



AALIM MUHAMMED SALEGH COLLEGE OF ENGINEERING

Muthapudupet, I.A.F Avadi, Chennai – 600 055

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BEST PRACTICES

Best Practices 1:

Digitalized Campus (Curriculum, Strategic plan)

Objectives:

A digitalized campus aims to leverage technology and digital tools to enhance the learning experience, streamline administrative processes, and create a more efficient and connected educational environment. Here are some common objectives for a digitalized campus:

- To Enhance Learning Experience of the student
- To access to Information and Resources (Google Class Room)
- To motivate student and faculty members to study blended Learning and Online Courses
- To enhance Campus Security
- To do strategic planning, investment in appropriate technology infrastructure

CONTEXT :

In the context of a digitized campus, "digitization" refers to the process of converting analog information, processes, and resources into digital formats, making them accessible and manipulable through computers and other digital devices. The integration of digital technologies and tools into the campus environment has transformative effects on various aspects of education and campus life. Here are some key elements and features of aALIMEC digitized campus:

Technology-Driven Learning: A digitized campus leverages technology to enhance the learning experience. This includes the use of digital learning platforms, multimedia content, interactive simulations, online assessments, and virtual classrooms. Students can access educational materials from anywhere at any time, facilitating personalized learning and flexibility in study schedules.

Online Learning Management Systems (LMS): A central component of a digitized campus is the adoption of an efficient and user-friendly Learning Management System (LMS). The LMS acts as a virtual hub for course materials, assignments, grades, discussions, and communication between students and instructors.

Blended Learning: The digitized campus often incorporates blended learning, which combines traditional face-to-face instruction with online learning activities. Blended learning provides a more dynamic and adaptable educational approach, allowing students to benefit from both in-person interactions and online resources.

Smart Classrooms: Classrooms are equipped with technology, such as interactive whiteboards, audio-visual aids, and projectors, to facilitate more engaging and interactive teaching sessions.

Campus Connectivity: The digitized campus ensures seamless internet connectivity across the entire campus, allowing students, faculty, and staff to access online resources, collaborate, and communicate effectively.

Digital Libraries and Resources: Traditional libraries are complemented with digital repositories, providing access to a vast collection of e-books, journals, research papers, and other digital resources.



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Campus Safety and Security: Technology is employed to enhance campus safety and security, including surveillance cameras, access control systems, emergency alert systems, and mobile safety apps.

Virtual Labs and Simulations: For certain disciplines, virtual labs and simulations are used to provide practical training and experiences without the need for physical equipment.

Sustainability Efforts: Digitized campuses often strive for sustainability by reducing paper usage, optimizing energy consumption, and promoting eco-friendly practices through digitalization.

Overall, a digitized campus aims to create a dynamic, connected, and technologically advanced learning environment that fosters innovation, collaboration, and efficiency in all aspects of education and campus life. However, it is essential to strike a balance between technology and human interaction, ensuring that the digital transformation enhances the learning experience rather than replacing the value of personal connections and traditional teaching methods.

THE PRACTICE:

AALIMEC utilized the **Technology-Driven Learning** by uploading the course content through google classrooms and made available to the student for accessible.

AALIMEC encourages **Online Learning Management Systems (LMS)** with course materials, assignments, grades, discussions, and communication between students and instructors.

AALIMEC encourages faculty members and students to **Blended Learning** through NPTEL-SWAYAM, PALS, ATAL FDPs. The **Smart Classrooms** are made available for the students with whiteboards, audio-visual aids, and projectors.

AALIMEC **Campus Connectivity** having seamless internet connectivity across the entire campus, allows students, faculty, and staff to access online resources, collaborate, and communicate effectively. In AALIMEC Traditional libraries are complemented with digital repositories, providing access to a vast collection of e-books, journals, research papers, and other digital resources.

AALIMEC has installed surveillance cameras, access control systems and emergency alert systems to enhance campus safety and security. AALIMEC provides **Virtual Labs and Simulations** for certain disciplines, virtual labs and simulations are used to provide practical training and experiences without the need for physical equipment.

AALIMEC committed to **Sustainability Efforts** towards Digitized campuses to strive for sustainability by reducing paper usage, optimizing energy consumption, and promoting eco-friendly practices through digitalization.

EVIDENCE OF SUCCESS:

- Enhance Learning Experience of the student has been realized and students access to Information and Resources (Google Class Room) is also realized
- Students and faculty members enrolled blended Learning and Online Courses via SWAYAM-NPTEL and completed the course

GAP IDENTIFICATION FOR CONTINUOUS IMPROVEMENT:

- New mobile app will be developed apart from google class room
- Motivating all the students (Including weak Learners) to enroll online courses

Best Practices -1

Digitalized Campus (curriculum and strategic plan)

DELNET Online Library opening Screenshots



The screenshot shows the DELNET website homepage. At the top, there is a navigation bar with the following links: [DELNET Brochure](#), [DELNET YouTube Channel](#), [Silver Jubilee Documentary](#), [Testimonials](#), [NACLIN](#), and [Newsletter](#). Below this is a main navigation menu with links: [About Us](#), [Membership](#), [Services](#), [Resources](#), [Publications](#), [Software Support](#), [Programmes](#), [Member Testimonials](#), and [Contact Us](#).

The main banner features a large image of a library with a circular logo celebrating 31 years of commitment. The logo text includes: "Networking Libraries, Sharing & Spreading Knowledge", "31 Years of Commitment", "DELNET", and "Empowering Libraries, Inspiring Professionals". To the right of the banner, the text reads "Access the Major Digital Library Resources in South Asia" with two buttons: "New Discovery Portal Login" and "DELDRess Portal for Schools Login".

Below the banner, there is a "Latest Updates" section with a blue header. Underneath, it lists "NACLIN 25th National Convention on Knowledge, Library and Information Networking - NACLIN" with a "Read more" link. There is also a "Latest Programmes" section mentioning the "National Convention on Knowledge, Library".

The "Welcome to DELNET" section includes the text: "DELNET-Developing Library Network, New Delhi is a major resource sharing library Network in India connecting more than 7700 institutions in 33 states in India and few other countries comprising of Universities, Colleges, R&D organisations, medical hospitals, etc. DELNET is devoted to the Modernisation & Networking of Libraries. It". To the right of this text are two bullet points: "About Us" and "History".

The bottom of the page shows a Windows taskbar with the search bar, taskbar icons, and system tray showing "GBP/INR +0.53%", "16:08", and "07-29-2023".



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Accurate Multi-Channel QCM Sensor Measurement Enabled by FPGA-Based Embedded System Using GPS

by Adrien Bourennane et al.
Electronics 2023, 12(12), 2666;
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Rotated Object Detection with Circular Gaussian Distribution

by Hang Xu, Xinyuan Liu, Yike Ma, Zunjie Zhu, Shuai Wang, Chenggang Yan and Feng Dai
Electronics 2023, 12(15), 3265; <https://doi.org/10.3390/electronics12153265> (registering DOI) - 29 Jul 2023

Abstract Rotated object detection is a challenging task due to the difficulties of locating the rotated objects and separating them effectively from the background. For rotated object prediction, researchers have explored numerous regression-based and classification-based approaches to predict a rotation angle. However, both paradigms [...] Read more.
 (This article belongs to the Special Issue Object Detection, Segmentation and Categorization in Artificial Intelligence)

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by Meng Zhang, Peng Lei, Ce Zhang, Zhengyu Zou, Jiaqing Yang, Changzhi Yin, Xiaochuan Wang, Wenzhong Lu and Wen Lei
Electronics 2023, 12(15), 3264; <https://doi.org/10.3390/electronics12153264> (registering DOI) - 29 Jul 2023

Abstract In this paper, a novel design of ultra-wideband (UWB) filtering antenna integrated with the multimode resonator (MMR) bandpass filter is proposed, aiming to enhance band-edge selectivity. At the beginning, a MMR bandpass filter is modified and studied. Based on the classic MMR filter, [...] Read more.

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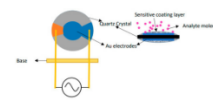
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Accurate Multi-Channel QCM Sensor Measurement Enabled by FPGA-Based Embedded System Using GPS

by Adrien Bourennane et al.
Electronics 2023, 12(12), 2666;
<https://doi.org/10.3390/electronics12122666>
 Published: 14 June 2023



Research Progress of Nature-Inspired Metaheuristic Algorithms in Mobile Robot Path Planning

by Yiqi Xu, Qiongqiong Li, Xuan Xu, Jiafu Yang and Yong Chen
Electronics 2023, 12(15), 3263; <https://doi.org/10.3390/electronics12153263> (registering DOI) - 29 Jul 2023


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by Julián Galindo-Losada et al.
Electronics 2023, 12(13), 2772; <https://doi.org/10.3390/electronics12132772>
 Published: 22 June 2023



An Ultra-Wideband Integrated Filtering Antenna with Improved Band-Edge Selectivity Using Multimode Resonator

by Meng Zhang, Peng Lei, Ce Zhang, Zhengyu Zou, Jiaqing Yang, Changzhi Yin, Xiaochuan Wang, Wenzhong Lu and Wen Lei
Electronics 2023, 12(15), 3264; <https://doi.org/10.3390/electronics12153264> (registering DOI) - 29 Jul 2023

Abstract In this paper, a novel design of ultra-wideband (UWB) filtering antenna integrated with the multimode resonator (MMR) bandpass filter is proposed, aiming to enhance band-edge selectivity. At the beginning, a MMR bandpass filter is modified and studied. Based on the classic MMR filter, [...] Read more.
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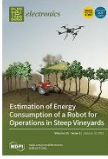






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National Digital Library Login Details

The screenshot shows the homepage of the National Digital Library of India. The browser address bar displays <https://www.ndli.gov.in/help>. The page features a navigation menu on the left with links for 'About NDLI', 'How to Register on NDLI', 'Using NDLI', 'Content', and 'Site Navigation'. The main content area is titled 'Featured Collections:' and includes a descriptive paragraph about the 'On This Day' section. Below this, there is a preview of the library's homepage with various navigation buttons for subjects like School, Engineering, Science, Humanities, Literature, and Law & Management. A 'Member Log-In' modal window is overlaid on the page, showing the login form with fields for 'Email address' (info@aalimec.ac.in), 'Password' (masked with dots), a CAPTCHA (118318), and a 'Remember me' checkbox. The modal also includes 'Account recovery' and 'Register' buttons. The Windows taskbar at the bottom shows the date as 07-29-2023 and the time as 16:27.

