



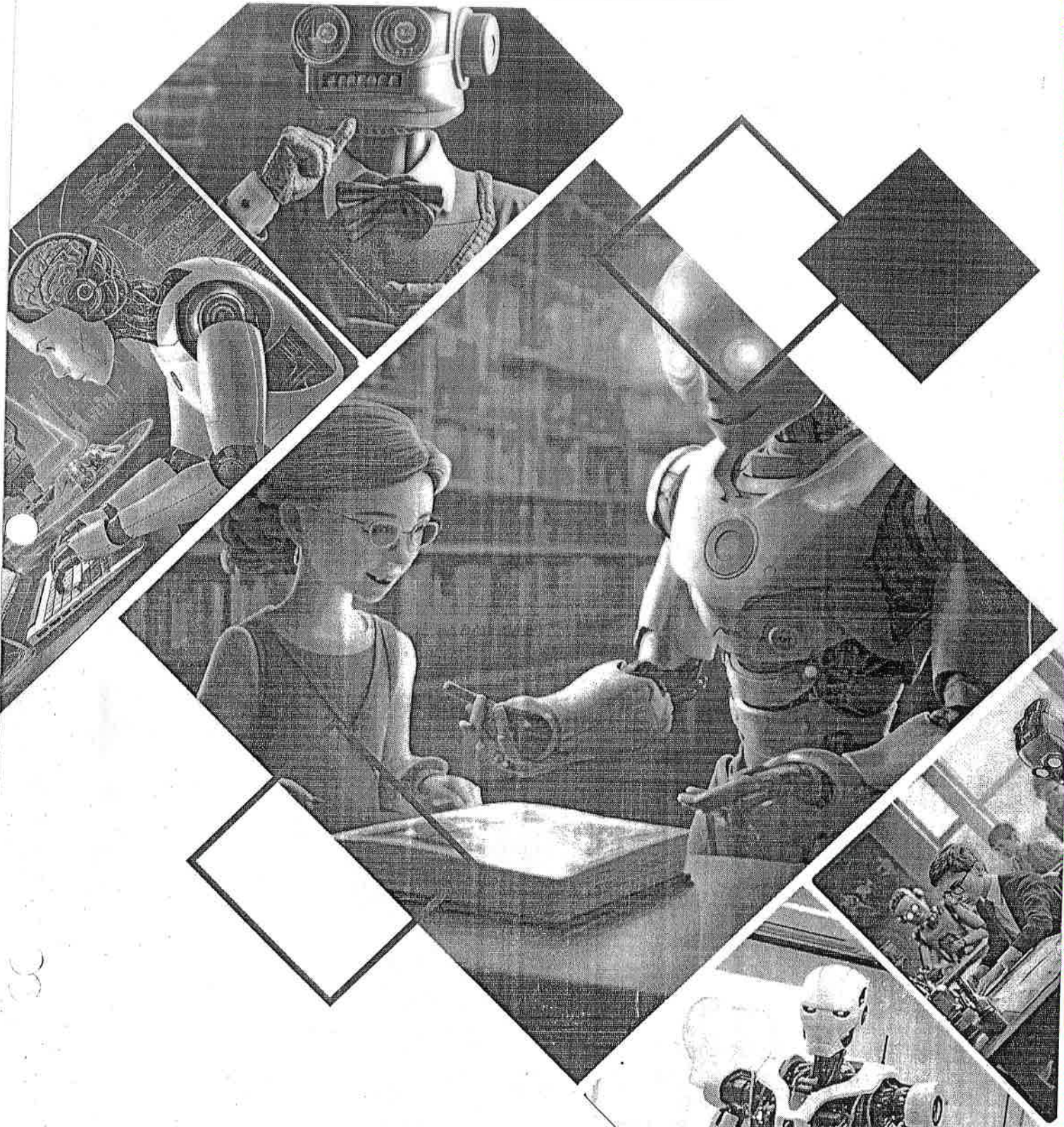
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1	2023-24	41	-	-	-	2	-	-	2

