



DEPARTMENT OF INSTRUMENT AND CONTROL ENGINEERING L.D COLLEGE OF ENGINEERING, AHMEDABAD

EDITORIAL 5.0
JULY'20 - DEC'20

DEPARTMENT OF IC ENGINEERING NEWSLETTER



Principal Message



Dear Students and Faculty Members,

L. D. College of Engineering is reputed as one of the institutes in the state where students as well as faculty members are given the best platform to perform. The COVID -19 pandemic periods have been one of the toughest phases the world has seen. The COVID-19 situation brought almost everything to a standstill. Yet I am glad that we did not succumb to the situation and gave our best. Not just online teaching-learning but we extended our support to society through community help. The institute gave its best in supporting students, whether it is teaching or projects. Final year placements are also successfully conducted

through online mode. I appreciate efforts made by placement cell and congratulate all the students of IC and all other department for securing job though campus placement. With a lot of webinars organized and attended, there was immense sharing of knowledge. LDCE students and faculties putting lots of efforts in students startups and innovation activities, As a results Institute received First rank in Prashansa Award 2020 in best institution category. All the faculty members attended an online training program on IPR, which will lead to noteworthy results soon. I wish and pray that we triumphantly come out of these difficult times. Best wishes for healthy and prosperous new Year 2021.

[Dr. R.K. Gajjar , Principal, LDCE.](#)

Vision and Mission of Institute

Vision : To contribute for sustainable development of nation through achieving excellence in technical education and research while facilitating transformation of students into responsible citizens and competent professionals.

Mission :

- To impart affordable and quality education in order to meet the needs of industries and achieve excellence in teaching-learning process.
- To create a conducive research ambience that drives innovation and nurtures research oriented scholars and outstanding professionals .
- To collaborate with other academic & research institutes as well as industries in order to strengthen education and multidisciplinary research.
- To promote equitable and harmonious growth of students, academicians, staff, society and industries, thereby becoming a center of excellence in technical education.
- To practice and encourage high standards of professional ethics, transparency and accountability

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Message of Head of Department

EDITORIAL



Season's Greetings..!!! It is indeed a pleasure for me to write an editorial for Department of Instrumentation and control engineering newsletter. Department is achieving milestone of success day by day under able leadership of Dr. R.K. Gajjar – Principal, LDCE, dedicated and committed team of IC Engineering faculties. The major events in the current issue of news letter are orientation Program for newly admitted students, Placement of 2021, webinar organized by ISA LDCE student section, publication of faculty in highly reputed journals, student's awards and achievements. At department we also encourage to take student at filed visit which help them to correlate their theoretical knowledge with real time experi-

ments.

In spite of COVID 19 Pandemic department faculties and students did not stop learning and result of that good publication came in to reputed journals, patent published in the journal, department faculties took imitative and they conducted online webinar series to cover content beyond syllabus ,students took part and won in online DD ROBOCON completion. I congratulate to all those students and faculty mentors. Students are also showing extra ordinary creativity in pencil sketch, sports, embroideries, photography and I am sure that reader enjoys and appreciates their art and crafts.

Placement season is also started Our placement records has always being very impressive, with the large number of students being placed year after year in highly reputed core companies and public sector units. For the 2021 batch 23 on campus job offered by various reputed companies, I appreciate efforts made by team placement of LDCE. In spite of COVID pandemic our two students group also received industrial define project and they are getting mentorship by Axis Automation. My message to students is never stop learning new thing s in life because The beautiful thing about learning is that no one can take it away from you. My Best wishes for upcoming new year 2021.

Thank You

[Dr. Manish Thakker](#)

[Professor, Head](#)

[Department of Instrumentation & Control Engineering](#)

Department Vision and Mission

Vision : Provide quality education and research environment for preparing competent Instrumentation and Control engineers to meet the technological challenges of industries and the society.

Mission :

- To impart quality education in the field of industrial automation to match the needs of industries.
- To encourage multi disciplinary research and innovative projects.
- To cultivate technocrats and entrepreneurs with professional skills and ethics.

RESEARCH ARTICLE AND PATENT BY FACULTIES AND STUDENTS



RESEARCH ARTICLE PUBLICATION BY FACULTIES

PUBLICATION BY DR. MANISH THAKKER ET.AL IN SENSORS LETTER, MDPI, SWITZERLAND, ARTICLE ONLINE: SENSORS 2020, 20(14),3840; [HTTPS://DOI.ORG/10.3390/s20143840](https://doi.org/10.3390/s20143840)



Letter

Single-Bit, Self-Powered Digital Counter Using a Wiegand Sensor for Rotary Applications

Janki Chotai ^{1,*} , Manish Thakker ² and Yasushi Takemura ³ 

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PUBLICATION BY PROF. DIVYESH RANINGA ET.AL TRANSACTION OF THE INSTITUTE OF MEASUREMENT AND CONTROL, SAGE PUBLICATION, ONLINE [HTTPS://DOI.ORG/10.1177/0142331220938532](https://doi.org/10.1177/0142331220938532)

Article

Explicit nonlinear predictive control algorithms for Laguerre filter and sparse least square support vector machine-based Wiener model

Divyesh Raninga ¹ , Radhakrishnan TK ¹ and Kirubakaran Velswamy ²



Transactions of the Institute of Measurement and Control
1–20

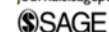
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DOI: [10.1177/0142331220938532](https://doi.org/10.1177/0142331220938532)

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RESEARCH ARTICKE AND PATENT BY FACULTIES AND STUDENTS

PATENT PUBLICATION

PATENT ON ADVANCED DATA LOGGER HAS BEEN SUCCESSFULLY PUBLISHED IN INDIAN PATENT JOURNAL.