This screenshot shows the same National Digital Library of India homepage, but with the 'Member Log-In' modal window open in the foreground. The modal contains the following fields and options: 'Email address' (info@aalimec.ac.in), 'Password' (masked with dots), a CAPTCHA (118318), and a 'Remember me' checkbox. Below the login fields are buttons for 'Account recovery' and 'Register'. The background of the page shows the library's navigation menu and various service categories like 'CBSE Examination Preparatory', 'IIT-JEE and NEET', 'Joint Admission test for Masters (JAM)', 'Graduate Aptitude Test in Engineering (GATE)', 'National Eligibility Test (UGC NET)', and 'Career Development and Recruitment'. The Windows taskbar at the bottom shows the date as 07-29-2023 and the time as 16:29.

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Since the outbreak of severe acute respiratory syndrome (SARS) 18 years ago, a large number of SARS-related coronaviruses (SARSr-CoVs) have been discovered in their natural reservoir host, bats. [View more](#)

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The envelope spike (S) proteins of MERS-CoV and SARS-CoV determine the virus host tropism and entry into host cells, and constitute a promising target for the development of prophylactics and therapeu. [View more](#)

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Viruses are obligate intracellular microbes that exploit the host metabolic machineries to meet their biosynthetic demands, making these host pathways potential therapeutic targets. Here, by exploring [View more](#)

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[Tanya Kaur Bedi](#) & [Shankha Pratim Bhattacharya](#)

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ORIGINAL CONTRIBUTION

An Investigative Study on Perceived Indoor Air Quality During COVID-19 Lockdown in India

Tanya Kaur Bedi¹ · Shankha Pratim Bhattacharya¹

Received: 12 October 2020 / Accepted: 24 May 2021 / Published online: 18 July 2021
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Abstract The air we breathe is a worldwide concern, especially in developing countries like India. Recently, the coronavirus pandemic resulted in restricted activities which showed noteworthy improvement in ambient air. As it hassled people to reach home, corporations began work from home schemes. Conforming to WHO, coronavirus is airborne as transmission cannot be disregarded in crowded and inadequately ventilated indoor spaces. A high-density population spending more time indoors raises questions on existing indoor requirements of accommodating a healthy long-duration habitation. Indoor time is also likely to extend with higher than before acceptance to online learning, entertainment, and shopping. Even though air pollution is mostly thought of as an outdoor concern, studies suggest that the air indoors can be contaminated as well, and sometimes even more than the air outside. India has shown growth in building-related illness, whereas lack of specific standards and limited research raises a concern. The countrywide lockdown to control the coronavirus situation in India has brought overwhelming improvement in

and economic crisis, the pandemic may act as a promoter for healthy and sustainable indoor environments.

Keywords Air pollution · Indoor air quality · IAQ · COVID-19 pandemic · India · Lockdown

Introduction
 When the World Health Organization (WHO) affirmed the COVID-19 spreading a pandemic, people all over the world rushed to reach home. The virus has made a massive effect on our professional, as well as personal lives. According to WHO, coronavirus is airborne in crowded and inadequately ventilated indoor spaces, where the short-range aerosol transmission cannot be disregarded [1]. As a reaction, questions arise on how architects and planners possibly will put in new ideas or upgrade existing spaces to the growing indoor requirements. Extensive research is required for the countless unanswered questions. Following

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2. Digitalized study materials in Google Classroom

3:08 PM | ...0.1KB/s | 3:09 PM | ...1.0KB/s

SMART GRID

SMART GRID FINAL YEAR/VIII SEM

Share with your class...

New question: REVIEW QP TEST 2
 23 May 2022
 Add class comment

New question: FIRST INTERNAL REVIEW QUESTIONS
 19 Apr 2022
 Add class comment

New material: SMART GRID PPT
 16 Apr 2022
 Add class comment

New material: SMART GRID TEXT BOOK1 AND TEXT BOO...

Teachers

Dr Mohanasundaram Anthony

Students

Annalakshmi selvam

GUNA SEKCHAR

Mohamed Firnas

Mohamed Hameed

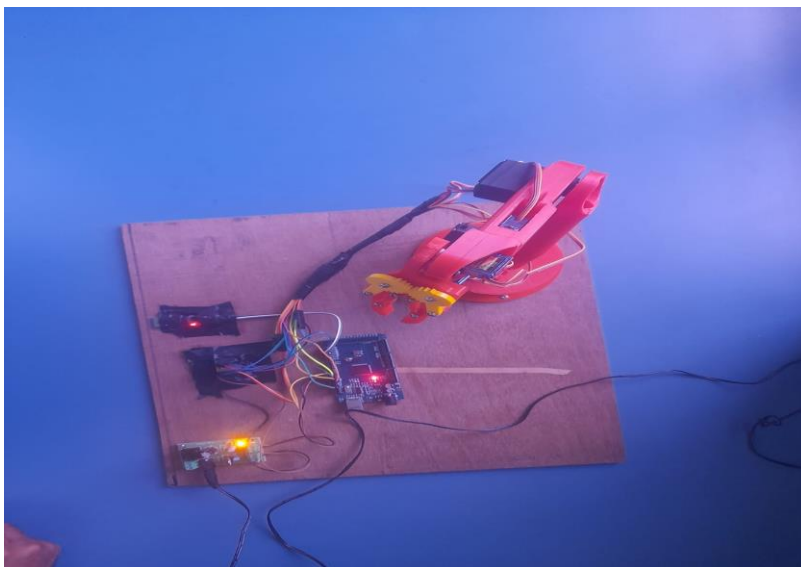
Stream | Classwork | People

3. Robotics Club Details

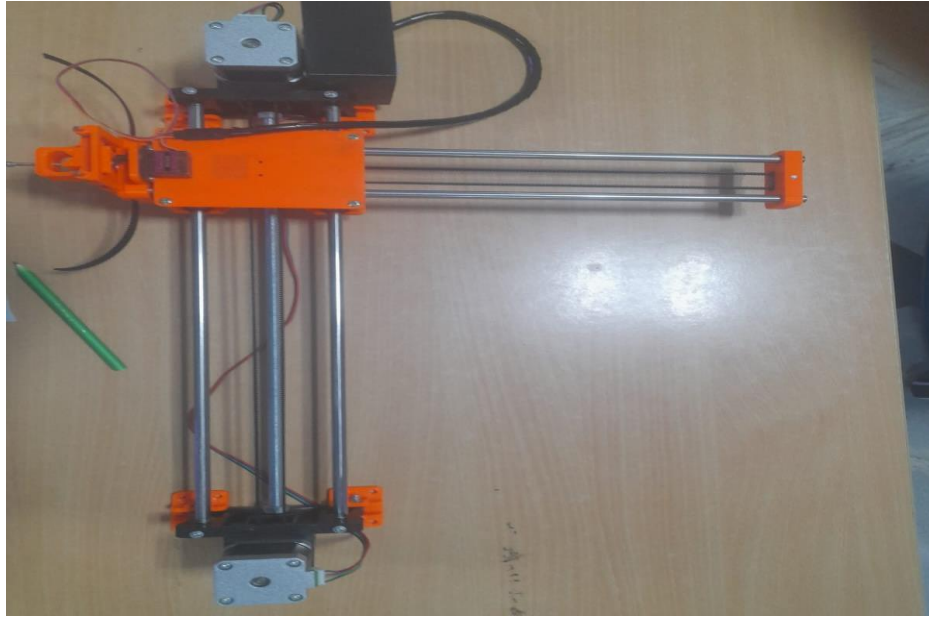


4. 3D Printing Projects

Six Axis Robot 3D Printer



2 Axis CNC Writing Machine



4. Virtual Labs





AALIM MUHAMMED SALEGH COLLEGE OF ENGINEERING
AVADI – IAF, CHENNAI-55
NATIONAL SERVICE SCHEME



RURAL VISIT

The students were taken to the villages adopted by Aalim Muhammed Salegh College of Engineering (under Unnat Bharat Abhiyan Scheme). The students were made to take Village Household Survey. The villages visited by our students were Palavedu, Pakkam, Puliur, Kadavur and Pandeswaram 10.11.2022 to 17.11.2022. The 270 students had a wonderful time interacting with the people living in the villages.



