Introduction

Remarkably, there is a dearth of literature on the efficacy of financial advisers in making crucial decisions relevant to their work. Slovic (1969), Torngren and Montgomery (2004), Tyszka and Zielonka (2002), and Zielonka (2002) are among the few research that have investigated the reliability of financial services professionals' decision-making. Rather, most efforts to assess the efficacy of financial adviser recommendations have zeroed in on complaints about financial planning and investment management models (e.g., Kautt, 2002). However, financial advisers cannot gauge their own skill level relative to others in the field or the general public's perception of their abilities in making decisions without this data. Finding out if the financial services industry's holistic decision-making procedures deliver as promised will be of paramount importance as the industry keeps expanding.

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Analysis of breast cancer event logs using various regression techniques

Publisher: IEEE

Saravanan M. S ; Pradnya Patil ; K. Venkata Subbaiah All Authors

Abstract:
The breast cancer is a chronic disorder that causes serious illness to the patients despite their age groups. Breast cancer has more number of research to identify the ro... **View more**

Metadata

Abstract:
The breast cancer is a chronic disorder that causes serious illness to the patients despite their age groups. Breast cancer has more number of research to identify the root causes. But in recent research finding also concentrated more on factors affecting the breast cancer with different type of event logs, such as healthcare centers generated data and trail data taken from various webpages. The machine learning techniques are mostly applied on complex type of event logs such as cancer data set, brain tumor dataset and heart related diseases. Among various diseases breast cancer is the one has more complex event logs, which is very complex to analyze and to find the root causes. This research article discuss about the breast cancer data set using logistic regression technique applied with python programming language. This paper also deals about the root causes about the breast cancer and related issues.

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A PROJECT REPORT ON PRODUCT LIFE CYCLE AT KESORAM LTD

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HYDERABAD

I. INTRODUCTION

Product/Service lifecycle management (PLM) is the process of managing the entire lifecycle of a product/Service from its conception, through design and manufacture, to service and disposal. PLM integrates people, data, processes and business systems and provides a product/Service information backbone for companies and their extended enterprise.

Product/Service lifecycle management (PLM) is more to do with managing descriptions and properties of a product/Service through its development and useful life, mainly from a business/engineering point of view; whereas product/Service life cycle management (PLCM) is to do with the life of a product/Service in the market with respect to business/commercial costs and sales measures.

Product/Service lifecycle management is one of the four cornerstones of a corporation's information technology structure. All companies need to manage communications and information with their customers (CRM-Customer Relationship Management), their suppliers (SCM-Supply Chain Management), their resources within the enterprise (ERP-Enterprise Resource Planning) and their planning (SDLC-Systems Development Life Cycle). In addition, manufacturing engineering companies must also develop, describe, manage and communicate information about their product/Services.

A form of PLM called people-centric PLM. While traditional PLM tools have been deployed only on release or during the release phase, people-centric PLM targets the design phase.

Recent (as of 2009) ICT development (EU funded PROMISE project 2004-2008) has allowed PLM to extend beyond traditional PLM and integrate sensor data and real time 'lifecycle event data' into PLM, as well as allowing this information to be made available to different players in the total lifecycle of an individual product/Service (closing the information loop). This has resulted in the extension of PLM into Closed Loop Lifecycle Management (CL_2M).

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Applications Of Meromorphic Functions With Positive Coefficients Associated With Rafid Operator

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Abstract

The target of this paper, we introduce and study new class $\aleph_n(\wp, \hbar, \mu, \theta)$ of meromorphic univalent functions defined in $U^* = \{z : z \in C$ and $0 < |z| < 1\} = U \setminus \{0\}$.We obtain coefficients inequaities, distortion theorems, extreme points, closure theorems, radius of convexity estimates and modified Hadamard products.

Keywords and Phrases: Meromorphic functions, Distortion, Hadamard product.

1 INTRODUCTION

Let Σ^* denote the class of meromorphic function of the form

$$f(z) = \frac{1}{z} + \sum_{n=1}^{\infty} a_n z^n, \quad (a_n \geq 0) \tag{1.1}$$

which are analytic in the punctured unit disc $U^* = \{z : z \in C$ and $0 < |z| < 1\} = U \setminus \{0\}$. Let $g(z) \in \Sigma^*$ be given by

$$g(z) = \frac{1}{z} + \sum_{n=1}^{\infty} b_n z^n \tag{1.2}$$

then the Hadamard product (or convolution) of $f(z)$ and $g(z)$ is given by

$$(f * g)(z) = \frac{1}{z} + \sum_{n=1}^{\infty} a_n b_n z^n = (g * f)(z) \tag{1.3}$$