APPLICATION NUMBER- 201921051652, JOURNAL DATE- 13/11/2020

CONGRATULATION TO TEAM LEADER VISHESH OZA, TEAM MEMBER ZARANA PAREKH AND MENTORED BY DR. MANISH THAKKER AND PROF.V.P.PATEL.

FINANCIAL SUPPORT RECEIVED BY STUDENT STARTUP AND INNOVATION POLICY (SSIP), GOVERNMENT OF GUJARAT HIGHLY APPRECIATED.

Application Details	
APPLICATION NUMBER	201921051652
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	13/12/2019
APPLICANT NAME	1 . THAKKER MANISH TARACHANDRABHAI 2 . PATEL VINOD PURUSHOTTAMDAS 3 . OZA VISHESH KETANKUMAR 4 . PAREKH ZARANA CHETANKUMAR
TITLE OF INVENTION	ADVANCED DATA LOGGER
FIELD OF INVENTION	COMMUNICATION
E-MAIL (As Per Record)	ozavishesh07@gmail.com
ADDITIONAL-EMAIL (As Per Record)	ozavishesh07@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	05/11/2020
PUBLICATION DATE (U/S 11A)	13/11/2020

PATENT ON PLC HIGH RESOLUTION TIMER MODULE ON FPGA PLATFORM HAS BEEN SUCCESSFULLY PUBLISHED IN INDIAN PATENT JOURNAL.

APPLICATION NUMBER- 202021028003 A, JOURNAL DATE– 04/12/2020

CONGRATULATION TO DR. ANKIT SHAH AND HIS PHD STUDENT MR. DHRUV PATEL.

FINANCIAL SUPPORT RECEIVED BY GTU STUDENT STARTUP AND INNOVATION POLICY (SSIP), GOVERNMENT OF GUJARAT HIGHLY APPRECIATED.

(12) PATENT APPLICATION PUBLICATION	(21) Application No.202021028003 A
(19) INDIA	
(22) Date of filing of Application :01/07/2020	(43) Publication Date : 04/12/2020
(54) Title of the invention : PLC HIGH RESOLUTION TIMER MODULE ON FPGA PLATFORM	
(51) International classification	:G05B0019050000, H03K0003640000, G05B0019040000, H03K0017780000, H03M0001540000
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA
(71)Name of Applicant :	1)Patel Dhruv Maheshbhai, Assistant Professor, Sardar Vallabhbhai Patel Institute of Technology-Vasad and PhD Scholar, Gujarat Technological University Address of Applicant :1083, Azad Street, Behind: Swaminarayan Temple, At: Jetalpur, Ta: Daskroi, Di: Ahmedabad, Pin code : 382427 Gujarat India
(72)Name of Inventor :	1)Patel Dhruv Maheshbhai, Assistant Professor, Sardar Vallabhbhai Patel Institute of Technology-Vasad and PhD Scholar, Gujarat Technological University 2)Ankit Kiritkumar Shah Assistant Professor, I&C Dept., LDCE, Ahmedabad

DISSERTATION DETAILS - ME



STUDENT NAME: Jani Devanshi Vivekkumar (190280703004)

DISSERTATION TITLE: Automatic PCB Defect detection using image processing on embedded platform

GUIDED BY: Prof.(Dr.) R.C.Patel

ABSTRACT: Printed Circuit Board (PCB) is said to be the heart of the electronic automation system because PCB are by far the most common method of assembling modern electronic circuits. During the manufacturing of PCB many defects are introduced which are harmful to precise circuit performance. A PCBs Defect detection system uses machine vision which is used to find difficulties occurred in manual inspection. It eliminates subjective aspects and gives fast, quantitative and dimensional quality. There are many algorithms developed for PCB defect detection, using contact or noncontact methods. There are three categories of PCB inspection algorithms i.e., referential approaches, non-referential approaches, and hybrid approaches. We first compare a standard PCB image with a PCB image to be inspected, using a simple subtraction algorithm that can detect the defected regions. Our focus is to detect defects on printed circuit boards. The results obtained from this shows that this methods can effectively detect common defects on the circuit board because we only need to examine the area of defect consuming less time than the conventional practices which makes this system a highly cost effective, fast processing, very accurate and an efficient method to detect the defects.



STUDENT NAME: Parmar Himanshu Babubhai(190280703008)

DISSERTATION TITLE: Design of a Hybrid PID plus Fuzzy Controller for Inner Loop and Outer Loop Speed control of DC Motor.