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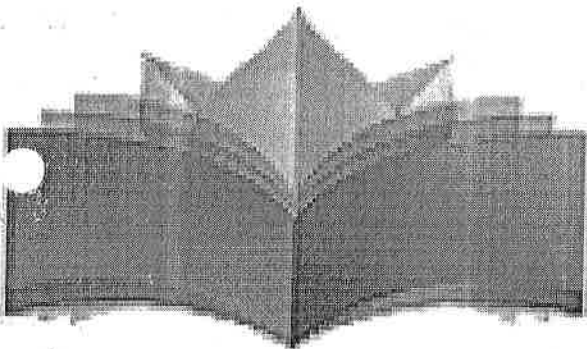
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S.No	Academic Year	No.of Research papers published in journals	No.of patents granted	No.of papers published in National conference	No.of papers published in international conferences	No.of Books Authored	No.of externally funded Research Projects received	Fund received during this academic year	No.of Book chapters Authorized
1	2023-24	41	-	-	-	2	-	-	2

Research papers published :

s.no	Title of paper	Name of the author/s	Name of journal	Calendar Year of publication	ISSN number	Link to website of the Journal	Link to article / paper / abstract of the article	Is it listed in UGC Care list
1	SUBCLASSES OF ANALYTIC FUNCTIONS CONNECTED WITH HURWITZ-ZETA FUNCTION	J.R.WADKAR, GANESH B. DAPKE, AND P.THIRUPATHI REDDY	Journal of Engineering and Technology Management 73 (2024)	2023-24	1879:1719	https://jetm.com/wp-content/uploads/15-JETM8373.pdf	https://jetm.com/wp-content/uploads/15-JETM8373.pdf	No
2	CERTAIN SUBCLASSES OF ANALYTIC FUNCTIONS INVOLVING	P.Thirupathi Reddy, K.C.Deshmukh and Rajkumar N.Ingle	Palestine Journal of Mathematics	2023-24	2219-5688	https://pjm.ppu.edu/paper/1745-certain-subclass-analytic-functions-involving-	https://pjm.ppu.edu/paper/1745-certain-subclass-analytic-functions-involving-	No

3	Univalence Criteria for Analytic Functions related to Hurwitz Lerch Zeta function	S.S.Hawal , P.Thirupathi Reddy and K.Venkata Subbaiah	Int. J. Open Problems Compt. Math.,	2023-24	2079-0376	https://www.ijopcm.org/Vol/2024/2024.1.3.pdf	https://www.ijopcm.org/Vol/2024/2024.1.3.pdf	No
4	SOME PROPERTIES OF ANALYTIC FUNCTIONS DEFINED BY POLYLOGARITHM	P. THIRUPATHI REDDY	Electronic Journal of Mathematical Analysis and Applications	2023-24	2090-729X	https://ejma.journals.ejournals.org/article/358849.html	https://ejma.journals.ejournals.org/article/358849.html	Yes
5	A Deep Learning Method for Transformer-Based,	Mr.G JACOB JAYARAJI , Mrs.Geddam Prashanthi2 , Mrs.N.SOWJANYA3 , Mrs.K.ANUSHA4	IJITCE	2023-24	2347-3657	https://ijitce.com/ijitcedmin/upload/ijlbps_66_bca605b67_96.pdf	https://ijitce.com/ijitcedmin/upload/ijlbps_66_bca605b67_96.pdf	Yes
6	DESIGN EVALUATION AND MATERIAL OPTIMIZATION OF TRAIN BRAKE	1 DR.PAVAN BALAPPA BAGALI, 2 HEMANT KUMAR SAHU, 3 K. POORNACHANDHAR, 4 M SOWMYA, 5 N VEERESHU, 6 U UPENDAR	http://ijite.uke.uk/	2023-24	2057-5688	http://ijite.uke.uk/archive/2023/DESIGN-EVALUATION-AND-MATERIAL-OPTIMIZATION-OF-TRAIN-BRAKE.pdf	http://ijite.uke.uk/archive/2023/DESIGN-EVALUATION-AND-MATERIAL-OPTIMIZATION-OF-TRAIN-BRAKE.pdf	Yes