Student rural visit in Palavedu village, Tiruvallur Dist.



Village household survey by Students



Village household survey by Students



Village household survey by Students



Village household survey by Students



AALIM MUHAMMED SALEGH COLLEGE OF ENGINEERING
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WELFARE SCHOOL VISIT

As a part of NSS activity, NSS Students were visited a Welfare school in Palavedu village, Tiruvallur Dist. On 10.11.2022, During the visit, students involed the Welfare school students. Dr.K.Suresh Kumar NSS P.O initiated the Program.



Palavedu village welfare school visit by Dr.K.Suresh Kumar, P.O, NSS /AMSCE.



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NATIONAL SERVICE SCHEME

MEDICAL AWARENESS PROGRAMME

14.11.2022

Dr. M. MOHAMED MEERAN, MBBS., MD.,

Former Deputy Director of Medical Education, Chennai

Dr.K.SURESH KUMAR

NSS PROGRAMME OFFICER

PROF. DR. S. SATHISH

PRINCIPAL

Medical Awareness programme poster

Aalim Muhammed Salegh College of Engineering conducted a medical Awareness for First year students. Dr.M.Mohammed Meeran., M.B.B.S., M.D., Former Deputy Director of Medical Education, Chennai delivered a medical Awareness speech. 270 students and 15 faculty members have participated in the programme. The Programme was Initiated by Dr.K.Suresh Kumar NSS P.O.



Student interaction with the chief Guest Dr.M.Mohammed Meeran.

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ATHIYA ZAINAB
36/29
AZUDDIN KHAN STREET, TRIPLICANE
CHENNAI
TAMIL NADU - 600005
PH. NO :8122347740



Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

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for successfully completing the course

Programming in Java

with a consolidated score of **71** %

Online Assignments	24.56/25	Programming Exam	25/25	Proctored Exam	21.5/50
--------------------	----------	------------------	-------	----------------	---------

Total number of candidates certified in this course: **2649**

Prof. G P Raja Sekhar
Dean, Continuing Education
IIT Kharagpur

Jul-Oct 2021
(12 week course)

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur



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HAZEEM AHMAD
3/561, PUGHAZHENTHI SALAI 8TH STREET
JJ NAGAR, MOGAPPAIR EAST
CHENNAI
TAMIL NADU - 600037
PH. NO :9551321909

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate



No. of credits recommended by NPTEL:3

An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.



Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to

HAZEEM AHMAD

for successfully completing the course

Programming in Java

with a consolidated score of **65** %

Online Assignments	18.72/25	Programming Exam	25/25	Proctored Exam	20.84/50
--------------------	----------	------------------	-------	----------------	----------

Total number of candidates certified in this course: **2649**

Prof. G P Raja Sekhar
Dean, Continuing Education
IIT Kharagpur

Jul-Oct 2021
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Prof. Debjani Chakraborty
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To
SOFIYA RANI N
15/9, 2ND NARAYANAN STREET
SEVEN WELLS
CHENNAI
TAMIL NADU - 600001
PH. NO :9384629772



Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:3

An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.



Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to

SOFIYA RANI N

for successfully completing the course

Programming in Java

with a consolidated score of **72** %

Online Assignments	24.63/25	Programming Exam	25/25	Proctored Exam	22.34/50
--------------------	----------	------------------	-------	----------------	----------

Total number of candidates certified in this course: **2649**

Prof. G P Raja Sekhar
Dean, Continuing Education
IIT Kharagpur

Jul-Oct 2021
(12 week course)

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur



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To
THAMEEMULLAH
5/2,D B K STREET, OLD WASHERMENPET
TAMILNADU - 600021
PH. NO :9941351701

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate



No. of credits recommended by NPTEL:3

An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.



Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to
THAMEEMULLAH
for successfully completing the course
Programming in Java



with a consolidated score of **75** %

Online Assignments	24.53/25	Programming Exam	25/25	Proctored Exam	25.42/50
--------------------	----------	------------------	-------	----------------	----------

Total number of candidates certified in this course: **2649**

Prof. G P Raja Sekhar
Dean, Continuing Education
IIT Kharagpur

Jul-Oct 2021
(12 week course)

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur



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To
VELMURUGAN C
11, VALLALAR STREET, PERIYAKUPPAM
THIRUVALLUR
TAMILNADU - 602001
PH. NO :9025839966



Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:3

An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.



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This certificate is awarded to

VELMURUGAN C

for successfully completing the course

Fundamentals of Manufacturing Processes

with a consolidated score of **54** %

Online Assignments	23.75/25	Proctored Exam	30/75
--------------------	----------	----------------	-------

Total number of candidates certified in this course: **519**

Prof. V. C. Srivastava
Coordinator, Continuing Education Centre
IIT Roorkee

Jul-Oct 2021
(12 week course)

Prof. Priti Maheshwari
NPTEL Coordinator
IIT Roorkee



Indian Institute of Technology Roorkee



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To
AAMIR DAWOOD
4/73, PARAMANANDA STREET,
SEVENWELLS
CHENNAI
TAMIL NADU - 600001
PH. NO :9894113239



Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:3

An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.



Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to

AAMIR DAWOOD

for successfully completing the course

Programming in Java

with a consolidated score of **70** %

Online Assignments	24.56/25	Programming Exam	25/25	Proctored Exam	20/50
--------------------	----------	------------------	-------	----------------	-------

Total number of candidates certified in this course: **2649**

Prof. G P Raja Sekhar
Dean, Continuing Education
IIT Kharagpur

Jul-Oct 2021
(12 week course)

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur



Indian Institute of Technology Kharagpur





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Muthapudupet, I.A.F Avadi, Chennai – 600 055

Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai



Best Practices 2:

Innovation & Research with Continuous Improvement and Alumni Participation

Objectives:

- To motivate student and faculty members to do innovation and Research
- To initiate Sustainability and Green Initiatives
- To do Alumni Engagement and Networking
- To take Feedback from all stakeholders for Continuous Improvement

CONTEXT:

Innovation and Research: Encourage faculty and students to engage in research and innovation leveraging technology. This can include partnerships with tech companies, research initiatives on emerging technologies, and incorporating cutting-edge tools into academic projects. **Alumni Engagement and Networking:** Employ digital platforms to strengthen connections with alumni and create networking opportunities for current students and graduates. This can foster a sense of community and support for both current and former students. **Feedback and Continuous Improvement:** Encourage feedback from students, faculty, and staff on the effectiveness of digital initiatives and continuously strive for improvement based on their input and needs.

THE PRACTICE:

AALIMEC provides internal seed funding and promote **Innovation and Research** for students and faculty and it is also providing cash awards for the students and faculty on publication in SCIE/Scopus Journals. AALIMEC is committed to **Alumni engagement and networking** through social media, department alumni association programs. AALIMEC is receiving feedback from both internal and external stakeholders via various survey in digital format and find out gap for **continuous improvement**.

EVIDENCE OF SUCCESS:

- Students and faculty members have done innovation and Research through internal seed funding and publications
- Alumni Engagement and Networking is very active and received financial aides as scholarship for students
- Feedback from all stakeholders for Continuous Improvement has been taken via google forms

GAP IDENTIFICATION FOR CONTINUOUS IMPROVEMENT:

- The faculty are motivated to apply research for the major funding research agency and publish papers in high impact factor journals
- Alumni engagement needs to be enhanced by live interaction with the students
- Number of external stakeholders (Employer, Parents, Alumni) feedback needs to fetch should be increased

Best Practices -2

Innovation Research with Continuous Improvement and Alumni Participation

Placement Support By Alumni Students

1. Mohammed ather Sajjad S – Glenwood Systems

Senior Software Engineer

2021-2022 Academic year Placed students by above is given below

1. Abdul Hameed J – ECE
2. Mohameed Wajith –CSE

2. Syed Abuthahir- General Manager

Pneumatic Vaccum Elevators and Lifts Pvt Ltd

2021-2022 Academic year Placed students by above is given below

1. Mohamed Syed Riyaz Khan-EEE
2. Vahab Khan –EEE



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No. 1148, I-Block, 6th Avenue
Anna Nagar West, Chennai - 600 040
Phone : +91-44-26181625, 26185320

May 13, 2022

OFFER LETTER

(Strictly confidential)

Mohamed Wajith,
69, 83rd Street,
Ashok Nagar,
Chennai - 600 083.

Dear Mohamed Wajith,

With reference to your application and the subsequent interview you had with us, we are pleased to offer you the position of **Configuration Analyst – Trainee** in our Organization.

You will be on probation for a period of three months and your remuneration would be **INR 15,000/-** (Rupees fifteen thousand) Gross per Month. Your employment will be confirmed based on your performance by the end of probation period.

You will be required to execute a Service Agreement as undertaking to serve the Management for a period of two years from the date of joining.

The following supporting documents should be submitted in person to the HR Department.

- 1) Xerox copy of 10th, Intermediate / Diploma & last semester mark sheet.
- 2) 4 passport size & 2 stamp size photograph
- 3) Xerox copy of ID & Address proof (Aadhar and PAN card)

Must carry the original documents of above for verification.

Yours Sincerely,

Director : Rajalakshmi Kanakaraj



L-CUBE INNOVATIVE SOLUTIONS PVT. LTD.