GUIDED BY: Prof. Umang .V . shah

ABSTRACT: The dissertation work is based on hybrid PID plus fuzzy controller for inner loop and outer loop speed control of DC motor. The DC motors have wide range of applications such as in battery operated vehicles, wheel chairs, robotics, aerospace and in other various industrial applications because of their superior electrical and mechanical characteristics. Most of the application requires efficient speed control of DC motor. Here performance analysis of inner loop and outer loop speed control of DC motor using hybrid PID controller and Fuzzy logic controller is carried out using MATLAB/SIMULINK. Using fuzzy, sensitiveness to variation of input torque and also any kind of system uncertainty can be overcome compared to all other conventional controllers. In hardware portion we design Hybrid PID AND FUZZY controller programming in Arduino software and networking with design of dc motor speed control PCB. After networking we measuring and controlling the DC motors speed.

DISSERTATION DETAILS - ME



STUDENT NAME: Kansagara Yashkumar Jayantilal(190280703007)

DISSERTATION TITLE: Integrated frame work for data driven process monitoring and diagnosis system using machine learning and cloud computing

GUIDED BY: Prof. V.P.Patel

ABSTRACT: - Today's manufacturing processes are much complex and high efficient. Because there are most of process work on automation and artificial intelligence system. And for that user and developers are required monitoring or diagnosis of that system. In given Dissertation we use two system for monitoring of process and diagnosis of that processes. 1. Machine learning 2. Cloud computing.

Here process monitoring is an assessment of the process of a program or intervention. In this, by using machine learning programming and cloud computing user and developers are monitoring process program. Also diagnosis meaning is find the fault and error from that process.

Machine learning is an application of artificial intelligence that provides systems the ability to automatically learn and improve from experience without being explicitly programmed. Machine learning focuses on the development of computer programs that when system getting unstable during that time changes in parameter by use of program. User & developers can also monitoring process by the use of cloud computing technique. Cloud Computing has emerged as new paradigm of Automation technology. In this dissertation user and developers are also monitoring process and diagnosis the process using through cloud computing.



STUDENT NAME: Maulin Navneetbhai Patel (190280703010)

DISSERTATION TITLE: Identification of human emotions by facial expression using artificial intelligence techniques.

GUIDED BY: Prof. Manisha Patel

ABSTRACT: Human emotions can be predicted by facial expressions of person. As a human, we always try to identify others person feeling by reading body language. Facial expression reading is crucial part to understand feeling and predict behavior of human. Facial expression is very subjective and contextual things to understand. To taught that ability to computer is very tough task. We have to provide large numbers of data to computer. So, based on that data computer determine values of wight in CNN architecture to draw conclusion about facial expression. Finding right kind of facial data to feed into CNN is done by face detection algorithm. Final end result would be one of the seven emotions, that produce by multi class classifier.

DISSERTATION DETAILS - ME



STUDENT NAME: Patel Palak RohitKumar (190280703011)

DISSERTATION TITLE: Application of Deep Learning in Respiratory Diseases Diagnosis

GUIDED BY: Dr. M.T. Thakker, Prof. Bhavesh Parmar

ABSTRACT: - As early prediction can reduce the spread of virus, it is highly desirable to have intelligent prediction and diagnosis tools. AI has a potential to aid in rapid evaluation of CT Scans for differentiation of COVID-19 Findings from other clinical entities. AI can improve work efficiency by accurate definition of infections in X-RAY and CT images. The applied search strategy led in to include various paper related to the application of AI techniques for COVID-19. AI can contribute against COVID-19 at main six areas, early warnings and alerts, tracking and prediction, data dashboards, diagnosis and prognosis, treatments, and cures and social control. In this proposed system a fully automatic deep learning system for COVID-19 diagnostic and prognostic analysis by routinely used computed tomography. Here, from the various papers, the collected computed tomography images were used to Image acquisition, lung volume segmentation and the feature extraction using Deep Learning System. This work introduces that various research based on statistical analysis and Deep -learning-based survival approaches that can be directly applied to real-world COVID-19 data of the respiratory diseases and the damage of the lungs to evaluate how the patient clinical information could have an impact on the length of stay in hospital. This paper proposed a various pipeline of medical imaging and analysis technique involved with COVID-19, including image acquisition, segmentation, Diagnosis from various research.



STUDENT NAME: Thaker Maharsh Kalpeshbhai (190280703022)

DISSERTATION TITLE: Application Development of Auto-Tuner for PID Controller Tuning with Machine Learning and Optimization Techniques on Remote Server using Cloud Computing.

GUIDED BY: Prof. V. P. Patel

ABSTRACT: The dissertation project work is based on creating an Auto-Tuning application using web development for PID controller to tune the PID parameters using optimization techniques. Auto-Tuning application contains simulation model of a plant, which is developed using Python programming language. Parameters of PID are autotuned according to the setpoint received by the system from the user. This simulation of plant model can be implemented in cloud service. User can operate the simulation in the remote server using cloud services. Cloud Computing has emerged as new paradigm of Automation technology and has many advantages like cost reduction for system developers and users.