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7	MODELING AND STRUCTURAL ANALYSIS OF FACAMSHAFT	1 DR.T.PRASAD, 2 CH RAVITEJA, 3 D NITHIN KUMAR, 4 J JITHENDER, 5 NUDAYKIRAN, 6 R BHOOPATHI	http://ijte.uk/	2023-24	2057-5688	http://ijte.uk/archive/2023/MODELING-AND-STRUCTURAL-ANALYSIS-OF-FACAMSHAFT.pdf	http://ijte.uk/archive/2023/MODELING-AND-STRUCTURAL-ANALYSIS-OF-FACAMSHAFT.pdf	Yes
8	STUDY, MODELING AND ASSEMBLY OF FASTING ENGINE	1 BHUMIREDDY RAVINDRAREDDY, 2 M VAMSHI, 3 M ARCHANA, 4 P RAJESH, 5 VSAIKUMAR, 6 P DANIEL	ijte.uk	2023-24	2057-5688	http://ijte.uk/archive/2023/STUDY-MODELING-AND-ASSEMBLY-OF-FASTING-ENGINE.pdf	http://ijte.uk/archive/2023/STUDY-MODELING-AND-ASSEMBLY-OF-FASTING-ENGINE.pdf	Yes
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	ijte.uk	2023-24	2057-5688	http://ijte.uk/archive/2023/DEVELOPMENT-OF-CAR-BUMPER-TECHNOLOGY.pdf	http://ijte.uk/archive/2023/DEVELOPMENT-OF-CAR-BUMPER-TECHNOLOGY.pdf	Yes

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10	ROTARY POWER STEERING SYSTEM	1 K.RAMASWAMY, 2 B PANDU, 3 M RAJASHEKAR, 4 S PREM KUMAR GOUD, 5 VMOHAN CHARY, 6 P SAIRAM	ijte.uk	2023-24	2057-5688	http://ijte.uk/archive/2023/DEVELOPMENT-OF-CAR-BUMPER-TECHNOLOGY.pdf	http://ijte.uk/archive/2023/ROTARY-POWER-STEERING-SYSTEM.pdf	Yes
11	DESIGN AND ANALYSIS OF DISK BRAKE ROTAR	1 BHUMIREDDY RAVINDRA REDDY, 2 A SAI CHANDAR, 3 CH SAI GANESH, 4 KSRIKANTH, 5 M PAVAN KALYAN,	ijte.uk	2023-24	2057-5688	http://ijte.uk/archive/2023/DESIGN-AND-ANALYSIS-OF-DISK-BRAKE-ROTAR.pdf	http://ijte.uk/archive/2023/DESIGN-AND-ANALYSIS-OF-DISK-BRAKE-ROTAR.pdf	Yes
12	COMPUTER AIDED ROBOT	1 DR.PAVAN BALAPPA BAGALI, 2 A SIDDANNA, 3 CH SRINIVAS, 4 J RAJA, 5 VSAI MADHAV,	ijte.uk	2023-24	2057-5688	http://ijte.uk/archive/2023/COMPUTER-AIDED-ROBOT.pdf	http://ijte.uk/archive/2023/COMPUTER-AIDED-ROBOT.pdf	Yes

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13	DEVELOPMENT OF SHOCK ABSORBER IN CATIA	1 BHUMIREDDY RAVINDRA REDDY, 2 BHUPAL REDDY, 3 CH RAMESH, 4 CHSANJEEV KUMAR, 5 K SAI KIRAN,	ijte.uk	2023-24	2057-5688	http://ijte.uk/archive/2023/COMP UTER-AIDED-ROBOT.pdf	http://ijte.uk/archive/2023/DEVELOPMENT-OF-SHOCK-ABSORBER-IN-CATIA.pdf	Yes
14	DESIGN AND ANALYSIS OF IC ENGINE PISTONS IN CATIA	1 Dr. PAVAN BALAPPA BAGALI, 2 MOHAN KUMAR, 3 PURUSHOTHAM, 4 MTHUKARAM, 5 SHIVANAND, 6 CHANDRA SHEKHAR	ijte.uk	2023-24	2057-5688	http://ijte.uk/archive/2023/DESIGN-AND-ANALYSIS-OF-IC-ENGINE-PISTONS-IN-CATIA.pdf	http://ijte.uk/archive/2023/DESIGN-AND-ANALYSIS-OF-IC-ENGINE-PISTONS-IN-CATIA.pdf	Yes
15	ANALYSIS OF AN INTEGRATED BUCK-ZETA CONVERTER	1M. JYOTHI SARANYA, 2P ROHITH SWARAJ, 3H ABHISHEK, 4B PRASADSAI GIRI, 5VKARISHMA, 6N AMULYA,	ijte.uk	2023-24	2057-5688	http://ijte.uk/archive/2023/ANALYSIS-OF-AN-INTEGRATED-BUCK-ZETA-CONVERTER.pdf	http://ijte.uk/archive/2023/ANALYSIS-OF-AN-INTEGRATED-BUCK-ZETA-CONVERTER.pdf	Yes