No.1148, I-Block, 6th Avenue
Anna Nagar West, Chennai - 600 040
Phone : +91-44-26181625, 26185320

May 13, 2022

OFFER LETTER

(Strictly confidential)

Abdul Hameed,
No : 4/7,
Mukthurunisha Begum Street,
5th Lane,
Chennai - 600 002.

Dear Abdul Hameed,

With reference to your application and the subsequent interview you had with us, we are pleased to offer you the position of **Application Support** in our Organization.

You will be on probation for a period of three months and your remuneration would be **INR 18,000/-** (Rupees Eighteen thousand) Gross per Month. Your employment will be confirmed based on your performance by the end of probation period.

You will be required to execute a Service Agreement as undertaking to serve the Management for a period of two years from the date of joining.

The following supporting documents should be submitted in person to the HR Department.

- 1) Xerox copy of 10th, Intermediate / Diploma & last semester mark sheet.
- 2) 4 passport size & 2 stamp size photograph
- 3) Xerox copy of ID & Address proof (Aadhar and PAN card)

Must carry the original documents of above for verification.

Yours Sincerely,

Director : Rajalakshmi Kanakaraj



A WORK OF ART,
POWERED BY AIR.

16th Dec, 2022

Personal & Confidential

Mr. S Mohamed Seyed Riazkhan,
S/o. Mr. Shahul Ameen,
No. 6a, Kulakarai 1st Street, Puliyambedu,
Thiruverkadu, Ayapakkam,
Tiruvallur, Chennai - 600077,
Tamil Nadu.

Sub: - Letter of Appointment

With reference to the discussion, we had with you, we are pleased to appoint you as **Graduate Engineer Trainee** in our factory at Guduvancherry under the following terms and conditions:

1. Commencement Date

Your date of appointment will be effective from **16th Dec, 2022**

2. Salary and Benefits

Salary and benefits are detailed in Annexure attached herewith. Your Compensation package includes an annual Salary of **Rs. 3,31,200/-** subject to deduction of Tax at source.

3. Place of work

Your initial employment location will be in Guduvancherry near Chennai. However, your services are transferable to any place in the country or abroad or to any of the company's associate or sister concern or its subsidiary client location, at the sole discretion of the management.

4. Working Hours

The shift timings will be based on process / program requirement as and when explained.

5. Job Assignment/Reporting

In your assignment, you will be responsible for the duties of a Graduate Engineer Trainee, as more particularly laid out in the job description for this position. You will report directly to the manager nominated by the management.

PNEUMATIC VACUUM ELEVATORS AND LIFTS – INDIA PRIVATE LIMITED

Regd. Office & Factory: Survey No. 344/2A1, Ward No. 1/8, Nellikuppam Road, Karanai Puduchery,
Guduvancherry, Chengalpattu District, Tamil Nadu – 603 202. PHONE: +91 44 2743 8737.

CIN: U36999TN2019FTC132890, GSTIN: 33AAKCP9030C1Z0.



A WORK OF ART.
POWERED BY AIR.


6. Probation, Confirmation & Termination

- 1) You will be on probation for a period of **6 (Six) months** from the date of your appointment, where after, if your services are found satisfactory, you will be confirmed by means of a written intimation. The management reserves the right to reduce, dispense with or extend your probation period at its absolute discretion.
- 2.1. During the probation period or the extended period of probation, an Employee will be liable to be discharged from the company's services at any time with 7 days prior notice and without assigning any reason. An Employee is bound to provide the company with 7 days' notice during which period he / she may have to actually work. If the employee leaves without the notice period, then the salary for the notice period will be deducted from the dues, payable to the employee.
- 2.2. Upon confirmation your services are liable to be terminated by the company after providing you one month notice or payment of basic salary in lieu thereof You shall also be bound to provide the company with one month notice prior to Resignation during which period you may have to actually work. If the employee leaves without the notice period, then the salary for the notice period will be deducted from the dues, payable to the employee.
- 2.3. If the exigencies of work so require, the company may not relieve you earlier than the expiry of the entire period of notice. It shall, however, be open to the company to accept your resignation with effect from any date earlier than the one offered by you in your resignation letter.
- 2.4. The company will have the right to terminate your employment without notice or payment of salary in lieu thereof if:
 - You commit any breach of your duties and responsibilities under this contract of service.
 - You are guilty of any gross default or misconduct, which contravenes the expressed or implied conditions of your employment; and
 - You commit breach of any of the terms of clause 8 of this appointment letter.

7. Absence without Notice

Absence without leave or remaining absent beyond the period of leave originally granted or subsequently extended, shall result in voluntary termination of your employment without any notice unless you

- 1) Return to work within **3 days** from the commencement of such absence, and
- 2) Provide satisfactory explanation to management regarding such absence.



PNEUMATIC VACUUM ELEVATORS AND LIFTS – INDIA PRIVATE LIMITED

Regd. Office & Factory: Survey No. 344/2A1, Ward No. 1/8, Nellikuppam Road, Karanai Puduchery,
Guduvanchery, Chengalpattu District, Tamil Nadu – 603 202. PHONE: +91 44 2743 8737.

CIN: U36999TN2019FTC132890, GSTIN: 33AAKCP9030C1Z0,



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8. Non-Disclosure Agreement

During the course of your employment with us you will have access to confidential/proprietary information about the organization, its clients, its business transactions, and associated companies. You shall not during your course of Employment and two years after you have ceased to be in the employment of this organization, disclose such confidential/proprietary information to any third party and /or any unauthorized person.

All notes and memoranda pertaining to this organization trade secrets and confidential/proprietary information made by or acquired by you during the course of your employment shall at all times remain the property of this organization. Upon termination of your employment, you shall return all notes/memoranda and any copies thereof to organization that you may have obtained during the course of your employment.

You are obliged to sign a non-disclosure agreement specific to a particular client as and when required by organization.

Prior to joining organization, you will ensure that you will be free from any contractual restrictions preventing you from accepting this offer or starting work on the joining date.

9. Employment Regulations

Whilst employed with the company:

- You will not engage in any trade or profession or undertake any employment, full or part-time, while in the service of the Company;
- You will have no objection to working extra hours in the morning and/or the evening according to the requirements of the job.
- You may be selected and sponsored by the Company for familiarization/training assignments with the Company's technical collaborators or any other institutions/organizations in India and/or abroad. You will diligently and beneficially take part in such assignments. The cost of Such training, including the travel fare and related expenses, will be borne by the Company subject to agreements to be drawn up and signed between the Company and you. Such agreements will be specifying the minimum period you will be required to serve the Company after completing the training and providing for payment of liquidated damages by you to the Company proportionate to the time period of service remaining to be rendered, in the event you voluntarily terminate the contract of service or this appointment, as the case may be, prior to the expiry of the agreed period of service referred to herein above;
- You will carry out your duties with diligence and loyalty at all times, keeping the Company's interest paramount;
- You shall not under any circumstances either directly or indirectly, receive or accept for your benefit any commission, rebate, discount or profit from any person, company or firm having business transactions with Organization
- During your employment, you will be bound by the Company's Rules and Regulations framed and enforced from time to time. The Company reserves the right to amend or alter the said Rules and Regulations at its discretion, without any notice thereof, and these will be deemed as Rules and Regulations in terms of your employment;

PNEUMATIC VACUUM ELEVATORS AND LIFTS – INDIA PRIVATE LIMITED

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CIN: U36999TN2019FTC132890, GSTIN: 33AAKCP9030C1Z0.



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- The Company shall verify the facts stated by you in your resume submitted during the Interview process. If any of the facts stated therein are found to be false, your services will be terminated immediately without any notice or any compensation in lieu of the notice period;
- This appointment letter is governed by and shall be construed in accordance with the laws of India, and both parties to this appointment letter shall submit to the exclusive jurisdiction of the Indian Courts. This appointment letter contains the entire understanding between the parties and supersedes all previous agreements and/or arrangements relating to employment with the organization. Any amendment or modification to this appointment letter shall be made in writing and signed by both the parties.
- The terms and conditions of service are confidential and may not be disclosed to or discussed with anyone;
- You will be required to effectively carry out all duties and responsibilities assigned to you by your manager and others authorized by the company to assign such duties and responsibilities;
- You will be required to apply and maintain highest standards of personal conduct and integrity and comply with all company policies and procedures. All acts subversive of good conduct and discipline like insubordination, gross negligence, corruption, fraud, forgery, misappropriation, etc. would warrant strong disciplinary action from the company.
- The emoluments/benefits due to you will be liable / subject to deduction of income tax in accordance with the provisions, of the Income Tax Act and Rules made there under as also other applicable laws, if any, as may be in force from time to time.

10. Retirement

You will automatically retire from the service of the company on attaining the superannuating age of 60 years.

11. Date of Joining

At the time of joining please submit the following documents:

- a) Date of Birth proof certificate (Copy of passport / birth certificate / S.S.C) (Two Copies)
- b) Original Academic Certificates (all from 10th to Highest)
- c) Original Resignation Letter with acknowledgement
- d) Relieving letter from previous employer (Original)
- e) Proof of compensation last drawn (3 Months - Original)
- f) Six passport size photographs (Recent)
- g) Copy of your AADHAR Card & PAN Card

PNEUMATIC VACUUM ELEVATORS AND LIFTS – INDIA PRIVATE LIMITED

Regd. Office & Factory: Survey No. 344/2A1, Ward No. 1/8, Nellikuppam Road, Karanai Puduchery,
Guduvanchery, Chengalpattu District, Tamil Nadu – 603 202. PHONE: +91 44 2743 8737.