DISSERTATION DETAILS - ME



STUDENT NAME: Shersiya Trupti Mansukhbhai (190280703018)

DISSERTATION TITLE: Performance evaluation of motion blurred image restoration and algorithms on embedded platform

GUIDED BY: Prof.(Dr.) R.C.Patel

ABSTRACT: - Image restoration is process of recovering the original image by removing noise, pixel value errors, out of focus blurring or camera motion blurring of image. Process to reconstruct the image it's called deblurring or restoration. Image deblurring is an important research direction in the field of computer vision and image processing.

In the process of imaging, the generated image becomes blurred because of the relative movement between the imaging target and the camera. In practical application, these anamorphoses often greatly affect in image identifying and analyzing. So we need some algorithms of inverse process to restore the image. We call the process "motion blurred image restoration".

There are several widely used techniques in motion blurred image restoration like direct inverse filter method, Method based on wiener filter and Lucy-richardson non-linear restoration method etc.The application of motion blurred image restoration in various fields as astronomy, military, road transportation, medical image.



STUDENT NAME: Raval Harshit Maganbhai (190280703014)

DISSERTATION TITLE: Sound Characterization and its application in fault identification

GUIDED BY: Dr. M.T. Thakker , Dr. S.S. Pathan

ABSTRACT:In Industry the maintenance of the instruments are always a prior point. Also a fault identification is a hard job for non-experienced and sometimes for experienced engineers also. For fault identification there are so many methods contact type, non-contact type but sometimes it gets harder and harder to find a source of the fault. Every Instruments having some frequency at its running condition. By that frequency the spectrum can be made. By catching that frequency via microphone array and capturing that image by camera and processing on it in Software can be superimposed that spectrum and Image. So the spectrum of the Frequency can be adjusted as per our requirement. High intensity noise will be generating when the fault occurs. We can detect that where the intensity of the noise is high and the source of that fault. Each individual pixel of the screen is colored with assigned color based on calculated effective sound pressure value at that point. This also shows a color scale from which the value in dB can be determined. The result of previous calculations is the automatic overlay of the optical image by the color scale expressing the sound pressure value (dB).

DISSERTATION DETAILS - ME



STUDENT NAME: Sana Vohra (190280703016)

DISSERTATION TITLE: Artificial Neural Network based ECG analysis for arrhythmia detection.

GUIDED BY: Prof. Vandana V. Patel

ABSTRACT: - ECG is a periodical, rhythmically repeating signal synchronized by the functioning of the heart, which acts as a generator of bioelectric events. The waveforms thus recorded have been standardized in terms of phase and amplitude relationships and any deviation from this would reflect or denote an abnormality in the functioning of the heart. Any change in the shape of these waveforms or the time period denotes an abnormality in the conduction system. An intelligent diagnosis system for electrocardiogram (ECG) analysis using artificial neural network (ANN) is to be implemented. Features are extracted using wavelet decomposition (WD) followed by feature extraction on detection of P, Q, R, S, T waves for time-domain features. The performance of algorithms is evaluated on the MIT-BIH Arrhythmia Database. Further the data is processed through ANN and classification of signal analysis is thus provided. Furthermore, the system is implemented using Rasp pi on hardware platform.

GTU TOPPER



10th ANNUAL CONVOCATION
18th JANUARY, 2021 MONDAY

CONGRATULATIONS TO MS. GAJJAR BINITA GIRISHBHAJI AND BRANCH TOPPER - INSTRUMENTATION AND CONTROL (APPLIED INSTRUMENTATION) - MASTER OF ENGINEERING AND HER PG GUIDE DR. R.C. PATEL.

