P.S.R. ENGINEERING COLLEGE

(An Autonomous Institution Approved by AICTE & Affiliated to Anna University, Chennai)
(Accredited by NAAC , NBA & Recognized Under 12(B) of UGC Act, 1956)
Sivakasi – 626140, Virudhunagar(Dt.), Tamil Nadu.

EEE NEWS LETTER

May 2021
Volume 11 Issue 2

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Dear Comrade,

"LIFE ALWAYS HAS THE BEST TEACHER DISGUISED AS EXPERIENCE"

May is **Get Caught Reading Month** and **National Good Car-Keeping Month.**

A time where the energy integrate towards**unity** and **compassion.**

Approaching all of us in the month of May is subtle light energy from other planets reflected off the moon.

MAY FOLKLORE

A dry May and a leaking June
Make the farmer whistle a merry tune.

A snowstorm in May
Is worth a wagonload of hay.

Among the changing months, May stands confessed
The sweetest, and in fairest colors dressed!
-James Thomson, Scottish poet (1700–48)

When thought of in the energetic realm ofMay this brings **strength, stability, longevity and the manifestation of desirable outcomes.**

This Newsletter brings the winners and participants who have given their utmost effort in the first half of the year. Keep charming with your valuable feedbacks.

Happy Reading...!!!!

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FACULTY ACTIVITIES

FACULTY ACHIEVEMENTS

- Dr.R.Madavanreceived best paper award titled**"Fault diagnosis and asset management of power transformer using adaptive boost machine learning algorithm"** in an internationalconference held atKongu Engineering College, Perundurai on 15th December 2020.
- Dr.R.Madavan acted as a resource person in Faculty Development Programme on **"High Voltage Direct Current Transmission"** on 24.01.2021.
- Dr.S.Anbarasi delivered a guest lecture on **"Future students – The gift for education 4.0 – Robotic marathon – 2021"**atHayagrivasSchool, Sivakasi on 28.02.2021.
- Dr.R.Madavan acted as a resource person in AICTE-ISTE Sponsored Six days induction programme on **"Recent Advancements in High Voltage Engineering"** from 03.03.2021 to 09.03.2021.

PATENT PUBLICATIONS

- Published a patent titled on **"Modular designed agricultural robot for ploughing seeding harvesting and spraying pesticides"** on 12th February 2021.Application No: 202141004627 A.
- Published a patent titled on **"Smart system for child rescue from borewell"** on 12th February 2021. Application No: 202141004622 A.

JOURNAL PUBLICATIONS

Name of the Faculty	Title of the paper	Journal Name	ISSN No	Volume, issue, page No	Scopus/ Web of Science	Impact Factor
Dr.R.Madavan	Optimization of Mineral Oil properties blended with Natural Ester Oils using Taguchi-based Grey Relational Analysis	Fuel - Elsevier	ISSN: 0360-3199	Vol.45 4703 – 4719	Web of Science	5.578
	Fault Diagnosis and Asset Management of Power Transformer Using Adaptive Boost Machine Learning Algorithm	IOP Conference Series: Materials Science and Engineering	Vol. 1055, 2021		Scopus	-

	Comprehensive review on recycling of spent lithium ion batteries	Elsevier-Materials today proceedings	https://doi.org/10.1016/j.matpr.2021.03.744		Scopus	-
	Comparative analysis of PV based Cascaded Buck Boost converter for water pump applications	Solid State Technology	ISSN: 0038-111X	Volume no. 63,Issue (6) 2020.	Scopus	0.3
	Aging assessment of transformer solid insulation: A review	Elsevier – Materials today proceedings	https://doi.org/10.1016/j.matpr.2021.04.301		Scopus	-
	A Comprehensive review on nanotechnology for enhancement in performance of transformer liquid insulation	Elsevier – Materials today proceedings	https://doi.org/10.1016/j.matpr.2021.04.128		Scopus	-
Dr.S.EdwinJose	Power quality disturbance analysis of BLDC motor drive using wavelet transform	AIP journal	ISSN:1551-7616	2207(1): 020001	Scopus	0.4
	Performance analysis of brain tumour detection using modified adaboost classification (MAC) algorithm	International journal of grid and distributed computing	Vol.63 No.6 PP 822 - 828		Web of science	-
	Automatic and real time classification of power quality disturbance using statistical moments	AIP Journals Proceedings	https://doi.org/10.1063/5.0039811 020050 (2021)		Scopus	-
Dr.K.Punitha	Comparative analysis of PV based Cascaded Buck Boost converter for water pump applications	Solid State Technology		Vol.63 No. 6 2021	Google Scholar	-
Dr.S.Anbarasi	An optimal tuning of integral controller for hybrid LFC system integrated with wind energy resources	International Journal of advanced science and technology	ISSN: 2005-4238	-	Scopus	-
Dr.V.Seetharaman	Optimal Production Cost Assessment Considering Increase Cost Borders using Salp Swarm Algorithm	Design Engineering	ISSN: 0011 – 9342	Issue: 3, pp – 09 to 20	Scopus	-
	Evaluation of Increasing rate for small scale power manufacturers adopting ant lion optimizer	Turkish journal of computer and mathematics education	ISSN: 1309-4653	Vol.12, No.7, pp – 2686 to 2695	Scopus	-

	Comparative analysis of PV based Cascaded Buck Boost converter for water pump applications	Solid State Technology	ISSN: 0038-111X	Volno. 63,Issue (6) 2020.	Scopus	0.3
Mrs.R.Aruna	Smart Security Device for Women	International journal of Scientific Research in Science and Technology	ISSN: 2395-602X	Vol.9, Issue.1,pp- 207 to 210	Scopus	7.214
	Bi-Directional Single Stage Grid Connected Inverter for Battery Energy Storage System using Sepic-Zeta Converter	Journal of Interdisciplinary Cycle Research	ISSN:0022-1945	Vol. 13 Issue. 4 pp– 869	Google scholar	-
Mrs.M.Yamuna	A Comprehensive review on nanotechnology for enhancement in performance of transformer liquid insulation	Elsevier – Materials today proceedings	https://doi.org/10.1016/j.matpr.2021.04.128		Scopus	-
	Gauging of bushing under adulterated condition by applying nitrates and sulphates	Elsevier – Materials today proceedings	https://doi.org/10.1016/j.matpr.2021.04.111		Scopus	-
Mr.P.SarathChandran	Electricity Generation by Speed Breaker	International journal of Scientific Research in Science and Technology	ISSN: 2395-602X	Vol.9, Issue.1,pp- 357 to 362	Scopus	7.214
	Three phase buck boost derived power factor correction converter for more electric aircraft	Journal of interdisciplinary cycle research	ISSN: 0022-1945	Vol. 13, Issue. 4,	Scopus	6.2
Mr.S.Ramaraj	Fuzzy Based Dual - T - Type Multilevel inverter for photovoltaic Power system applications	Journal-Icon		Vol. 6, Issue 2, March 2021	Google scholar	-
Mr.M.Sivaraman	Isolated bidirectional microinverter with proportional resonant controller for renewable energy system	Journal-Icon	ISSN: 2456-6071	Vol.6, Issue.2, March 2021	Google scholar	-
Ms.R.Nikkitha	Gauging of bushing under adulterated condition by applying nitrates and sulphates	Elsevier – Materials today proceedings	https://doi.org/10.1016/j.matpr.2021.04.111		Scopus	-