16	TIED ELECTRIC VEHICLE CHARGING SYSTEM USING DC-CONVERTER	1B. CHANDRASEKHAR REDDY, 2CHANDAN CHAUHAN, 3KACHITHREDDY, 4MRAJENDRA BABU, 5PVIJAYA DURGA, 6T SNAVEEN	ijte.uk	2023-24	2057-5688	http://ijte.uk/archive/2023/TIED-ELECTRIC-VEHICLE-CHARGING-G-SYSTEM-USING-DC-CONVERTER.pdf	http://ijte.uk/archive/2023/TIED-ELECTRIC-VEHICLE-CHARGING-G-SYSTEM-USING-DC-CONVERTER.pdf	Yes
17	BIO-METRIC BASED VOTING MACHINE	1 MR.C.P. SUDHAKAR, 2G NAGESH, 3A VIGNESH AVANITH, 4KMALLIKARJUN, 5BAKHIL, 6A KARTHIK KUMAR	ijte.uk	2023-24	2057-5688	http://ijte.uk/archive/2023/BIO-METRIC-BASED-VOTING-MACHINE.pdf	http://ijte.uk/archive/2023/BIO-METRIC-BASED-VOTING-MACHINE.pdf	Yes
18	CONTROL LING AND MONITORING OF INDUSTRIAL PROCESS	1 B CHANDRASEKHAR REDDY, 2P MANEESHA, 3B SUMA BHARATHI, 4KSWAROOP KUMAR, 5SPREETHI, 6J CHANDULAL	ijte.uk	2023-24	2057-5688	http://ijte.uk/archive/2023/CONTROLLING-AND-MONITORING-OF-INDUSTRIAL-PROCESS.pdf	http://ijte.uk/archive/2023/CONTROLLING-AND-MONITORING-OF-INDUSTRIAL-PROCESS.pdf	Yes