CIN: U36999TN2019FTC132890, GSTIN: 33AAKCP9030C120,

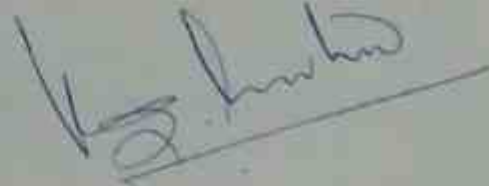
12. Salary Structure:

S.no.	Description	Monthly	Annual
1	Salary (Basic + DA)	12,000	1,44,000
2	House Rent Allowance	8,000	96,000
3	Traveling Allowance	2,000	24,000
4	Medical Allowance	1,500	18,000
5	Special Allowance	500	6,000
	Gross Earnings – Net take home	24,000	2,88,000
6	EPF *	3,600	43,200
7	ESI / Medical Insurance**	0	0
8	Gratuity	0	0
9	Bonus ***	***	***
	Total	3,600	43,200
	CTC	27,600	3,31,200

* EPF ESI: Company's contribution will be applicable from the date of Applicability of the Scheme/Act to the establishment.

** Medical Insurance

*** Bonus: Subject to the Payment of Bonus Act.



13. Acceptance

- Please sign and return the duplicate copy of this letter and annexure as a token of your acceptance of the terms and conditions mentioned herein.
- If you fail to indicate your acceptance within a week from the date of the appointment letter, this offer of employment will be deemed to have been withdrawn and cancelled.

All other terms and conditions will be governed by the Company's policies as stated from time to time.

We look forward to your joining us for a long, successful and mutually beneficial association

Yours faithfully

For PNEUMATIC VACUUM ELEVATORS AND LIFTS - INDIA PVT LTD.,



NOOR MOHAMED
DIRECTOR & COO



I accept the appointment on the terms and conditions contained herein and will report for duty on 16.12.2022

Signature: S. MD Seyed Riaz Khan

Name: S. MOHAMED SEYED RIAZ KHAN

Date: 16/12/2022

PNEUMATIC VACUUM ELEVATORS AND LIFTS – INDIA PRIVATE LIMITED

Regd. Office & Factory: Survey No. 344/2A1, Ward No. 1/8, Nellikuppam Road, Karanai Puduchery,
Guduvanchery, Chengalpattu District, Tamil Nadu – 603 202. PHONE: +91 44 2743 8737.

CIN: U36999TN2019FTC132890, GSTIN: 33AAKCP9030C120.



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8th Dec, 2022

Personal & Confidential

Mr. Vahab Khan N,
S/o. Mr. Nasar Khan,
No. 1076, 23rd Cross Street, T.P Chatram,
Shenoy Nagar, Chennai - 600030,
Tamil Nadu.

Sub: - Letter of Appointment

With reference to the discussion, we had with you, we are pleased to appoint you as Graduate Engineer Trainee in our factory at Guduvancherry under the following terms and conditions:

1. Commencement Date

Your date of appointment will be effective from 8th Dec, 2022

2. Salary and Benefits

Salary and benefits are detailed in Annexure attached herewith. Your Compensation package includes an annual Salary of Rs. **3,31,200/-** subject to deduction of Tax at source.

3. Place of work

Your initial employment location will be in Guduvancherry near Chennai. However, your services are transferable to any place in the country or abroad or to any of the company's associate or sister concern or its subsidiary client location, at the sole discretion of the management.

4. Working Hours

The shift timings will be based on process / program requirement as and when explained.

5. Job Assignment/Reporting

In your assignment, you will be responsible for the duties of a Graduate Engineer Trainee, as more particularly laid out in the job description for this position. You will report directly to the manager nominated by the management.

PNEUMATIC VACUUM ELEVATORS AND LIFTS – INDIA PRIVATE LIMITED

Head Office & Factory: Survey No. 944/2A1, Ward No. 1/8, Nellikuppam Road, Karanaipuduchery,
Guduvanchery, Chengalpattu District, Tamil Nadu – 603 202. PHONE: +91 44 2743 8737
CIN: U35999TN2019FTC132890, GSTIN: 93AAKCP9030C120



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6. Probation, Confirmation & Termination

- 1) You will be on probation for a period of 6 (Six) months from the date of your appointment, where after, if your services are found satisfactory, you will be confirmed by means of a written intimation. The management reserves the right to reduce, dispense with or extend your probation period at its absolute discretion.
- 2.1. During the probation period or the extended period of probation, an Employee will be liable to be discharged from the company's services at any time with 7 days prior notice and without assigning any reason. An Employee is bound to provide the company with 7 days' notice during which period he / she may have to actually work. If the employee leaves without the notice period, then the salary for the notice period will be deducted from the dues, payable to the employee.
- 2.2. Upon confirmation your services are liable to be terminated by the company after providing you one month notice or payment of basic salary in lieu thereof. You shall also be bound to provide the company with one month notice prior to Resignation during which period you may have to actually work. If the employee leaves without the notice period, then the salary for the notice period will be deducted from the dues, payable to the employee.
- 2.3. If the exigencies of work so require, the company may not relieve you earlier than the expiry of the entire period of notice. It shall, however, be open to the company to accept your resignation with effect from any date earlier than the one offered by you in your resignation letter.
- 2.4. The company will have the right to terminate your employment without notice or payment of salary in lieu thereof if:
 - You commit any breach of your duties and responsibilities under this contract of service.
 - You are guilty of any gross default or misconduct, which contravenes the expressed or implied conditions of your employment; and
 - You commit breach of any of the terms of clause 8 of this appointment letter.

7. Absence without Notice

Absence without leave or remaining absent beyond the period of leave originally granted or subsequently extended, shall result in voluntary termination of your employment without any notice unless you

- 1) Return to work within 3 days from the commencement of such absence, and
- 2) Provide satisfactory explanation to management regarding such absence.

PNEUMATIC VACUUM ELEVATORS AND LIFTS – INDIA PRIVATE LIMITED

Regd. Office & Factory: Survey No. 344/2A1, Ward No. 1/8, Nellikuppam Road, Karanai Puduchery, Guduvanchery, Chengalpattu District, Tamil Nadu – 603 202. **PHONE:** +91 44 2743 8737.

CIN: U36999TN2019FTC132890, **GSTIN:** 33AAKCP9030C1Z0.



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8. Non-Disclosure Agreement

During the course of your employment with us you will have access to confidential/proprietary information about the organization, its clients, its business transactions, and associated companies. You shall not during your course of Employment and two years after you have ceased to be in the employment of this organization, disclose such confidential/proprietary information to any third party and /or any unauthorized person.

All notes and memoranda pertaining to this organization trade secrets and confidential/proprietary information made by or acquired by you during the course of your employment shall at all times remain the property of this organization. Upon termination of your employment, you shall return all notes/memoranda and any copies thereof to organization that you may have obtained during the course of your employment.

You are obliged to sign a non-disclosure agreement specific to a particular client as and when required by organization.

Prior to joining organization, you will ensure that you will be free from any contractual restrictions preventing you from accepting this offer or starting work on the joining date.

9. Employment Regulations

Whilst employed with the company:

- You will not engage in any trade or profession or undertake any employment, full or part-time, while in the service of the Company;
- You will have no objection to working extra hours in the morning and/or the evening according to the requirements of the job.
- You may be selected and sponsored by the Company for familiarization/training assignments with the Company's technical collaborators or any other institutions/organizations in India and/or abroad. You will diligently and beneficially take part in such assignments. The cost of Such training, including the travel fare and related expenses, will be borne by the Company subject to agreements to be drawn up and signed between the Company and you. Such agreements will be specifying the minimum period you will be required to serve the Company after completing the training and providing for payment of liquidated damages by you to the Company proportionate to the time period of service remaining to be rendered, in the event you voluntarily terminate the contract of service or this appointment, as the case may be, prior to the expiry of the agreed period of service referred to herein above;
- You will carry out your duties with diligence and loyalty at all times, keeping the Company's Interest paramount;
- You shall not under any circumstances either directly or indirectly, receive or accept for your benefit any commission, rebate, discount or profit from any person, company or firm having business transactions with Organization
- During your employment, you will be bound by the Company's Rules and Regulations framed and enforced from time to time. The Company reserves the right to amend or alter the said Rules and Regulations at its discretion, without any notice thereof, and these will be deemed as Rules and Regulations in terms of your employment;

PNEUMATIC VACUUM ELEVATORS AND LIFTS – INDIA PRIVATE LIMITED

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Guduvanchery, Chengalpattu District, Tamil Nadu – 603 202. PHONE: +91 44 2743 8737.

CIN: U36999TN2019FTC132890, GSTIN: 33AAKCP9030C1Z0.