CONFERENCE PUBLICATIONS

Name of the Faculty	Title of the paper	Conference Name	College	Date
Dr.R.Madavan	Fault diagnosis and asset management of power transformer using adaptive boost machine learning algorithm	International virtual conference on robotics, automation, intelligent systems and energy	Kongu Engineering College, Perundurai	15th December 2020
Dr.S.Edwin Jose	Prediction and early avoidance of flood based on IoT	International conferences on advances in materials, computing and communication technologies	AnnaiVailankanni college of engineering. Kanyakumari	10th April 2021
	Testing and Analysis of HV Disc Insulator by Nano Particles Using FEM	International E-Conference on Recent advances in computation, Communication, Internet of Things and Artificial Intelligence	M.Kumarasamy college of engineering. Karur	31st March 2021 and 1st April 2021
	Performance enhancement of high voltage disc insulators	International virtual conference on emerging trends in engineering, management and applications	PET engineering college. Vallioor	12th march 2021
Dr.K.Punitha	Quasi –Trans Z – Source based bidirectional DC-DC converter and its control strategy	International E-Conference on Recent advances in computation, Communication, Internet of Things and Artificial Intelligence	M.Kumarasamy college of engineering. Karur	31st March 2021 and 1st April 2021
Dr.S.Anbarasi	Bi-Directional Single Stage Grid Connected Inverter for Battery Energy Storage System using Sepic-Zeta Converter	International E-Conference on Recent advances in computation, Communication, Internet of Things and Artificial Intelligence	M.Kumarasamy college of engineering. Karur	31st March 2021 and 1st April 2021

	Analysis of intelligent controllers for juice flow process in a sugar industry	Virtual international conferences on ICICA	GCE Keonjhar	22nd to 23rd December 2020
	An optimal tuning of integral controller for multi-source LFC system integrated with solar energy resources	Virtual international conferences on POWER INITIATIVES (ICPI – 2020)	K.Ramakrishnan college of engineering.	29th March and 31st March 2021
	IOT based smart infant incubator	International conference on artificial intelligence for IOT and sustainable electrical networks (ICAIISEN'21)	SRM TRP engineering college	29.04.2021
	Smart agriculture monitoring system	International conference on artificial intelligence for IOT and sustainable electrical networks (ICAIISEN'21)	SRM TRP engineering college	29.04.2021
Mr.T.Balasubramanian	Quasi –Trans Z – Source based bidirectional DC-DC converter and its control strategy	International E-Conference on Recent advances in computation, Communication, Internet of Things and Artificial Intelligence	M.Kumarasamy college of engineering. Karur	31st March 2021 and 1st April 2021
	Design and implementation of stepped DC source multilevel inverter by reducing the switches	International conference on artificial intelligence for IOT and sustainable electrical networks (ICAIISEN'21)	SRM TRP engineering college	29.04.2021
Mr.S.Sivakumar	Testing and Analysis of HV Disc Insulator by Nano Particles Using FEM	International E-Conference on Recent advances in computation, Communication, Internet of Things and Artificial Intelligence	M.Kumarasamy college of engineering. Karur	31st March 2021 and 1st April 2021

Mrs.S.Krishnaveni	Handmade universal motor with speed control	International E-Conference on Recent advances in computation, Communication, Internet of Things and Artificial Intelligence	M.Kumarasamy college of engineering. Karur	31st March 2021 and 1st April 2021
	Onboard battery charger for BLDC based electric vehicles applications	International conference on power initiatives	K.Ramakrishnan College of Engineering. Trichy	29th March and 31st March 2021
	IOT based smart infant incubator	International conference on artificial intelligence for IOT and sustainable electrical networks (ICAIISEN'21)	SRM TRP engineering college	29.04.2021
	Smart agriculture monitoring system	International conference on artificial intelligence for IOT and sustainable electrical networks (ICAIISEN'21)	SRM TRP engineering college	29.04.2021
	Smart infant incubator using IoT	International E-Conference on Recent advances in computation, Communication, Internet of Things and Artificial Intelligence	M.Kumarasamy college of engineering. Karur	31st March 2021 and 1st April 2021
Mrs.R.Aruna	Bi-Directional Single Stage Grid Connected Inverter for Battery Energy Storage System using Sepic-Zeta Converter	International E-Conference on Recent advances in computation, Communication, Internet of Things and Artificial Intelligence	M.Kumarasamy college of engineering. Karur	31st March 2021 and 1st April 2021
	Smart Security device for Women	International conferences on advances in materials, computing and communication technologies	AnnaiVailankanni college of engineering. Kanyakumari	10th April 2021

	Smart Electricity Meter Data Intelligence for Future Energy System	International conferences on advances in materials, computing and communication technologies	AnnaiVailankanni college of engineering. Kanyakumari	10th April 2021
Mrs.M.Yamuna	Sensor less control for high speed brushless DC motor based on the line to line back EMF	International conference on power initiatives	K.Ramakrishnan College of Engineering. Trichy	29th March and 31st March 2021
Mr.S.Ramaraj	DC grid converter with reduced switches	International conferences on advances in materials, computing and communication technologies	AnnaiVailankanni college of engineering. Kanyakumari	10th April 2021
	Fuzzy based dual T type multilevel inverter for photovoltaic power system applications	International conference on artificial intelligence for IOT and sustainable electrical networks (ICAIISEN'21)	SRM TRP engineering college	29.04.2021
Mr.P.SarathChandran	Three phase Buck-Boost derived power factor correction converter for more electric aircraft	International E-Conference on Recent advances in computation, Communication, Internet of Things and Artificial Intelligence	M.Kumarasamy college of engineering. Karur	31st March 2021 and 1st April 2021
	Electricity generation by speed breaker	International conferences on advances in materials, computing and communication technologies	AnnaiVailankanni college of engineering. Kanyakumari	10th April 2021
Ms.B.Mangaiyarkkarasi	Traffic Management System and Smart street Lighting control using IoT	International E-Conference on Recent advances in computation, Communication, Internet of Things and Artificial Intelligence	M.Kumarasamy college of engineering. Karur	31st March 2021 and 1st April 2021