19	SMART OTP BASED DEVICE CONTROL SYSTEM	1 MR.C.P. SUDHAKAR, 2B AKHIL, 3P NITHISH, 4Y NARASIMHA, 5G HARIKRISHN A, 6JSAI CHAITHANY A	ijte.uk	2023-24	2057-5688	http://ijte.uk/archive/2023/SMART-OTP-BASED-DEVICE-CONTROL-SYSTEM.pdf	http://ijte.uk/archive/2023/SMART-OTP-BASED-DEVICE-CONTROL-SYSTEM.pdf	Yes
20	EXPERIMENTAL INVESTIGATION ON WEAR PROPTIES S OF RICE HUSK ASH AND FLY ASH REINFOR CEMENT IN ALUMINI UM (AI 6061) METAL MATRIX	Pavan Balappa Bagali1 , K. Naresh 2 , B.Ravindra Reddy 3 , T.Prasad 4 , Sumeet Hangargi	GRADI VA REVIE W JOURN AL	2023-24	0363-8057	https://drive.google.com/file/d/1AHkTcNYH5GWBanNwW0czk4S1LvxcRC2/view	https://drive.google.com/file/d/1AHkTcNYH5GWBanNwW0czk4S1LvxcRC2/view	Yes
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22	DESIGN AND ANALYSIS OF CAR RIM	1 Dr.T.PRASAD, 2 Dr. K VENKATA SUBBAIAH, 3 B SUBASH, 4 G NAVEENREDDY, 5 GSRINU, 6 J PRAVEEN	https://zkginternational.com/	2023-24	2366-1313	https://zkginternational.com/archive/volume8/DESIGN-AND-ANALYSIS-OF-CAR-RIM.pdf	https://zkginternational.com/archive/volume8/DESIGN-AND-ANALYSIS-OF-CAR-RIM.pdf	Yes
23	EFFECT OF WELDING SPEED AND DEPTH OF PENETRATION IN BUTT WELD JOINT USING TIG WELDING	1 Dr. PAVAN BALAPPA BAGALI, 2 Dr. K VENKATA SUBBAIAH, 3 A RISHI SAGAR, 4 BSAGAR, 5 J ASHWINI, 6 U DATHATHRI	zkginternational	2023-24	2366-1313	https://zkginternational.com/archive/volume8/EFFECT-OF-WELDING-SPEED-AND-DEPTH-OF-PENETRATION-IN-BUTT-WELD-JOINT-USING-TIG-WELDING.pdf	https://zkginternational.com/archive/volume8/EFFECT-OF-WELDING-SPEED-AND-DEPTH-OF-PENETRATION-IN-BUTT-WELD-JOINT-USING-TIG-WELDING.pdf	Yes
24	DESIGN AND ANALYSIS OF CYLINDER HEAD GASKET	1 BHUMIREDDY RAVINDRAREDDY, 2 Dr. K VENKATA SUBBAIAH, 3 MSHIVATEJA, 4 MDURGA PRASAD, 5 Y CHIRANJEEVI, 6 B MAHESH BABU,	zkginternational	2023-24	2366-1313	https://zkginternational.com/archive/volume8/DESIGN-AND-ANALYSIS-OF-CYLINDER-HEAD-GASKET.pdf	https://zkginternational.com/archive/volume8/DESIGN-AND-ANALYSIS-OF-CYLINDER-HEAD-GASKET.pdf	Yes

25	TAGUCHI METHOD USED IN TURNING OPERATION WITH DIFFERENT PARAMETERS	1 Dr. PAVAN BALAPPA BAGALI, 2 Dr. K VENKATA SUBBAIAH, 3 P ROSHANCHARY, 4 GSRIHARI, 5 K VIVEKANANDA, 6 PARAMESHWAR,	zkginternational	2023-24	2366-1313	https://zkginternational.com/archive/volume8/TAGUCHI-METHOD-USED-IN-TURNING-OPERATION-WITH-DIFFERENT-PARAMETERS.pdf	https://zkginternational.com/archive/volume8/TAGUCHI-METHOD-USED-IN-TURNING-OPERATION-WITH-DIFFERENT-PARAMETERS.pdf	Yes
26	OPTIMIZATION OF MACHINING PARAMETERS FOR FACE MILLING OPERATION IN A VERTICAL CNC MILLING MACHINE USING TAGUCHI METHOD	1 BHUMIREDDY RAVINDRAREDDY, 2 Dr. K VENKATA SUBBAIAH, 3 Y PRAKASH, 4 DRAJU, 5 D SUNIL KUMAR, 6 G GANESH,	zkginternational	2023-24	2366-1313	https://zkginternational.com/archive/volume8/OPTIMIZATION-OF-MACHINING-PARAMETERS-FOR-FACE-MILLING-OPERATION-IN-A-VERTICAL-CNC-MILLING-MACHINE-USING-TAGUCHI-METHOD.pdf	https://zkginternational.com/archive/volume8/OPTIMIZATION-OF-MACHINING-PARAMETERS-FOR-FACE-MILLING-OPERATION-IN-A-VERTICAL-CNC-MILLING-MACHINE-USING-TAGUCHI-METHOD.pdf	Yes