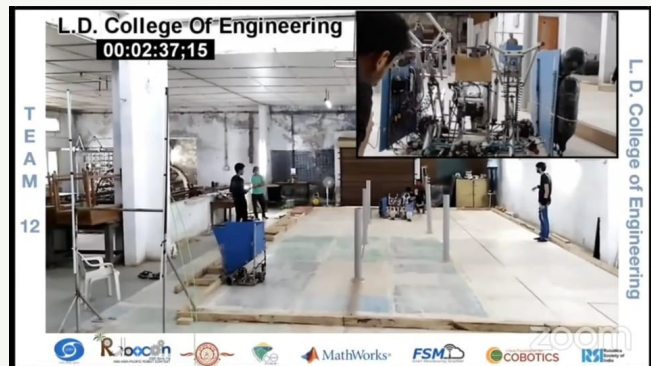
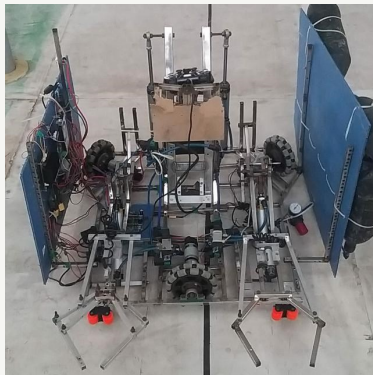
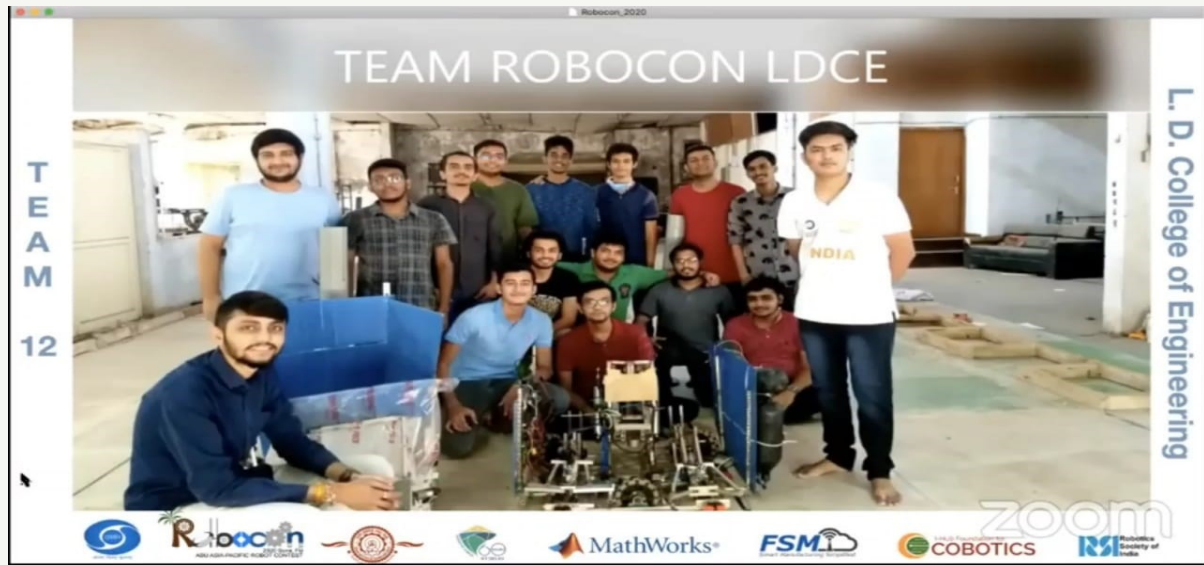
MS. BINITA WAS AWARDED WITH A GOLD MEDAL FOR ACHIEVING BRANCH TOPPER'S PLACE IN ALL OVER GTU AT 10TH CONVOCATION OF GTU.

PLACEMENT OF IC ENGG , 2021 BATCH

INSTRUMENTATION & CONTROL ENGG.- PLACEMENT 2020		
Sr. No	Name of Students	Company
1	JINAL PAREKH	TATA CONSULTANCY SERVICES
2	DISHANT CHONDAGAR	TATA CONSULTANCY SERVICES
3	ROHAN TEJWANI	TATA CONSULTANCY SERVICES
4	SANJAYKUMAR VARU	TATA CONSULTANCY SERVICES
5	ANINDA DEY SARKAR	TATA CONSULTANCY SERVICES
6	HARSH PATEL	TATA CONSULTANCY SERVICES
7	SHALIN PANCHAL	TATA CONSULTANCY SERVICES
8	YASH DALMIA	TATA CONSULTANCY SERVICES
9	JANESH SENJALIYA	TATA CONSULTANCY SERVICES
10	MAYANK PATEL	TATA CONSULTANCY SERVICES
11	ANINDA DEY SARKAR	ACCENTURE
12	DISHANT CHONDAGAR	WELPSUN
13	ANINDA DEY SARKAR	L&T TECHNOLOGY SERVICES
14	JANVI DUBAL	L&T TECHNOLOGY SERVICES
15	SAIFALI SINGH	EVOSYS
16	JINAY SHAH	EVOSYS
17	MAYANK KHATRI	EVOSYS
18	DARSHAN SURTI	CAIRN INDIA
19	MAYANK PATEL	CAIRN INDIA
20	ROHAN TEJWANI	CAIRN INDIA
21	JINAL PAREKH	CAIRN INDIA
22	JINAY SHAH	CAIRN INDIA
23	YASH DALMIA	CAIRN INDIA



STUDENTS' AND FACULTIES ACHIEVEMENTS



Students from various branch including Instrumentation and Control Engineering Department, participated in National Level Robotics competition - National DD Robocon 2020 and represented L.D. College of Engineering among IITs, NITs, BITS and many other prestigious colleges and secured 7th place. The event was online this year due to Covid-19 norms and selection of teams and ranking was based on 3 minutes video of robots doing the theme based task.

"A DREAM DOES NOT BECOME REALITY THROUGH MAGIC; IT TAKES SWEAT, DETERMINATION, AND HARD WORK."

STUDENTS' AND FACULTIES ACHIEVEMENTS



Patel Yug from 1st semester IC Dept, was a new member of SWA-SARJAN Foundation, Due to his efforts in betterment of society and some of his suggestions and ideas to serve the society by analyzing problems faced by them, He was promoted to Research and Analysis Head.