Mr.M.Sivaraman	Investigation on high voltage insulators under various polluted condition	First virtual International conference on green energy and smart technologies in engineering (GEST 2021)	JP college of engineering	24th April 2021
	Isolated bidirectional microinverter with proportional resonant controller for renewable energy system	International conference on artificial intelligence for IOT and sustainable electrical networks (ICAIISEN'21)	SRM TRP engineering college	29.04.2021
Ms.R.Nikkitha	IoT based smart spargefaction system	International E-Conference on Recent advances in computation, Communication, Internet of Things and Artificial Intelligence	M.Kumarasamy college of engineering. Karur	31st March 2021 and 1st April 2021

BOOK PUBLICATIONS

Title of the chapter	Authors	Name of the Publisher	ISBN	Year of Publication
Control systems	Dr.E.Kaliappan B.Ponkarthika **Dr.V.Seetharaman**	The Charulatha Publications	9789388335188	2021
Residential and Industrial electrical installations	**Dr.S.Edwin Jose** Dr.R.Lal Raja Singh **Dr.R.Rajagopal** **Dr.V.Seetharaman** **Mr.S.Sivakumar**	JBR TRI SEA Publications	9788193224281	2021
Electric energy generation utilization and conservation	Dr.P.S.Manoharan **Dr.V.Seetharaman**	The Charulatha Publications	Under process	2021

BOOK CHAPTER PUBLICATIONS

Title of the chapter	Author	Publications	ISBN No	Date of publication
Application of artificial intelligent techniques in microgrid	Dr.S.Anbarasi	Micro grid technologies, scrivener Publishing, Wiley	978-1-119-71079-0	April 2021
Analysis for intelligent controllers for juice flow process in a sugar industry	Dr.S.Anbarasi	Sixth international conference on intelligent computing and applications, springer	981-16-1335-7 E- Book ISBN: 978-981-16-1335-7	2021

COURSERA COURSES

Name of the Faculty	Title of the Course	Duration in weeks
Mrs.Aruna R	Introduction to battery management systems	5
Ms.Mangaiyarkkarasi B	Introduction to Solar cells	5
	Solar Energy basics	5
Ms.Nikkitha R	Introduction to Solar Cells	5

WORKSHOPS/FDPS/FIPS/SEMINARS/ONLINE COURSES

Name of the Faculty	Name of the workshop/FDP/FIPS/Seminar	Name of the Institute/Industry	Duration
Dr.R.Madavan	Diagnostics of High Voltage Engineering	IIT Kanpur	1.03.2021 to 6.03.2021
	Energy Engineering	National Institute of Technology, Delhi	25.12.2020 to 29.12.2020
	Internet of Things	Shri Ramdeobaba college of engineering and Management	15.12.2020 to 19.12.2020

	Green technology and sustainability engineering	Malaviya National Institute of technology,	04.01.2021 to 08.01.2021
	Expert lecture on topic Liquid Insulation system for power transformer	SRM Valliammai engineering college, Kattankulathur	04.03.2021
Dr.S.Edwinjose	National level research seminar on green trends energy 2021	Vimaljyothi engineering college. Kannur	20.03.2021
	Smart Cities	Vellore Institute of Technology	01.02.2021 to 05.02.2021
Dr.S.Anbarasi	Hands on training on MATLAB and Advanced Optimization Techniques	Government college of Engineering, Bargur	18.01.2021 to 23.01.2021
Mrs.S.Krishnaveni	Hands on training on MATLAB and Advanced	Government college of Engineering, Bargur	18.01.2021 to 23.01.2021
	Recent Challenges and emerging opportunities in Electric Vehicle	Pragathi Engineering college	07.12.2020 to 12.12.2020
	Hybrid energy storage systems – DPE	Pragathi Engineering college	24.03.2021 To 30.03.2021
	Indian electricity rules	Tata Steel (Online courses)	19.05.2021
	NPTEL E-Awareness workshop	NPTEL	28.05.2021
	Recent Trends and Opportunities for Research in Electronics and Computer Science Engineering	Goa College of Engineering	24.05.2021 to 28.05.2021
Mrs.R.Aruna	Systems Engineering	Malaviya National Institute of Technology Jaipur.	01.02.2021 To 05.02.2021
	National webinar on" Practical challenges in incorporating renewable energy sources into the grid"	Nehru institute of engineering and technology	15.05.2021
	Python for Machine learning	Great learning academy(online course)	May 2021
	Inculcating universal human values in technical education	All India council for technical education	03.05.2021 – 07.05.2021

	Introduction to MATLAB	Math works Webinar	21.05.2021
	Intellectual Property Rights Regime and its Impact	Academy of maritime education and training	25.05.2021
Mrs.M.Yamuna	Recent Advancements in High Voltage Engineering	SRM Valliammai Engineering College	03.02.2021 to 09.02.2021
	Impact of Artificial Intelligence and Deep learning on Internet of things for designing smarter products- A	Francis Xavier Engineering College	7.12.2020 to 12.12.2020
	Diagnostics of High Voltage Engineering	IIT Kanpur	1.03.2021 to 6.03.2021
Mr.M.Sivaraman	Smart protection and control using numerical relays	Online workshop in National engineering College.	16.04.2021 To 17.04.2021
Ms.R. Nikkitha	Recent Advancements in High Voltage Engineering	SRM Valliammai Engineering College, Kattankallathur	03.02.2021 to 09.02.2021
	Smart Cities	Vellore Institute of Technology	01.02.2021 to 05.02.2021
	Advances in Renewable Energy Technologies	Jodhpur institute of engineering and Technology	06.04.2021 to 12.04.2021
	Recent Trends and Opportunities for Research in Electronics and Computer Science Engineering	Goa College of Engineering	24.05.2021 to 28.05.2021

DEPARTMENT ACTIVITIES

NATIONAL LEVEL TECHNICAL ONLINE SYMPOSIUM

The Department of Electrical and Electronics Engineering has organized a National Level Technical Online Symposium **"GRALITZ 2K21"** on March 31, 2021.Totally 130 students from various institutes participated in the online symposium.Our prominent alumni's Er. R.Balakumar Senior Engineer, TUV Nord Chennai and Er.A.Gurusamy, Development Engineer Lakshmi Electronics, Rajapalayam as chief guests of the event.