27	DESIGN AND ANALYSIS OF FOUR WHEEL STEERING SYSTEM	1 K.RAMASWAMY, 2 Dr. K VENKATA SUBBAIAH, 3 N SAIKUMAR, 4 G SRIKANTH, 5 MPAVAN, 6 M PRAMOD, 7 V GANESH	zkginternational	2023-24	2366-1313	https://zkginternational.com/archive/volume8/DESIGN-AND-ANALYSIS-OF-FOUR-WHEEL-STEERING-SYSTEM.pdf	https://zkginternational.com/archive/volume8/DESIGN-AND-ANALYSIS-OF-FOUR-WHEEL-STEERING-SYSTEM.pdf	Yes
28	DESIGN AND ANALYSIS OF COMBUSTION CHAMBER IN I.C. ENGINE	1 K.RAMASWAMY, 2 Dr. K VENKATA SUBBAIAH, 3 V TEJOVIKAS, 4 MEKALASREKANTH, 5 B.PRASHANTH KUMAR, 6 V RAMU,	zkginternational	2023-24	2366-1313	https://zkginternational.com/archive/volume8/DESIGN-AND-ANALYSIS-OF-COMBUSTION-CHAMBER-IN-I-C-ENGINE.pdf	https://zkginternational.com/archive/volume8/DESIGN-AND-ANALYSIS-OF-COMBUSTION-CHAMBER-IN-I-C-ENGINE.pdf	Yes



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30	DESIGN AND ANALYSIS OF NATURAL CONVECTIVE HEAT TRANSFER OF NARROW INCLINED PLATES	1 BHUMIREDDY RAVINDRAREDDY, 2 Dr. K VENKATA SUBBAIAH, 3 KPRUDHVI RAJ, 4 B MAHESH, 5 B ANIL, 6 CH NIKHILA, 7 V SNEHITHA	zkginternational	2023-24	2366-1313	https://zkginternational.com/archive/volume8/DESIGN-AND-ANALYSIS-OF-NATURAL CONVECTIVE-OF-HEAT-TRANSFER-OF-NARROW-INCLINED-PLATES.pdf	https://zkginternational.com/archive/volume8/DESIGN-AND-ANALYSIS-OF-NATURAL CONVECTIVE-OF-HEAT-TRANSFER-OF-NARROW-INCLINED-PLATES.pdf	Yes

31	PERFORMANCE ANALYSIS OF PHOTOVOLTAIC FEDERATIVE POWER FILTER FOR POWER QUALITY IMPROVEMENT	3BHUMIREDDY RAVINDRAREDDY	zkginternational	2023-24	2366-1313	https://zkginternational.com/archive/volume8/PERFORMANCE-ANALYSIS-OF-PHOTOVOLTAIC-FEDERATIVE-POWER-FILTER-FOR-POWER-QUALITY-IMPROVEMENT.pdf	https://zkginternational.com/archive/volume8/PERFORMANCE-ANALYSIS-OF-PHOTOVOLTAIC-FEDERATIVE-POWER-FILTER-FOR-POWER-QUALITY-IMPROVEMENT.pdf	Yes
32	SOLAR AND WIND BASED HYBRID ENERGY SYSTEM USING MODELING AND SIMULATION	1C SUDHAKAR, 2Dr. VENKATA SUBBAIAH, 3BHUMIREDDY RAVINDRAREDDY, 4GUGLOTH VIDYA, 5KONYALAA RAVIND, 6MANAPURAM SAIPRIYA, 7MOHAMMAD ABDUL SIRAJ	zkginternational	2023-24	2366-1313	https://zkginternational.com/archive/volume8/SOLAR-AND-WIND-BASED-HYBRID-ENERGY-SYSTEM-USING-MODELING-AND-SIMULATION.pdf	https://zkginternational.com/archive/volume8/SOLAR-AND-WIND-BASED-HYBRID-ENERGY-SYSTEM-USING-MODELING-AND-SIMULATION.pdf	Yes