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- The Company shall verify the facts stated by you in your resume submitted during the interview process. If any of the facts stated therein are found to be false, your services will be terminated immediately without any notice or any compensation in lieu of the notice period;
- This appointment letter is governed by and shall be construed in accordance with the laws of India, and both parties to this appointment letter shall submit to the exclusive jurisdiction of the Indian Courts. This appointment letter contains the entire understanding between the parties and supersedes all previous agreements and/or arrangements relating to employment with the organization. Any amendment or modification to this appointment letter shall be made in writing and signed by both the parties.
- The terms and conditions of service are confidential and may not be disclosed to or discussed with anyone;
- You will be required to effectively carry out all duties and responsibilities assigned to you by your manager and others authorized by the company to assign such duties and responsibilities;
- You will be required to apply and maintain highest standards of personal conduct and integrity and comply with all company policies and procedures. All acts subversive of good conduct and discipline like insubordination, gross negligence, corruption, fraud, forgery, misappropriation, etc. would warrant strong disciplinary action from the company.
- The emoluments/benefits due to you will be liable / subject to deduction of income tax in accordance with the provisions, of the Income Tax Act and Rules made there under as also other applicable laws, if any, as may be in force from time to time.

10. Retirement

You will automatically retire from the service of the company on attaining the superannuating age of 60 years.

11. Date of Joining

At the time of joining please submit the following documents:

- a) Proof of compensation last drawn Date of Birth proof certificate (Copy of passport / birth certificate / S.S.C) (Two Copies)
- b) Original Academic Certificates (all from 10th to Highest)
- c) Original Resignation Letter with acknowledgement
- d) Relieving letter from previous employer (Original)
- e) Proof of compensation last drawn (3 Months - Original)
- f) Six passport size photographs (Recent)
- g) Copy of your AADHAR Card & PAN Card

PNEUMATIC VACUUM ELEVATORS AND LIFTS – INDIA PRIVATE LIMITED

Regd. Office & Factory: Survey No. 344/2A1, Ward No. 1/8, Nellikuppam Road, Karanai Puduchery, Guduvanchery, Chengalpattu District, Tamil Nadu – 603 202. **PHONE:** +91 44 2743 8737.

CIN: 1136999TN2019ETC122800 GSTIN: 32AAKCB0020C170



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12. Salary Structure:

S.no.	Description	Monthly	Annual
1	Salary (Basic + DA)	12,000	1,44,000
2	House Rent Allowance	8,000	96,000
3	Traveling Allowance	2,000	24,000
4	Medical Allowance	1,500	18,000
5	Special Allowance	500	6,000
	Gross Earnings – Net take home	24,000	2,88,000
6	EPF *	3,600	43,200
7	ESI / Medical Insurance**	0	0
8	Gratuity	0	0
9	Bonus ***	***	***
	Total	3,600	43,200
	CTC	27,600	3,31,200

* EPF ESI: Company's contribution will be applicable from the date of Applicability of the Scheme/Act to the establishment.

** Medical Insurance

*** Bonus: Subject to the Payment of Bonus Act.

PNEUMATIC VACUUM ELEVATORS AND LIFTS – INDIA PRIVATE LIMITED

Regd. Office & Factory: Survey No. 344/2A1, Ward No. 1/8, Nellikuppam Road, Karanal Puduchery, Guduvanchery, Chengalpattu District, Tamil Nadu – 603 202. **PHONE:** +91 44 2743 8737.

CIN: U36999TN2019FTC132890, **GSTIN:** 33AAKCP9030C1Z0.



AALIM MUHAMMED SALEGH COLLEGE OF ENGINEERING ALUMNI ASSOCIATION

Society Registration No: 457/2019

Date: 30/03/2022

To,
The Principal,
Aalim Muhammed Salegh College of Engineering,
Avadi – IAF, Chennai

Respected Sir,

Sub: - Regarding AMSCE Alumni Scholarship 2021 -2022 student list

AMSCE Alumni Association has shortlisted below students for the AMSCE Alumni Scholarship 2021 -2022 with each RS. 10,000 based on Scholarship interview conducted on 21/03/2022 & 22/03/2022.

Student Name	Anna University Registration No	Department	Year
Syed Mohamed Dhanish M R	110118205015	IT	4 th Year
Afrin fathima SA	110118106003	ECE	4 th Year
Mohamed Imtheyas Asaraf	110119114021	Mech	3 rd Year
Mohammed Fasehiullah	110119205025	IT	3 rd Year
K.thangarani	110119106031	ECE	3 rd Year
Priya dharshini R	110119104063	CSE	3 rd Year
YUGENDRAN R	110120103308	Civil	2 nd Year
Ahmed Aabidh Hajji	110120104701	CSE	2 nd Year
AHAMED RIYAJ KHAN A.	110118114701	Mech	4 th Year
Shameer. U	110120104314	CSE	2 nd Year
KAYSERDEEN M	110120114317	Mech	2 nd Year
Yasmin Parveen S	110121104105	CSE	1 st Year
R.Jamal Mohammed	110121106016	ECE	1 st Year
Rahul P	110121106046	ECE	1 st Year
Naumaanfaaize M A	110121104071	CSE	1 st Year
A.MOHAMED KAIF	110121104054	CSE	1 st Year
Yasmin T A	110121104104	CSE	1 st Year
Mubeena	110119106701	ECE	3 rd Year
Venkateshwaran N	110120106313	ECE	2 nd Year





AALIM MUHAMMED SALEGH COLLEGE OF ENGINEERING ALUMNI ASSOCIATION

Society Registration No: 457/2019

Mohammed Mukbil Hudha A	110118106022	ECE	4th Year
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Note: Cheque can be issued to the students based on the availability of below peoples,

- Secretary of Aalim Muhammed Salegh Trust.
- Principal, Vice Principal and HOD of respective departments of Aalim Muhammed Salegh College of Engineering.
- Alumni Office members.
- Scholarship Students if possible even parents also.

Thanking You,
Yours Faithfully,



Mohamed Shaik Hafeez,
Secretary of AMSCE Alumni Association



AALIM MUHAMMED SALEGH COLLEGE OF ENGINEERING

Muthapudupet, I.A.F Avadi, Chennai - 600 055

Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai

PROPOSALS INVITED UNDER

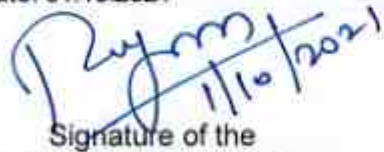


INTERNAL SEED FUNDING SCHEME

1	Title of the Project	:	REGULATION OF MTC BUS WITH PASSENGER ALERT SYSTEM
2	Discipline under which the project is to be considered	:	ELECTRICAL AND ELECTRONICS ENGINEERING
3	Name & Designation of the Principal Investigator	:	Er.A.MOHANASUNDARAM Assitant Professor/EEE
4	Postal Address of the Principal Investigator	:	Department of EEE, AALIM MUHAMMED SALEGH ENGINEERING COLLEGE, AVADI-IAF, CHENNAI-55.
5	Name, Designation and address of Co-investigator if any	:	Er.A.ANWAR BASHA Assitant Professor/EEE
6	Contact Phone numbers (Office and residence) of PI&Co-PI along with, emailid	:	Office : 044-26842627 Mobile: +91-9789355953 mohanasundaram.a@aalimec.ac.in anwarbasha@aalimec.ac.in
7	Name of the Department in which the project will be carried out	:	ELECTRICAL AND ELECTRONICS ENGINEERING
8	Name of other Institution(s) Organization(s)involved in the Project	:	AALIM MUHAMMED SALEGH ENGINEERING COLLEGE, AVADI-IAF, CHENNAI-55.
9	Duration of the Project (Maximum 1 years)	:	ONE YEAR
10	Total Cost of the Project Proposal (details to be furnished in the prescribed format)	:	Rs 25000
12	Details of the project proposal including the State-of-the art of the subject,the work already done in this area in India or elsewhere, and defining clearly the objectives and methodology and year wise phasing of the project.	:	To be enclosed separately
13	Brief bio-data of the Investigator(s)	:	To be enclosed separately
14	Social relevance and use fullness of the project	:	To be enclosed separately

Place: Chennai-55

Date: 01.10.2021


Signature of the

Head of the Department
With Seal

M. S. RAJAN

HEAD

Electrical & Electronics Engg.
Aalim Muhammed Salegh
College of Engineering


Signature of the

Investigator(s)

(A. MOHANASUNDARAM)


Signature of the

Head of the Institution

With Seal

**PRINCIPAL
AALIM MUHAMMED SALEGH
COLLEGE OF ENGINEERING**



AALIM MUHAMMED SALEGH COLLEGE OF ENGINEERING

Muthapudupet, I.A.F Avadi, Chennai - 600 055

Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai




DETAILS OF BUDGET ESTIMATE

Sl.No	Details	Total
A	i. Equipment (only project specific/min or equipment)	Rs 21000
B	Consumables[^]	Rs 3000
	Chemicals/glasswares	
	Fabrication/Service	Rs 1500
	Testing	Rs 1000
	Other Consumables	
	Total	Rs 5500
C	Travel	Rs 1000
D	Total of A+B+C+D	Rs 27500
E	Institutional overhead charge (Maximum of Rs.15000/per year)	Rs 7000
F	Total Cost of Project	Rs 34500


01/10/2021

Signature of the
Investigator(s)

(A. MOHANASUNDARAM)


01/10/2021

Signature of the
Head of the Institution

Prof. Dr. S. SATHISH

B.E., M.E., Ph.D.,

PRINCIPAL

AALIM MUHAMMED SALEGH
COLLEGE OF ENGINEERING
MUTHAPUDUPET, IAF-AVADI
CHENNAI 600 055

REGULATION OF MTC BUS WITH PASSENGER ALERT SYSTEM

Abstract

This project mainly concerned about a design of reliable hardware model to save fuel, time and avoid unwanted stopping of MTC bus in the Chennai city. This innovative design regulates the bus operating systems with simultaneously notifying the passengers (about arrival of bus) and bus conductor (whether passengers are awaiting to board the bus). The bus conductor is notified through ETM (Electronic Ticketing Machine) and passengers are notified through LED notification board with an announcement.