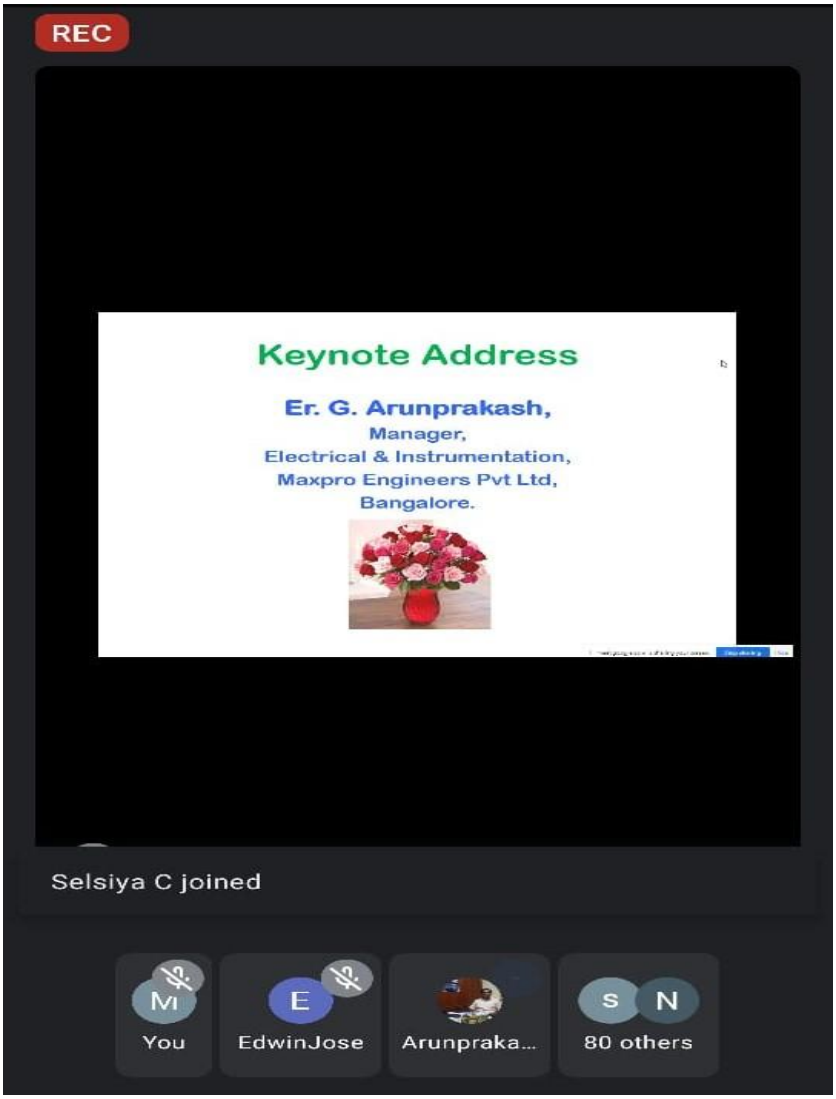
Symposium Brochure

Photographs of symposium Inaugural

VIRTUAL INTERNATIONAL CONFERENCE ON POWER AND ENERGY SYSTEMS ICPES 2K21

The Department of Electrical and Electronics Engineering has organized International Level Technical Online conferenceon 10.15AM 7th May, 2021.Our prominent alumniMr.G.Arunprakash Manager, Maxpro private Ltd, Bangaloreas chief guestof the event. We receive 65 papers for the conference, after peer review 47 papers were selected for presentation.

Invitation of Virtual international conference on power and energy systems



Inaugural of Virtual international conference on power and energy systems

STUDENT ACTIVITIES

STUDENT ACHIEVMENTS

- **G.Vijayavenkatesh (Prefinal – EEE), G.Muthukomu (Final – EEE), R.Gowthamraj (Final – EEE) and Y.Karuppasamy (Prefinal – EEE)** has done a project titled on **"Smart Economical App Development for Android Devices to Promote Fireworks and Printing Enterprises in Post Covid Status"**. The project got selected in 2nd level of AICTE - Chhatravishwakarma awards 2020
- **R.Karuppasamy, R.Saravana Kumar** and **G.Vijayavenkatesh**of Third Year got **second prize** in **Project Expo**titled **"GSM based COVID – 19 Quarantine Monitoring System"** at DYNAMECH – T'21 a national level technical symposium organized by Department of Mechanical Engineering P.S.R.Engineering College on 18th and 19th March 2021.
- **M.Muruganandham, V.Mahalingam** and **S.B.Viswanath**of Third Year got **second prize** in **Project Expo**titled **"Smart rescue Bore well system"** at DYNAMECH – T'21 a national level technical symposium organized by Department of Mechanical Engineering P.S.R.Engineering College on 18th and 19th March 2021.
- **K.ThathinDhevesh** and **P.KrishnaMoorthy** of Second Year got **first prize** in **Quiz**at DYNAMECH – T'21 a national level technical symposium organized by Department of Mechanical Engineering P.S.R.Engineering College on 18th and 19th March 2021.
- J.Ajay, I.S.Gobikrishnan and D.Yohinath has published a paper titled on **"DC GRID CONVERTER WITH REDUCED SWITCHES"**and this paperowned best conference award in International conferences on advances in materials, computing and communication technologies organized by AnnaiVailankanniCollege of engineering, Kanyakumari on 10th April 2021.

S.NO	ROLL NO	NAME OF THE STUDENT	EVENT	DEPARTMENT/ COLLEGE	PARTICIPATION/ WINNER
1.	19EE017	V.Jeyasimman	QUIZ	Mechanical engineering / PSREC	Participation
2.	19EE004	R.Arumugakani	QUIZ	Mechanical engineering / PSREC	Participation

3.	19EE002	S.Anguraj	QUIZ	Mechanical engineering / PSREC	Participation
4.	19EE025	N.MohammedNazar	QUIZ	Mechanical engineering / PSREC	Participation
5.	19EE011	R.Dinesh	QUIZ	Mechanical engineering / PSREC	Participation
6.	19EE043	R.Sarankumar	QUIZ	Mechanical engineering / PSREC	Participation
7.	19EE056	M.Vinoth Kumar	QUIZ	Mechanical engineering / PSREC	Participation
8.	19EE014	J.Gopikannan	QUIZ	Mechanical engineering / PSREC	Participation
9.	19EE034	L.Rajesh	QUIZ	Mechanical engineering / PSREC	Participation
10.	19EE037	R.Ramkumar	QUIZ	Mechanical engineering / PSREC	Participation
11.	19EE032	K.Pothiraj	QUIZ	Mechanical engineering / PSREC	Participation
12.	19EE013	S.Gobi Krishna	QUIZ	Mechanical engineering / PSREC	Participation
13.	19EE012	J.Dinesh Kumar	QUIZ	Mechanical engineering / PSREC	Participation
14.	19EE048	A.Suriya	QUIZ	Mechanical engineering / PSREC	Participation
15.	19EE005	C.ArunPrashath	QUIZ and CONNEXION	Mechanical engineering / PSREC	Participation
16.	19EE047	A.Suriya	QUIZ and CONNEXION	Mechanical engineering / PSREC	Participation
17.	19EE016	N.Jeya Krishna	QUIZ	Mechanical engineering / PSREC	Participation
18.	19EE046	K.Sudarson	QUIZ and CONNEXION	Mechanical engineering / PSREC	Participation
19.	19EE029	A.NandhaBalan	QUIZ and CONNEXION	Mechanical engineering /	Participation