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33	DESIGN AND SIMULATION OF FUZZY LOGIC CONTROLLER BASED MPPT OF PV MODULE USING MATLAB SIMULINK	1Y SAI JYOTIRMAI, 2Dr. K VENKATA SUBBAIAH, 3BHUMIREDDY RAVINDRAREDDY, 4BATHULASANJAY KUMAR, 5DESHAMONINISHANTH, 6DURSHEETYSAI DINESH, 7GONDLASAI GOUTHAM	zkginternational	2023-24	2366-1313	https://zkginternational.com/archive/volume8/DESIGN-AND-SIMULATION-OF-FUZZY-LOGIC-CONTROLLER-BASED-MPPT-OF-PV-MODULE-USING-MATLAB-SIMULINK.pdf	https://zkginternational.com/archive/volume8/DESIGN-AND-SIMULATION-OF-FUZZY-LOGIC-CONTROLLER-BASED-MPPT-OF-PV-MODULE-USING-MATLAB-SIMULINK.pdf	Yes
34	DEVELOPMENT OF ELECTRIC VEHICLE BATTERY CHARGING CONTROL USING BUCK CONVERTER WITH MODIFIED PI CONTROL SYSTEM	1C P SUDHAKAR, 2Dr. K VENKATA SUBBAIAH, 3BHUMIREDDY RAVINDRAREDDY, 4AMGOTHJAGAN, 5KURAKULAHIMABINDHU, 6N SURESH, 7ADEPURAJENDHAR	zkginternational	2023-24	2366-1313	https://zkginternational.com/archive/volume8/DEVELOPMENT-OF-ELECTRIC-VEHICLE-BATTERY-CHARGING-CONTROL-USING-BUCK-CONVERTER-WITH-MODIFIED-PI-CONTROL-SYSTEM.pdf	https://zkginternational.com/archive/volume8/DEVELOPMENT-OF-ELECTRIC-VEHICLE-BATTERY-CHARGING-CONTROL-USING-BUCK-CONVERTER-WITH-MODIFIED-PI-CONTROL-SYSTEM.pdf	Yes

35	Some Applications of Analytic Functions Associated with Erd'ely-Kober Integral Operator by using Jacobi	S.S.Howal and P.Thirupathi Reddy	Mukt Shabd Journal	2023-24	2347-3150	https://shabdbooks.com/volume-12-issue-7-july-2023	https://shabdbooks.com/volume-12-issue-7-july-2023	Yes
36	ON A CERTAIN SUBCLASS OF ANALYTIC FUNCTIONS DEFINED BY GEGENBAUER POLYNOMIALS	B. Venkateswarlu, P. Thirupathi Reddy, S. Sridevi and Sujatha	Palestine Journal of Mathematics	2023-24	2219-5688	https://pjm.ppu.edu/paper/1262-certain-subclass-analytic-functions-defined-gegenbauer-polynomials	https://pjm.ppu.edu/paper/1262-certain-subclass-analytic-functions-defined-gegenbauer-polynomials	No
37	A NEW SUBCLASS OF ANALYTIC FUNCTIONS DEFINED BY LAMBDA OPERATOR	H. Niranjan, A. N. Murthy, B. Venkateswarlu and P. T. Reddy	Palestine Journal of Mathematics	2023-24	2219-5688	https://pjm.ppu.edu/paper/1267-new-subclass-analytic-functions-defined-lambda-operator	https://pjm.ppu.edu/paper/1267-new-subclass-analytic-functions-defined-lambda-operator	No
38	A STUDY ON CAPITAL STRUCTURE IMPACT ON FINANCIAL PERFORMANCE WITH REFERENCE	Simhadri Pavani ¹ , Thanugundla fathima soni ² , Dr Venkata subbaiah ³	Journal of Engineering Sciences	2023-24	0377-9254	https://jespublication.com/uploads/2023-V14I70166.pdf	https://jespublication.com/uploads/2023-V14I70166.pdf	Yes