મીઠાઈ, ચવાણું અને કપડાં સ્વમ વિસ્તારમાં આપવાનું શરૂ કર્યું છે

‘અમારું શ્રુપ લીબુપાણી, બટાકા પૌઆ વેળીએ, એમાંથી જે આવક થાય એ સ્વમ વિસ્તારના ખાણકોના એજ્યુકેશન પ્રાપ્તિ વાપરીએ. લોકગર્ભિન દરમિયાન સ્વમ વિસ્તારમાં કુડ પેકેટનું અને લોકગર્ભિન પછી અનાજની કિટનું વિતરણ કરી ચૂક્યા છીએ. દિવાળી આવે છે એટલે બધા મિત્રોએ ભેગા થઈ જુના હોય પણ સારા હોય એવા કપડાં ભેગા કર્યા છે. એને સરસ રીતે પેક કરી સ્વમ વિસ્તારમાં આપવાના છીએ. આ ઉપરાંત મીઠાઈ, ચવાણું પણ આપીશું. - કૌશલ ગોહિલ, મણિલગર

“KNOWING IS NOT ENOUGH; WE MUST APPLY. WISHING IS NOT ENOUGH; WE MUST DO.” – JOHANN WOLFGANG VON GOETHE

STUDENTS' AND FACULTIES ACHIEVEMENTS

**Filing of Design Patent on BIOGUARD M20 by IC Engineering Department Students on 29th Dec.2021**

Milan Desai from 5th semester under guidance of Dr, M.T Thakker , Prof.M.R.Vasavada developed a UV disinfection chamber “ BIO-GUARD M20” which is used to sanitize, preventing and reducing the spread of infection diseases, viral infections, bacteria and other types of harmful organic microorganisms by breaking down their DNA-structure where liquid sanitizers can not used. Like electronic gadgets, Leather, vegetables etc.

Application Number-336956-001

Application Ref Number-336956-001

Filing Date-29/12/2020



"OPPORTUNITIES DON'T HAPPEN. YOU CREATE THEM."

- CHRIS GROSSER

STUDENTS' AND FACULTIES ACHIEVEMENTS

Dr. Manish Thakker, has been Awarded for his efforts to guide outstanding Innovation/ Startups during **NATIONAL STUDENT STARTUP MEET 2020** on December 17,2020 with August Presence of, **Shri. Prakash Javadekar** - Central minister **Smt. Vibhavariben Vijaybhai Dave**, **Shri. Bhupendrasinh Chudasama**.



Dr. Manish Thakker, Professor –IC, SSIP Co-ordinator LDCE has been Awarded for his Initiatives and Noteworthy contribution in student startups related activities in the institute during Lockdown due to **COVID - 19** on 15th August 2020

Prof. V. P Patel, Associate Prof– IC, TPO—LDCE has been Awarded for his Initiatives and Noteworthy contribution in LDCE Placement activities during Lockdown due to **COVID - 19** on 15th August 2020



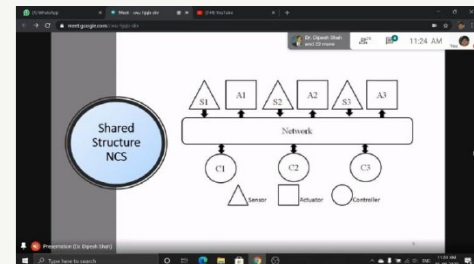
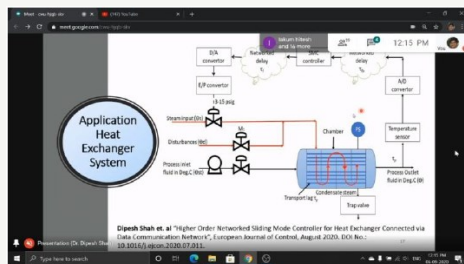
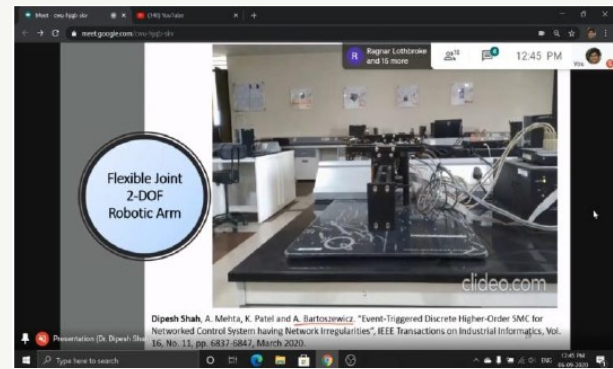
Dr. Manish Thakker and **Dr. Ankit Shah** received appreciation certificate for guiding SSIP Projects for publishing patent respectively during online felicitation of PoC, Patent Grantees. Felicitation ceremony is supported by SSIP and organized by Aarambh Innovation Cell, LDCE on 25th September 2020

WEBINARS BY ISA, LDCE

WEBINAR ON NETWORKED CONTROL SYSTEM

In the field of automation and control, the industries are emerging towards industry 4.0 and the Industrial Internet of Things which enables the connectivity to and from the field devices (sensors small and large control loops) this brings a secured network to share data. Seeing the emergence and updates in the technology, to understand more about Networked control Systems, ISA student section LDCE in association with Department with Instrumentation and control Engineering, LD college of Engineering had organized a webinar on NETWORK CONTROL SYSTEM: CHALLENGES, APPLICATION AND FUTURE SCOPE on Google meet platform on the date of 6th September 2020.