				PSREC	
20.	19EE023	M.Manoj	QUIZ and CONNEXION	Mechanical engineering / PSREC	Participation
21.	19EE003	G.Aravind	QUIZ	Mechanical engineering / PSREC	Participation
22.	19EE053	S.Veeramanikandan	QUIZ and CONNEXION	Mechanical engineering / PSREC	Participation
23.	19EE030	S.Palanivel	QUIZ	Mechanical engineering / PSREC	Participation
24.	19EE021	P.Lakshmanaraj	QUIZ	Mechanical engineering / PSREC	Participation

STUDENT PUBLICATIONS

JOURNAL PUBLICATIONS

- N.Madhavan, R.Vigneshwaran and S.Vishnukumar has published a paper titled on **"SMART SECURITY DEVICE FOR WOMEN"** on International journal of Scientific Research in Science and Technology,ISSN: 2395-602X, Vol.9, Issue.1, pp- 207 to 210, April 2021.
- S.Aravind, K.Baskar and M.Sureshanandh has published a paper titled on **"ELECTRICITY GENERATION USING SPEED BREAKER"** on International journal of Scientific Research in Science and Technology,ISSN: 2395-602X, Vol.9, Issue.1, pp- 357 to 362, April 2021.

CONFERENCE PUBLICATIONS

- S.Ayyappan, G.Karthikeyan and R.Sathesh Kumar has published a paper titled on **"IOT BASED FAULT DETECTION AND MONITORING FOR SOLAR PANEL"** on International conferences on advances in materials, computing and communication technologies organized by AnnaiVailankanniCollege of engineering, Kanyakumari on 10th April 2021.
- S.Sudalaimani, R.Premkumar and K.Yogeshwaran has published a paper titled on **"PREDICTION AND EARLY AVOIDANCE OF FLOOD BASED ON IOT"** on International conferences on advances in materials, computing and communication

technologies organized by AnnaiVailankannicollege of engineering, Kanyakumari on 10th April 2021.

- V.Abinathan, S.Aswinkumar and S.S.Rakesh has published a paper titled on **"ARDUINO BASED UNDERGROUND CABLE FAULT DISTANCE LOCATOR"**onInternational E-Conference on Recent advances in computation, Communication, Internet of Things and Artificial Intelligence organized by M.Kumarasamy college of engineering, Karur on 31st March 2021 and 01st April 2021.
- J.Deepanchelladurai, S.Esakkisankar and G.Muthukomu has published a paper titled on **"TESTING AND ANALYSIS OF HV INSULATOR BY NANO PARTICLES USING FEM"** on International E-Conference on Recent advances in computation, Communication, Internet of Things and Artificial Intelligenceorganized byM.Kumarasamycollege of engineering,Karur on 31st March 2021 and 01st April 2021.
- S.Jeyaananth, V.Prakash and P.Sathishkumar has published a paper titled on **"HANDMADE UNIVERSAL MOTOR WITH SPEED CONTROL"** on International E-Conference on Recent advances in computation, Communication, Internet of Things and Artificial Intelligence organized by M.Kumarasamycollege of engineering, Karur on 31st March 2021 and 01st April 2021.
- A.Anandh, G.Karthick and K.Karthick has published a paper titled on **"SMART ELECTRICITY METER DATA INTELIGENCE FOR FUTURE ENERGY METER"** on International conferences on advances in materials, computing and communication technologies organized by AnnaiVailankannicollege of engineering, Kanyakumari on 10th April 2021.
- S.Mathavan, M.Sankaramahalingam and A.Sabarisankaran has published a paper titled on **"TRAFFIC MANAGEMENT AND SMART STREET LIGHTING CONTROL USING IOT"** on International E-Conference on Recent advances in computation, Communication, Internet of Things and Artificial Intelligence organized by M.Kumarasamy college of engineering, Karur on 31st March 2021 and 01st April 2021.
- M.Sethuprasath, R.Sivasankaran and S.Sivasankaran Has Published a Paper Titled On **"IOT BASED SMART SPARGEFACTION SYSTEM"** on International E-Conference on Recent advances in computation, Communication, Internet of Things and Artificial

Intelligence organized by M.Kumarasamycollege of engineering, Karur on 31st March 2021 and 1st April 2021.

- T.Amirtharaj, S.Johnsuvekar and V.Kumaravel has published a paper titled on **"PERFORMANCE ENHANCEMENT OF HIGH VOLTAGE DISC INSULATORS"** on International virtual conference on emerging trends in engineering, management and applications organized by PET engineering college, Vallioor on 12thMarch 2021.

EXTRA CURRICULAR ACTIVITIES

BLOOD DONATION CAMP

S.NO	ROLL NO	NAME OF THE STUDENT	YEAR
1.	17EE047	R.Sivasankaran	IV
2.	19EE013	S.Gobi Krishna	II
3.	19EE048	A.Suriya	II
4.	19EE008	J.Dinesh	II
5.	19EE029	A.NandhaBalan	II
6.	19EE016	N.Jeya Krishna	II
7.	19EE039	S.Renga Raj	II
8.	19EE019	P.Krishnamoorthy	II
9.	19EE023	B.Manoranjith	II
10.	19EE041	S.Sampathkumar	II
11.	19EE047	A.Suriya	II
12.	18EE015	R.Karuppasamy	III
13.	18EE027	J.Praveen Kumar	III
14.	18EE031	R.Saravana Kumar	III
15.	19LEE11	G.VijayaVenkatesh	III

Blood DonationCamp (20.03.2021)

SOCIAL AWARNESS ACTIVITY

Social awareness program- Electrical Energy Conservation and Electrical Safety (24.03.2021)

The Department of Electrical and Electronics Engineering of PSR Engineering College, Sivakasi has organized a social awareness program on “Electrical Energy Conservation and Electrical safety” for the village people of sevalkulam. Our faculty, Dr.S.Anbarasi presents the welcome address and explains the necessity ofconducting this program.The head of the department Dr. R. Madavan gives a detailed speech regarding the energy generation by traditional and renewable energy resources. He also explains the shortage of fossil fuel availability and the energy conservation techniques to overcome the scarcities.