39	A STUDY ON FACTORS INFLUENCING THE DISCONNECTION OF LAND LINES OF RSNI	ALLADI NAVEENI Ms. SUSHEELA GRACE	Journal of Engineering Sciences	2023-24	0377-9254	2023-V14I70173.pdf (jespublication.com)	2023-V14I70173.pdf (jespublication.com)	Yes
40	A CERTAIN SUBCLASSES OF ANALYTIC FUNCTIONS WITH NEGATIVE COEFFICIENTS DEFINED BY KOMATU INTEGRAL OPERATOR	K.K. Viswanathan, Kishore Deshmukh, Rajkumar Ingle, Thirupathi Reddy, and Niranjani	Advances in Mathematics: Scientific Journal	2023-24	1857-8438	https://www.researchgate.net/publication/374055098_A_CERTAIN_SUBCLASSES_OF_ANALYTIC_FUNCTIONS_WITH_NEGATIVE_COEFFICIENTS_DEFINED_BY_KOMATU_INTEGRAL_OPERATOR	https://www.researchgate.net/publication/374055098_A_CERTAIN_SUBCLASSES_OF_ANALYTIC_FUNCTIONS_WITH_NEGATIVE_COEFFICIENTS_DEFINED_BY_KOMATU_INTEGRAL_OPERATOR	No
41	Applications Of Meromorphic Functions With Positive Coefficients Associated	K.C. Deshmukh, Rajkumar Ingle, P. Thirupathi Reddy	Mukt Shabd	2023-24	2347-3150	https://shabdbooks.com/volume-12-issue-7-july-2023	https://shabdbooks.com/volume-12-issue-7-july-2023	Yes

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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

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

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

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

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

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

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

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

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

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

CERTAIN SUBCLASS OF ANALYTIC FUNCTIONS INVOLVING HURWITZ-LERCH ZETA FUNCTION

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Communicated by Kuncham S P

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 disc 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 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

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

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

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

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

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

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

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

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

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

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

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

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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

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

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SOME PROPERTIES OF ANALYTIC FUNCTIONS DEFINED BY POLYLOGARITHM FUNCTIONS

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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

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

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

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

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

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

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 OPTIMIZATION 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

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

STUDY, MODELLING AND ASSEMBLY 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



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


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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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

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

DEVELOPMENT OF SHOCK ABSORBER IN CATIA

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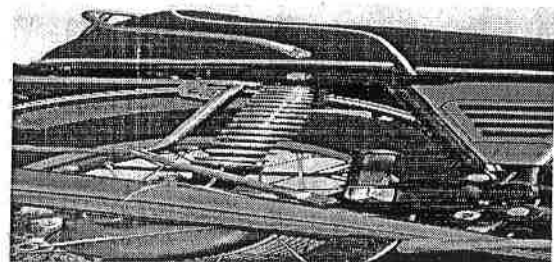
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Abstract: A shock absorber or damper is a mechanical device designed to smooth out or damp shock impulse, and dissipate kinetic. The basic function of the shock absorber is to absorb and dissipate the impact kinetic energy to the extent that accelerations imposed upon the air frame are reduced to a tolerable level. Existing shock absorbers 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 absorber 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 absorber.

I. INTRODUCTION

Shock absorbers are an important part of automobile and motor cycles suspensions, aircraft gear, and the supports for many industrial machines. Large shock absorbers have also been used in structural to reduce the susceptibility of structures to earthquake damage and resonance. A transverse mounted shock absorber, called a sway bar, helps keep railcars from swaying excessively from side to side and are important in

passenger commuter rail and rapid transit systems because they prevent railcars 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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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 inductor 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

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





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

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

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ABSTRACT:

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-

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^o, 40^o, 50^o will 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^o 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

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^oc, 313^oc and 413^oc). 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

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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

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

OPTIMIZATION OF MACHINING PARAMETERS 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

3D modelled 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 tyre'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 tyre'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

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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

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 ($0^\circ, 30^\circ, 45^\circ$ & 60°) 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 tra

nsfer coefficient encountered in natural convection is also low.

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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

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:

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,

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.

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Energy Bowrampally, plays a important role in our life but also in the overall economy of the country. The requirement for energy is

I. INTRODUCTION

our life but also in the overall economy of the country. The requirement for energy is

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

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 pursuing

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

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

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

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

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

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

where

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

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 $k - \tilde{U}ST_s(\mu, \rho, \gamma, t)$ 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

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

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 γ , $0 \leq \gamma < 1$, if satisfies the condition

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

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

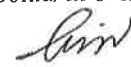
$$\Re \left\{ 1 + \frac{zu''(z)}{u'(z)} \right\} > k \left| \frac{zu''(z)}{u'(z)} \right| + \gamma, \quad (k \geq 0). \tag{1.5}$$

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

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



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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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