Introduction

As per 2011 census data, Chennai is the 4th highly populated city in India with population of 46 lakhs. At present it is estimated to be 48 lakhs with working population of 16.2 lakhs. According to the Ease of Moving Index report 2018, 75% of the residents use public transport including buses, cabs and auto rickshaws to daily commute. Most importantly 60% of the residents participated in survey said that they prefer buses over other modes of transport.

Motivation

The motivation for this project came by facing the daily cumulative traffic happens in the morning and evening peak hour. Many of our college mates uses the bus transport to reach college by bus transport usually comes late and looks very tired. Now the government also decided to add more numbers of solar power operated buses to reduce pollution. This advantage taken in to consideration with proper bus regulating system may provide good transport facility to the needy public through our project.

Materials and Methods

The Technology used is Arduino programming in arduino processor according to programming logic we planned for the bus regulation method. Arduino processor, Bluetooth, Buzzer, LCD display, push button switch, LED lights and battery are used. This contain Master and Slave mode operation. This model makes transmitter and receiver to transmit the signal. One device kept in the bus and another device kept in bus stop and the communication takes place between those devices regulates the bus transport.

Characterization

The Arduino board mainly include length and width. The printed circuit board of the Arduino Uno length and width are 2.7 X 2.1 inches, but the power jack and the USB connector will extend beyond the previous measurement. Bluetooth consists of Frequency: 2.4GHz ISM band, Emission power: $\leq 4\text{dBm}$, Class 2, Sensitivity: $\leq -84\text{dBm}$ at 0.1% BER, Speed: Asynchronous: 2.1Mbps (Max) / 160 kbps, Synchronous: 1Mbps/1Mbps, Security: Authentication and encryption, Power supply: +3.3VDC 50mA, LCD display. In this LCD each character is displayed in 5x7 pixel matrix. The 16 x 2 intelligent alphanumeric dot matrix displays the details such as bus arrival.

Working

In this project model both the bus stop and the bus consist of transmitter and receiver when the push button is pushed by the passenger with respective bus button. The signal transmitted through the help of Bluetooth device. The arduino is connected with the Bluetooth which transmits and receive the signal to the bus and bus stop. The Bluetooth HC-05 can receive or transmit the signal up to 10 meters. When the bus in 10 meter the signal receives in bus. The bus consists of Arduino, Bluetooth, and buzzer and LED indication. When the signal is received by the Bluetooth the buzzer and LED indicates the bus arrival. This setup were connected in ETM (Electronic Ticketing Machine) and It is handled by conductor he will observe the indication. Then simultaneously the signal transmitted to Bus stop. The bus stop consists of Arduino, LCD display, Buzzer, Bluetooth and Battery. When the signal received by the Bluetooth LCD display and buzzer announcement takes place. After the announcement the passenger know that the bus is arriving to the bus stop this system makes time saving tension free and keeps both passenger and bus driver more comfortable. If the bus did not get any signal from the bus stop then the unwanted stopping of the bus can be avoided. Due to this the time is saved and the bus can reach destination at stipulated time and because of that the fuel also saved. This prototype model can be extended to the real time with updating components in to appropriate technology.

Advantages

This project provides 1) the passengers to reach the destination in correct time and time saving 2) the unwanted bus stop are avoided, 3) Using this the Fuel are saved, 4) Using this system traffic are reduced, 5) Using over this project public turn over to reliable public transport.

Conclusion

This project helps to use most powerful public vehicle in a effective manner and so that the government can take more profit through this project. Most precious time of many public people are saved to utilize in a good manner. Then the fuel consumption is very less in our project and more effective. When the bus arrived the in time people will turn to public vehicle. So the pollution gets controlled and the traffic becomes less if the project implemented in real time soon.

Principal investigator

Er.A.Mohanasundaram

Assistant professor, Department of Electrical and Electronics Engineering,
Aalim Muhammad salegh college of Engineering
Chennai-60005









Co-investigator

Er.A.Anwar Basha,

Assistant professor, Department of Electrical and Electronics Engineering,
Aalim Muhammad salegh college of Engineering
Chennai-60005

Research Article

Decolourization of Reactive Red 120 Using Agro Waste-Derived Biochar

Srinivasan Krishnasamy ¹, Bobbili Aravind Sai Atchyuth ², Gokulan Ravindiran ³,
Jodhi Chidambaram ¹, Murallkrishnan Ramalingam ¹, Ragunath Subramanian ⁴,
Zunaithur Rahman Dhaleelur Rahman ⁵ and Nasar Ali Razack ⁶

¹Department of Civil Engineering, Annamalai University, Chidambaram, Tamil Nadu 6080024, India

²Department of Civil Engineering, National Institute of Technology, Rourkela 769 008, Odisha, India

³Department of Civil Engineering, GMR Institute of Technology, Srikakulam 532127, Andhra Pradesh, India

⁴Department of Civil Engineering, Jansons Institute of Technology, Coimbatore 641-659, Tamil Nadu, India

⁵Department of Civil Engineering, Aalim Muhammed Salegh College of Engineering, Chennai 600 055, India

⁶Department of Civil Engineering, College of Engineering and Technology, Samara University, Afar 7240, Ethiopia

Correspondence should be addressed to Nasar Ali Razack; nasar.ali01@su.edu.et

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Adsorption behavior of Reactive Red 120 from aqueous solutions onto rice husk-derived biochar was examined in batch mode of operation. To obtain the optimized conditions, various adsorption variables including temperature, initial dye concentration, biochar dosage, pH, and contact time were studied for effective remediation of the dye. The results showed that biochar uptake capacity varied linearly with biochar dosage and pH, but varied nonlinearly with temperature. The optimum value of pH, temperature, and a dosage of biochar was obtained as 2.0, 35°C, and 1 g/L, respectively, for reactive red 120 adsorption. TG analysis, FTIR, and SEM were used to investigate biochar characterization, and the results revealed that dye sorption onto biochar caused biochar variation. The possibility of reusing the biochar was examined from desorption studies, and they are conducted by studying different elutants and by altering the ratio of solid to liquid. From the results of experiments, the rice husk-derived biochar was reported to remediate reactive red 120 with the maximum removal efficiency of 75%.

1. Introduction

The usage of water has increased to a large extent due to the rapid growth of industrialization and population in the modern world. Several pollutants are released into rivers and streams in large quantities from industries, which result in degradation of water quality and also cause disturbance to the aquatic ecosystem [1]. Water pollution is increasing rapidly, and it is considered a major challenge in the modern world. Water pollution is majorly due to a large amount of sewage and wastage released from industries during the manufacturing and processing of raw materials. The used water for processing increased the number of harmful contaminants in the water, which was then discharged into

the environment without sufficient treatment. Colorings are one of the key contaminants that contribute to excessive surface pollution. It is due to the usage of dyes in major industries. Dyes differ from one another and are generally categorized as synthetic dyes and natural dyes [2]. Chemical methods are used to manufacture synthetic dyes. The loss of water quality was primarily caused by dyes commonly discharged from industries. [3]. Modern-day procedures and technologies are insufficient to handle these enormous volumes of dye-bearing wastewater [4]. In India, sewage treatment capacity is less than the volume of wastewater generated in major cities [5]. Dye-containing effluent from industry is discharged directly into surrounding water sources without treatment. The overuse of dyes often results

Investigation of mechanism of metal ions adsorption from aqueous solutions using *Prosopis juliflora* roots: Batch and fixed bed column studies

Sujatha S.¹, Gokulan R.², Zunaithur Rahman³, and Yogeshwaran V.^{4*}

¹Department of Civil Engineering, K. Ramakrishnan College of Technology, Trichy, Tamil Nadu – 621112, India

²Department of Civil Engineering, GMR Institute of Technology, Srikakulam, Andhra Pradesh – 532 127, India

³Department of Civil Engineering, Aalim Muhammed Salegh College of Engineering, Avadi, Chennai – 600 055, India

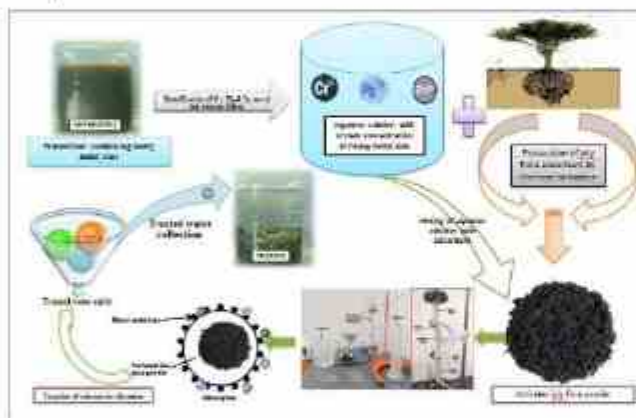
⁴Department of Civil Engineering, Sri Krishna College of Engineering and Technology, Coimbatore – 641008, India

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*to whom all correspondence should be addressed: e-mail: svyogi23190@gmail.com

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Graphical abstract



Abstract

Adsorption of heavy metal ions (Cr, Pb & Zn) using *Prosopis Juliflora* roots has been investigated by batch adsorption and fixed bed column process. The various properties of adsorbent were analyzed and the FT-IR spectra & SEM studies of *Prosopis Juliflora* powder, before and after adsorption of metal ions also examined. From the batch adsorption study, maximum amount of metal ion adsorption was found to be 87.12% for Cr (VI), 92.28% for Pb (II) and 95.62% for Zn (II) metal ions. The Freundlich isotherm model fitted well than the Langmuir adsorption isotherm with high regression values. From the column study, optimum bed height of 5 cm, flow rate of 5 mL/min and metal ion concentration of 100 mg/L was obtained by breakthrough analysis. The fixed bed column study followed Thomas & Yoon-Nelson model plots with good correlations and maximum desorption rate was achieved by adding 0.3N of concentrated H₂SO₄.