The session is then carried out by our faculty Dr. S. Edwin Jose. He discusses about the earthing needs to be followed to avoid accidents. A demo was also given with our students regarding the first aid for electric shock. Our students Mr.Mathan S, Mr.Muralidharan M and Mr. Vishal Mof third EEE explain the precautions to be taken to avoid electrical shock in various environmental conditions.

This program was successfully coordinated by Dr.R.Madavan HOD/EEE and Dr.S.Anbarasi Associate professor/EEE for the benefit of society for creating the awareness on electrical energy conservation and the electrical safety.

PLACEMENT DETAILS

S.No.	Roll Number	Register Number	Name of the Student	Name of the company placed	Photo
1.	17EE001	1704001	ABINAYA K	RSIM Pvt Ltd, Chennai, Sakthi Auto ComponentsPvt Limited, Thiruppur.	
2.	17EE003	1704003	ANANDH A	Sakthi Auto ComponentsPvt Limited, Thiruppur.	
3.	17EE004	1704004	ARAVINTH S	Shree Abirami Engineering Works Pvt Ltd, Chennai Sakthi Auto ComponentsPvt Limited, Thiruppur.	
4.	17EE005	1704005	AYYAPPAN S	Voltech Engineers Pvt. Ltd, Chennai.	
5.	17EE006	1704006	BALAKUMARAN. V	Sakthi Auto ComponentsPvt Limited, Thiruppur	

6.	17EE007	1704007	BASKAR. K	Shree Abirami Engineering Works Pvt Ltd, Chennai	
7.	17EE008	1704018	DEEPAN CHELLATHURAI J	Pothigai Power Solutions Pvt Ltd, Chennai. Sakthi Auto ComponentsPvt Limited, Thiruppur	
8.	17EE009	1704009	DHIVYA G	RSIM Pvt Ltd, Chennai, Sakthi Auto ComponentsPvt Limited, Thiruppur.	
9.	17EE010	1704010	ESAKKI SANKAR S	Voltech Engineers Pvt. Ltd, Chennai. Pothigai Power Solutions Pvt Ltd, Chennai. Sakthi Auto ComponentsPvt Limited, Thiruppur	
10.	17EE011	1704011	GANDHI R	Sakthi Auto ComponentsPvt Limited, Thiruppur	

11.	17EE012	1704012	GANESH MOORTHI A	Sakthi Auto Components Pvt Limited, Thiruppur Vijay Flexi Pvt Ltd, Sivakasi Voltech Engineers Pvt. Ltd, Chennai.	
12.	17EE013	1704013	GOBINATHAN V	Sakthi Auto ComponentsPvt Limited, Thiruppur Vijay Flexi Pvt Ltd, Sivakasi Voltech Engineers Pvt. Ltd, Chennai. Shree Abirami Engineering Works Pvt Ltd, Chennai	
13.	17EE014	1704014	GOKULAPRIYA M	RSIM Pvt Ltd, Chennai, Sakthi Auto ComponentsPvt Limited, Thiruppur.	
14.	17EE015	1704015	GOWTHAMRAJ R	Sakthi Auto ComponentsPvt Limited, Thiruppur.	

15.	17EE016	1704016	HARIHARALINGAM J	Voltech Engineers Pvt. Ltd, Chennai. Shree Abirami Engineering Works Pvt Ltd, Chennai Sakthi Auto ComponentsPvt Limited, Thiruppur.	
16.	17EE017	1704017	JENIPER M	RSIM Pvt Ltd, Chennai, Sakthi Auto ComponentsPvt Limited, Thiruppur.	
17.	17EE018	1704018	JEYAANANTH S	Voltech Engineers Pvt. Ltd, Chennai. Vijay Flexi Pvt Ltd, Sivakasi	
18.	17EE019	1704019	JEYAPRAKASH J	Sakthi Auto Component Pvt Limited, Thiruppur. Vijay Flexi Pvt Ltd, Sivakasi	
19.	17EE020	1704020	JOHN SUVEKAR S	Voltech Engineers Pvt. Ltd, Chennai. Shree Abirami Engineering Works Pvt Ltd, Chennai Sakthi Auto ComponentsPvtLimited,	

				Thiruppur	
20.	17EE021	1704021	KANIMOZHI N	RSIM Pvt Ltd, Chennai, Sakthi Auto ComponentsPvt Limited, Thiruppur.	
21.	17EE022	1704022	KARPAGA SARAVANA KUMAR K	Voltech Engineers Pvt. Ltd, Chennai. Shree Abirami Engineering Works Pvt Ltd, Chennai Sakthi Auto ComponentsPvt Limited, Thiruppur	
22.	17EE024	1704024	KARTHICK K	Voltech Engineers Pvt. Ltd, Chennai. Shree Abirami Engineering Works Pvt Ltd, Chennai Sakthi Auto ComponentsPvt Limited, Thiruppur	
23.	17EE025	1704025	KARTHIK V	Vijay Flexi Pvt Ltd, Sivakasi Sakthi Auto ComponentsPvt Limited, Thiruppur	

24.	17EE026	1704026	KARTHIKEYAN G	Shree Abirami Engineering Works Pvt Ltd, Chennai Sakthi Auto ComponentsPvt Limited, Thiruppur	
25.	17EE028	1704028	KUMARAVEL V	Vijay Flexi Pvt Ltd, Sivakasi 5K Carcare Pvt Ltd, Kovai.	
26.	17EE029	1704029	MADHAVAN N	Voltech Engineers Pvt. Ltd, Chennai Sakthi Auto ComponentsPvt Limited, Thiruppur	
27.	17EE031	1704031	MATHAVAN S	Shree Abirami Engineering Works Pvt Ltd, Chennai Sakthi Auto ComponentsPvt Limited, Thiruppur	
28.	17EE032	1704032	MUTHUKOMU G	Pothigai Power Solutions Pvt Ltd, Chennai. MMCInfotechPvt Ltd, Chennai Sakthi Auto ComponentsPvt Limited, Thiruppur	

29.	17EE033	1704033	MUTHU MAREESWARAN G	Voltech Engineers Pvt. Ltd, Chennai	
30.	17EE035	1704035	PRAKASH	5K CarcarePvt Ltd, Kovai.	
31.	17EE036	1704036	RAJESH KUMAR P	Voltech Engineers Pvt. Ltd, Chennai. Shree Abirami Engineering Works Pvt Ltd, Chennai Sakthi Auto ComponentsPvt Limited, Thiruppur	
32.	17EE037	1704037	RAJESH M	Voltech Engineers Pvt. Ltd, Chennai. Sakthi Auto ComponentsPvt Limited, Thiruppur	
33.	17EE038	1704038	RAMAKRISHNAN A	Sakthi Auto ComponentsPvt Limited, Thiruppur	