More than 27 students of LDCE and other Colleges and Universities participated in this webinar. Along with Students, many faculty members and Alumni also attended the webinar. The knowledge was delivered by Dr. Dipesh Shah who is Post Doctorate Fellow at the Department of Biological Engineering at IIT Gandhinagar. The webinar explained various topics including the Explanation of Network controlled systems, structure, data transmission, types of Network controlled systems along with its problems and solutions.



"LIVE AS IF YOU WERE TO DIE TOMORROW. LEARN AS IF YOU WERE TO LIVE FOREVER. "

- MAHATMA GANDHI

WEBINARS BY ISA, LDCE

WEBINAR ON POWER PLANT AUTOMATION

As an Instrumentation and control engineer, Power Plant is one the core and professional domain to work. To impart the knowledge about the roles and responsibilities of an Instrumentation and control engineer and the automation strategies in thermal power plant . **ISA student section LDCE** in association with **Department of Instrumentation and Control , L.D. College of Engineering** had organized two consecutive webinars on **POWER PLANT AUTOMATION** on the day of 26th and 29th September 2020.

More than 58 students of 3rd , 5th and 7th semester from LDCE and from various colleges like NIT Trichy, Nirma institute of technology, VGEC, and GEC attended the webinar. Apart from this some of the other divisions's ISA members also took advantage of the session . Along with the participants , faculty advisor and head of the IC department *Dr. Manish T. Thakker*, and the various department Professors participated in the webinar.

The webinar was conducted by Mr. Vishal Khathriya who is Deputy Manager at **ADANI POWER LIMITED** in C&I department having 9 years of experience in the various departments like turbine, boiler and MOV (Motor operated valve) in the company.

The screenshot shows a Zoom meeting interface with two presentation slides. The left slide compares PLC and DCS systems. The right slide shows a network diagram of a power plant automation system.

PLC	DCS
Use for Dedicated system	Use for entire plant automation
Earlier available with hardware and configurator software only	Available with entire hardware software package
Used different graphics software like SCADA Itx/ Factory Talkview	Graphics provided by DCS supplier
PLC speed faster because it use for dedicated system control	DCS slower because of so many processor connected with each other

The network diagram on the right slide illustrates a control system architecture. It includes a Network Switch connected to three OSI (Operator Station Interface) units. These are linked to a central Server and Archive. Below this, there are Engineering Stations, Processors, I/O cards, and Field Devices, all interconnected in a complex network.

"EDUCATION IS NOT THE FILLING OF A PAIL, BUT THE LIGHTING OF A FIRE."

- W.B YEATS

GLIMPSE OF ONLINE ORIENTATION- 2K20

Every year students are welcomed with orientation program but due to pandemic, this time Orientation Program was conducted online. Students are introduced to environment of college, professors, curriculums, club and all activities in the institute during this program the newsletter 4.0 was launched.



HISTORY OF LDCE

The institute was established in June 1948 with a generous donation of **31.2 Hectares** of land and **Rs. 25 lacs**, by the textile magnate Sheth Shri Kasturbhai Lalbhai.



ABOUT LDCE



LDCE has

16 Departments

14 Under Graduate courses

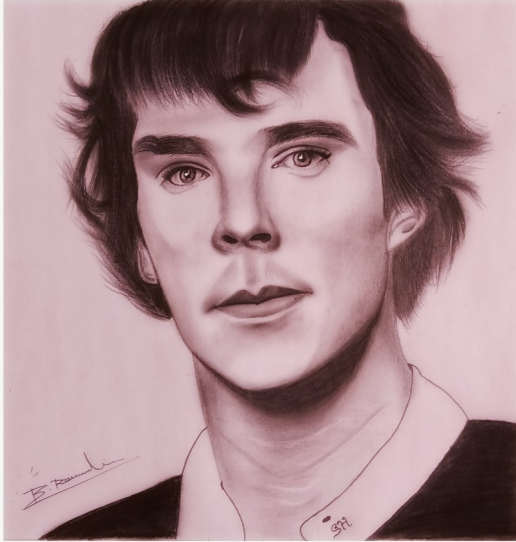
17 Post Graduate courses

4 Part-time Graduate courses

"LIVE AS IF YOU WERE TO DIE TOMORROW. LEARN AS IF YOU WERE TO LIVE FOREVER."

- MAHATMA GANDHI

CREATIVITY BY STUDENTS



‘Sherlock Holmes’
By - Ronvelia Bhavik (5th Sem)



‘Vector Art’
By - Tapan Chavda (5th Sem)

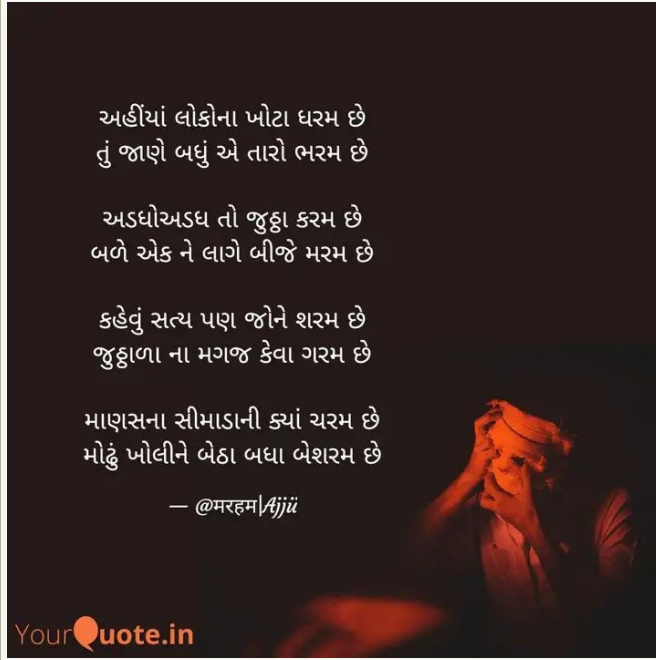


‘Chhatrapati Shivaji Maharaj’
By - Divyesh Bhavarva(3rd Sem)