34.	17EE041	1704041	SANKARA MAHALINGAM M	Shree Abirami Engineering Works Pvt Ltd, Chennai Sakthi Auto ComponentsPvt Limited, Thiruppur	
35.	17EE042	1704042	SARAVANAKUMAR E	Sakthi Auto ComponentsPvt Limited, Thiruppur	
36.	17EE043	1704043	SATHESHKUMAR R	Sakthi Auto Components Pvt Limited, Thiruppur	
37.	17EE044	1704044	SATHISH KUMAR P	Sakthi Auto Components Pvt Limited, Thiruppur	
38.	17EE045	1704045	SETHUPRASATH M	Pothigai Power Solutions Pvt Ltd, Chennai Sakthi Auto Components Pvt Limited, Thiruppur	
39.	17EE047	1704046	SIVASANKARAN R	Voltech Engineers Pvt. Ltd, Chennai. Sakthi Auto Components Pvt Limited, Thiruppur	

40.	17EE048	1704048	SIVASANKARAN S	Sakthi Auto Components Pvt Limited, Thiruppur	
41.	17EE049	1704049	SUDALAIMANI S	Sakthi Auto Components Pvt Limited, Thiruppur	
42.	17EE050	1704050	SUGAN P	Sakthi Auto Components Pvt Limited, Thiruppur	
43.	17EE051	1704051	SUNDAR S	Sakthi Auto Components Pvt Limited, Thiruppur	
44.	17EE052	1704052	SURESHANANDH M	Shree Abirami Engineering Works Pvt Ltd, Chennai Sakthi Auto Components Pvt Limited, Thiruppur	
45.	17EE053	1704053	THANGAPRIYA N	RSIM Pvt Ltd, Chennai, Sakthi Auto ComponentsPvt Limited, Thiruppur.	

46.	17EE054	1704054	VIGNESHWARAN R	Voltech Engineers Pvt. Ltd, Chennai. Sakthi Auto ComponentsPvt Limited, Thiruppur	
47.	17EE055	1704055	VIJAYA KUMAR M	Sakthi Auto ComponentsPvt Limited, Thiruppur	
48.	17EE056	1704056	VISHNUKUMAR S	Voltech Engineers Pvt. Ltd, Chennai. Sakthi Auto ComponentsPvt Limited, Thiruppur	
49.	17EE057	1704057	YAMUNASRI P	RSIM Pvt Ltd, Chennai, Sakthi Auto ComponentsPvt Limited, Thiruppur.	
50.	18LEE03	1704303	ASWINKUMAR S	Sakthi Auto ComponentsPvt Limited, Thiruppur	
51.	18LEE04	1704304	GOPIKRISHNAN S	Sakthi Auto ComponentsPvt Limited, Thiruppur	

52.	18LEE05	1704305	GOWTHAM K	Voltech Engineers Pvt. Ltd, Chennai. Shree Abirami Engineering Works Pvt Ltd, Chennai Sakthi Auto ComponentsPvt Limited, Thiruppur.	
53.	18LEE06	1704306	PONRAJAPANDIYAN A	Voltech Engineers Pvt. Ltd, Chennai. Sakthi Auto ComponentsPvt Limited, Thiruppur.	
54.	18LEE07	1704307	PREM KUMAR R	Sakthi Auto ComponentsPvt Limited, Thiruppur	
55.	18LEE08	1704308	S.S. RAKESH	5K CarcarePvt Ltd, Kovai	
56.	18LEE09	1704309	SABARISANKARAN A	Voltech Engineers Pvt. Ltd, Chennai. Sakthi Auto ComponentsPvt Limited, Thiruppur 5K CarcarePvt Ltd, Kovai	

57.	18LEE10	1704310	SARANKUMAR M	Sakthi Auto ComponentsPvt Limited, Thiruppur	
58.	18LEE11	1704311	YOGESWARAN K	MMCInfotechPvt Ltd, Chennai	
59.	18LEE12	1704312	YOHINATH D	Voltech Engineers Pvt. Ltd, Chennai.	

No. of. Students Placed in Sakthi Auto Components Pvt Ltd : 51

No. of. Students Placed in Voltech Engineers Pvt Ltd : 20

No. of. Students Placed in MMC InfotechPvt Ltd : 02

No. of. Students Placed in 5K CarcarePvt Ltd: 04

No. of. Students Placed in Shree Abirami Engineering Works PvtLtd : 13

No. of. Students Placed in RSIM Pvt Ltd : 07

No. of. Students PlacedinPothigai Power Solutions Pvt Ltd : 04

No. of. Students PlacedinVijay Flexi Pvt Ltd : 06

KNOW YOUR ALUMNI

Mr.A.GURUSAMY

Alumni: 2013

Department of Electrical and Electronics Engineering.

PSR Engineering College,

Sivakasi.

EDUCATION

- Course: Diploma in Electrical Engineering.

College:PACR Polytechnic college, Rajapalayam.

Year of passing: 2010

- Course: Bachelor of engineering in Electrical Engineering.

College: P.S.R. Engineering College.

University: Anna University, Chennai.

Year of passing: 2013

EXPERIENCE SUMMARY

- Industrial Electronics service (Own Business),
  December 2018 to till date.
- Industrial Automation Electronics service
  Engineer at Brisk Automation, Chennai.
  August 2013 to November 2018.

STUDENT ARTICLE

Improved Accuracy Function Generator Circuit for Analog Signal Processing

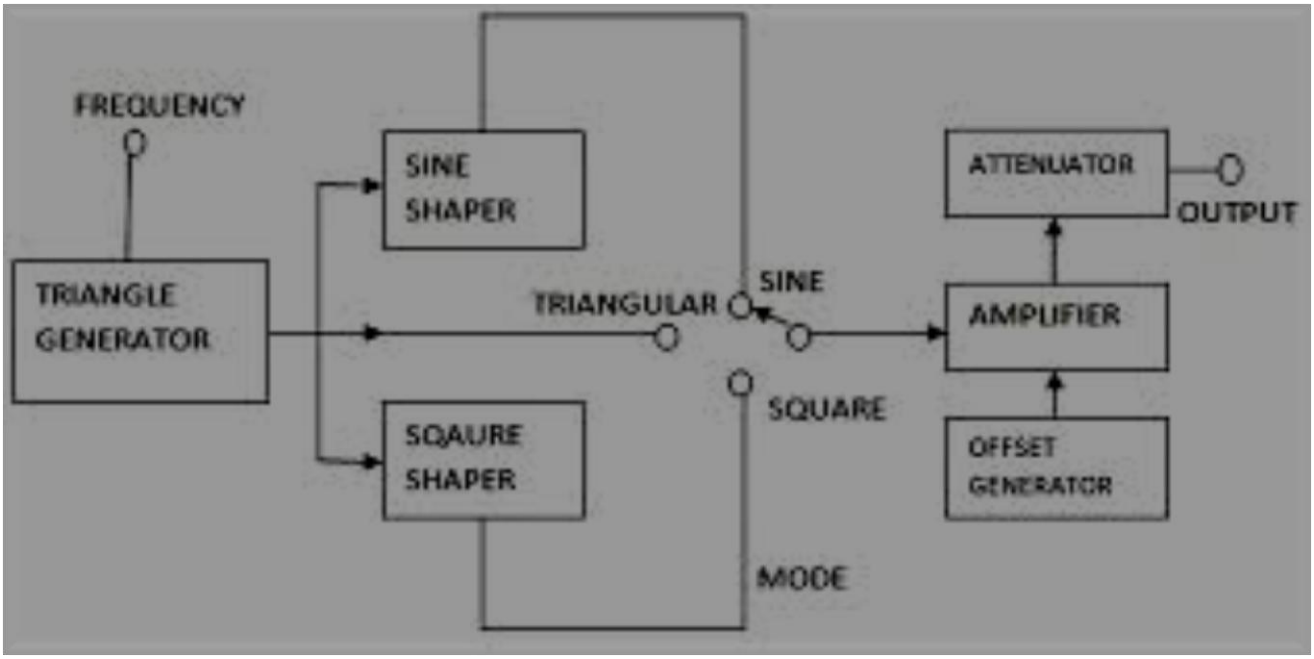
Abstract:

A new current-mode function generator circuit will be presented, having a much smaller complexity per function with respect to the previous reported similar works. The circuit allows to compute an important number of mathematical functions using their n^{th} order limited polynomial series expansion. The approximation error could be strongly decreased by increasing the number of terms considered in the previous expansion. The selection of the active function is digitally made, the main part of the function generator being common for all the computed functions. The circuit core, the current squarer circuit, will be analyzed in six possible implementations, using exclusively MOS transistors working in the saturation region for improving the circuit frequency response. In order to reduce the circuit complexity, classical MOS active devices will be replaced by a FGMOS (floating gate MOS) transistor. A very important advantage of the proposed function generator circuit is the independence of the computed function on the technological parameters. The circuit is implemented in 0.35 mum CMOS technology, the SPICE simulations confirming the theoretical estimated results.

Principles of Operation

Simple function generators usually generate triangular waveform whose frequency can be controlled smoothly as well as in steps. This triangular wave is used as the basis for all of its other outputs. The triangular wave is generated by repeatedly charging and discharging a capacitor from a constant current source. This produces a linearly ascending and descending voltage ramp. As the output voltage reaches upper or lower limits, the charging or discharging is reversed using a comparator, producing the linear triangle wave. By varying the current and the size of the capacitor, different frequencies may be obtained. Saw tooth waves can be produced by charging the capacitor slowly with low current, but using a diode over the current source to discharge quickly - the polarity of the diode changes the polarity of the resulting saw tooth, i.e. slow rise and fast fall, or fast rise and slow fall.

A 50% duty cyclesquare wave is easily obtained by noting whether the capacitor is being charged or discharged, which is reflected in the current switching comparator output. Other duty cycles (theoretically from 0% to 100%) can be obtained by using a comparator and the saw tooth or triangle signal. Most function generators also contain a non-linear diodeshaping circuit that can convert the triangle wave into a reasonably accurate sine wave by rounding off the corners of the triangle wave in a process similar to clipping in audio systems.



Sine wave: A function genesrator will normally be able to act as a sine wave generator. This is the standard waveform that oscillates between two levels with a standard sinusoidal shape. Using the function generator as a sine wave generator is one of the more commonly used applications. Sine waves are widely used in testing applications.

Square wave: Another very widely used waveform is the square wave. It consists of a signal moving directly between high and low levels. Used as a square wave generator, this test instrument provides a very useful source of a basic digital waveform.

A pulse waveform is another type that can be produced by a function generator. It is effectively the same as a square wave, but with the mark space ratio very different to 1:1. This form of waveform is again often used within digital applications.

Triangular wave: This form of signal produced by the function generator linearly moves between a high and low point. This form of waveform is often generated using an operational amplifier acting as an integrator. The triangular waveform generator typically also has a square wave output as well, and it is used as the basis for generating all the waveforms in a function generator test instrument. The triangular waveform is often used in testing amplifiers - it is far easier to see distortion and clipping on a triangular waveform than it is on a sine waveform.

Saw tooth wave: Again, this is a triangular waveform, but with the rise edge of the waveform faster or slower than the fall, making a form of shape similar to a saw tooth. It is generated by the same circuit as the triangular waveform, but with the different rise and fall times created by changing the charge rate for the rise and fall elements of the integrator. These are the basic waveforms that are produced within a function generator test instrument. These waveforms satisfy most of the needs for testing a number of items. Where specialized waveforms are required, then an arbitrary waveform generator is required.

Typical specifications for a general-purpose function generator are:

- Produces sine, square, triangular, saw tooth (ramp), and pulse output. Arbitrary waveform generators can produce waves of any shape.
- It can generate a wide range of frequencies. For example, the Tektronix FG 502 (ca 1974) covers 0.1 Hz to 11 MHz.
- Frequency stability of 0.1 percent per hour for analog generators or 500 ppm for a digital generator.
- Maximum sine wave distortion of about 1% (accuracy of diode shaping network) for analog generators. Arbitrary waveform generators may have distortion less than -55 dB below 50 kHz and less than -40 dB above 50 kHz.
- Some function generators can be phase locked to an external signal source, which may be a frequency reference or another function generator.
- Amplitude modulation (AM), frequency modulation (FM), or phase modulation (PM) may be supported.
- Output amplitude up to 10 V peak-to-peaks.
- Amplitude can be modified, usually by a calibrated attenuator with decade steps and continuous adjustment within each decade.
- Some generators provide a DC offset voltage, e.g. adjustable between -5V to +5V.
- An output impedance of 50 Ω.

Function generator usage

Function generators are normally used within electronics development, waveform generation that can be used in many tests. Manufacturing test and service departments. These test instruments are very flexible and not thought of as specialist instruments. Although they can often generate signals into the low end of the RF spectrum, normally a specific RF generator would be used, unless none were available.

Also they are generally not used for performance audio testing as the levels of distortion on the sine Waves that would normally be used would have higher levels of distortion than these tests sometimes require. A typical figure for the sine wave distortion might be about 1%.

If very high frequency stability is required, ten some of these test instruments allow for the output signal to be phase locked to another source.

There are several forms that the function generator can take. With modern digital technology there are many formats for this type of test equipment.

Function generators are normally very easy to operate. With modern processing technology often included this gives the possibility of many additional features including ease of operation, and remote control via one or more of the many standards available.

By,
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