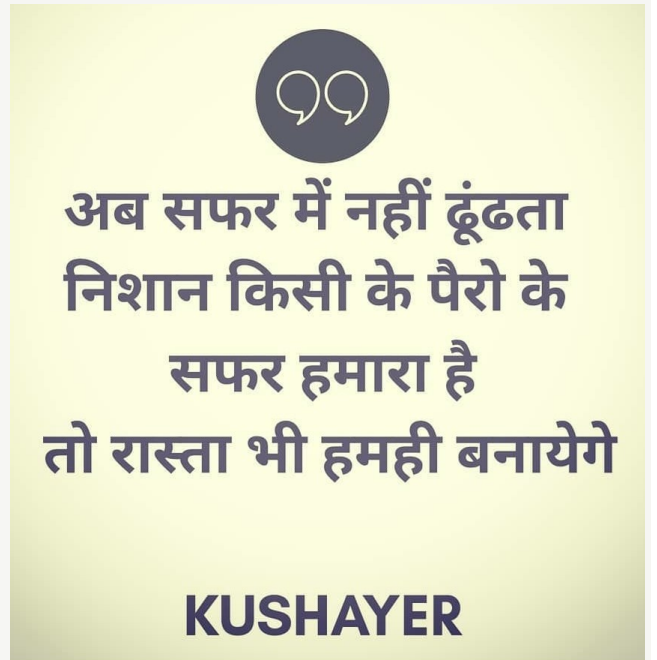
‘Paintings’
By - Preya Solanki (3rd Sem)

CREATIVITY BY STUDENTS



POEM

By - Ajay Vegad (7th Sem)



POEM

By - Kushdip Dadiyala (3rd Sem)



Nukkad Natak (Street Play)
By - Rutvij Thakkar (5th Sem),
Himanshu Joshi(5th Sem)



Photography
By - Samir Singh (1st Sem)

ALUMNI PROFILE

**VISHAL KATHIRIYA - LDCE PASSOUT - IC ENGINEERING**

Currently working as Deputy Manager at Adani Power Limited for C&I department. He had joined the company in July 2011 as a Graduate Engineer Trainee. During his 9 year of career he worked in shift, turbine team, boiler team, MOV team. He had implemented some innovative solutions in DCS like °User friendly protection graphics, °RGMO logic for grid frequency control, °Improvement in coordinated control system which is responsible for turbine-boiler combine close loop control, °And also removed some local PLC and take control in DCS for uniformity in system and history tracking. Other than technical work he and my team put effort to establish factory standard lab with NABL certificate ,safety work practice and also implement 5S work practice to maintain workplace clean and organized.

Dr. Jayesh Barve

Mr. Jayesh Bharve is Principal Engineer (Controls & Optimization) at GE Global Research Center, Bangalore, India. He is alumni of 1979 batch "IC" engineer. He completed his M.tech and Phd from Indian Institute of Technology, Bombay. Jayesh Bharve stated his career as associate professor in IC department at DDIT and continued there for nearly 12 years. He also worked with Tata consultancy services, Pune as associate consultant. He was senior engineer and program manager at GE India technology center. Presently he is principle engineer at GE global research, JF Welch Technology centre, Bangalore.

He published ~14 patents,~40 Journal/Conf. papers; & >20 white-papers/reports.

DEPARTMENT FACULTIES :

DR. MANISH THAKKER, PROFESSOR AND HEAD IC DEPT.

PROF. U. V. SHAH, PROF. V. P. PATEL, PROF. R.C. PATEL— Associate Professor

PROF. M.C. PATEL, PROF. V.V. PATEL, PROF. A. K. SHAH, PROF. H. K. SHASTRI, PROF. L. S. PATEL, PROF. D. V. RANINGA, PROF. C. V. SHAH, PROF. K. R. JOSHI, PROF. U. G. SUHAGIA, PROF. N. A. KANANI, PROF S. N. SHAH -Assistant Professor

VISHAL PATEL, MAYA PRAJAPATI— Lab. Assistant

STUDENTS EDITOR TEAM: TAPAN CHAVDA, VISHAL YADAV, UTASV PANCHAL, RUCHIT SINGALA, NILKANTH POKIYA

—TEAM ISA LDCE.

“Stand up, be bold, be strong. Take the whole responsibility on your own shoulders, and know that you are the creator of your own destiny. All the strength and succor you want is within yourself.” - Swami Vivekananda