Keywords: Adsorption, metal ions, isotherm studies, breakthrough analysis, kinetic modelling, desorption studies.

1. Introduction

Water pollution is one of the serious issues that we are facing from earlier stage. Clean water is required for all the communities, animals and plants, industrial process etc. Supply of clean water without any pollutants is one of the critical challenges and many countries are facing these kinds of problems from earlier stages (Akpen *et al.*, 2018). The water gets highly polluted in recent days due to extreme activities of industrial manufacturing and other pathogenic activities. Then the water becomes unsuitable for drinking due to changes in their physical and chemical properties (Badmus *et al.*, 2007). The pollution in water may be created by the presence of dyes, metal ions, suspended and dissolved solids and other organic & inorganic pollutants with very high concentration levels (Hasanpour *et al.*, 2020). Among various pollutants in the water, heavy metal pollution is one of the serious issues due to metal ion's toxicity and accumulation; it is very dangerous to the surrounding environment and human beings (Biswajit *et al.*, 2011). Increasing heavy metal pollution in day by day, the present world faces many health issues such as cancer, respiratory problems and other health issues (Table 1). Hence, it is necessary to reduce/remove the accumulation of heavy metal ions presents in the wastewater before discharging them into the water bodies. Many research works have been conducted to remove the accumulation of heavy metal ions from the wastewater (Yunnen *et al.*, 2017). To develop an innovative treatment process because of urgent need, the adsorption process has focused on removing metal ion concentration using batch and fixed bed process (Hasanpour *et al.*, 2021). This process has many advantages such as low capital cost, selective metal removal, desorption with no sludge generation (Qin *et al.*, 2015). Adsorption is the process of accumulation of atoms, ions or gaseous molecules to the adsorbate surface by batch mode or fixed bed column type (Hasfanilla *et al.*, 2012). Using various adsorbate materials



Properties of Plasma Sprayed Al_2O_3 -13 TiO_2 and ZrO_2 Blended Coatings on Biomedical Alloy

Sathyavageswaran Sathish, Narayanaswamy Balaji, Geetha Manivasagam & Singanahalli Thippa Reddy Aruna

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Performance Evaluation of Jatropha Blends in DI Diesel Engine with Nano additives

¹Muni Raja Chandra.P,²R. Manikandan,³Ayaz Ahamed ⁴Mohd.F.Shabir

^{1,2,3}Assistant Professor, Department of Mechanical Engineering, Aalim Muhammed Salegh College of Engineering, Chennai, INDIA

⁴Professor, Department of Mechanical Engineering, Aalim Muhammed Salegh College of Engineering, Chennai, INDIA

Abstract : In the present world it is basic to locate another fuel source because of the expanded industrialization and consumption of normal assets. The strategy for acquiring biodiesel from different sources and mixing them with diesel is embraced in numerous financially created and creating nations around the globe. This paper explores the usage of jatropha mix with diesel in DI-diesel motor. The presentation and ignition attributes of mixes 5%, 10%, 15% and 20% jatropha with perfect diesel. It is discovered that the mixes of biodiesel like jatropha with flawless diesel could substitute in the spot of unadulterated diesel and be utilized as a substitute wellspring of fuel sooner rather than later, hence sparing the common assets for the future age. Execution parameter like brake warm proficiency, explicit fuel utilization, demonstrated productivity, volumetric effectiveness, mechanical proficiency, brakespower is assessed and last end is drawn. As an inexhaustible, manageable and elective fuel for pressure start motors, biodiesel rather than diesel has been progressively fuelled to ponder its impacts on motor exhibitions and ignition qualities in the ongoing 10 years. Be that as it may, these examinations have been seldom evaluated to support comprehension and promotion for biodiesel up until this point. From these reports, the impact of biodiesel on motor power, economy, solidness and burning and the relating impact components are reviewed and dissected in detail.

IndexTerms - BMEP, Direct Injection, EGR, IMEP,Nano fluid

I. INTRODUCTION

The oil fuel exhaustion moving quick step by step and thus the cost of oil fuel climbs have had an extreme effect on the power and transport segments, likewise on the national and universal economy. The importance of biodiesel increments bit by bit because of the consumption of oil saves and improve in ecological concerns[1]. Neem oil is on-palatable oil and it is accessible in gigantic surplus amounts in South Asia. The neem oil generation in India is assessed to be 30,000 tons for each annum. Vegetable oils are naturally cordial and it may give an attainable substitute to diesel since these are inexhaustible in nature. Different non-palatable oils, for example, Neem oil, jatropha, elastic seed, mahua, squander cooking and cotton seed oils, are examined for their reasonableness to diesel motor fills. The primary burden of the biodiesel is its high creation cost because of the mind-boggling expense of vegetable oil, which records for practically 78% of the biodiesel generation.

The esters of vegetable oil are non-lethal, biodegradable and inexhaustible elective diesel fuel is accepting consideration.23.1% with biodiesel, which is 6% lower than that of diesel at full motor burden condition.[3] The higher thickness and lower calorific estimation of esters direct to the lower brake warm proficiency and motor exhibitions. In the advanced society having much advancement in innovation there is additionally some issues identifying with a substitute wellspring of fuel to continue the transportation part for the future generation. Any way our reliance is on diesel and oil for fueling the transportation segment and on the off chance that these proceeds, at that point this could undermine our vitality asset, influence our economy and even influence our condition so seriously that it might even take several years for a seed to grow. Along these lines we are looking for a substitute wellspring of fuel to have a supportable economy. This is conceivable with the utilization of Biodiesel which is an inexhaustible wellspring of vitality. In spite of the fact that it is unimaginable to expect to run a DI diesel Engine on 100% biodiesel like jatropha with no significant alterations in the by and by accessible motor, when mixed with diesel in different extents it would make the world marvel with its Eco-accommodating nature. Biodiesel is only long-chain alkyl esters which is gotten from creature fat and plant seeds. They are viewed as carbon sinkas they retain 78.5% of carbon in the environment as they consume and even considered as cleaner than petroleum derivatives.

Structural, Optical studies of Pure and Sn doped Lanthanum oxide nano particles

Sureshkumar. K¹, A.Mohamed Hidayathullah², Dhanalakshmi C³, Juvin Paula. A⁴
^{1,2,4}*Alim Muhammed Salegh College of Engineering Avadi IAF, Chennai, India*
³*Annai Therasa Arts and Science College, Chengalpattu, India*

Abstract - Pure and Sn doped Lanthanum oxide nanoparticles were synthesized using sol-gel technique. The average crystallite sizes of pure and Sn doped lanthanum oxide is found to be 26 nm. The powder X-ray diffraction studies shows that all samples have single phase hexagonal structure. The Fourier Transform-Infrared Spectroscopy (FT-IR) study fairly agrees with the powder XRD results. From Scanning Electron Microscope (SEM) images, it is clearly seen that a uniform smooth surfaced hexagonal with high porosity structures. The UV-vis Diffuse Reflectance Spectroscopy study confirms the absorption edge shift towards the lower wavelength region with the increase in Sn-concentration in Lanthanum oxide. The Photoluminescence (PL) spectroscopy study indicates the maximum emissive power for Sn doped lanthanum oxide at 358 nm with strong intensity peak.

Index Terms - Dopant, Hexagonal, Nanoparticles, Porosity, Sol-gel.

I. INTRODUCTION

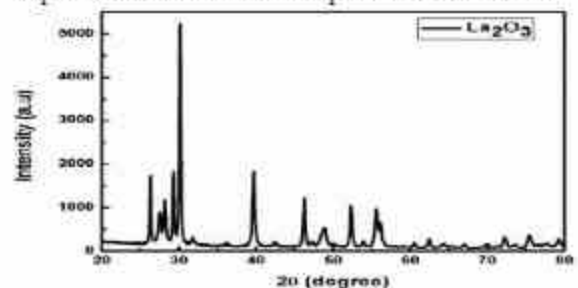
Lanthanum oxide La_2O_3 and other metallic oxide have very unique properties, which make them suitable for a lot of applications such as catalysts [1], optical filters [2], metal support [3,4], water treatment [5-8], and dielectric material [9,10]. Last decades, the synthesis of novel nano complex oxides with uniform crystalline nano size, high purity, and homogeneity had brought much attention by researchers [11]. Nowadays, many approaches have been followed to synthesize them, for example, hydrothermal microwave synthesis [12,13], Solution combustion method [14], reverse micelle approach [15], sol-gel processing [16]. Various synthesis routes are used for preparation of the nanocrystalline rare earths metal oxides. Sol gel route is found to be better synthesis method for getting the particles size metal oxide powder with less agglomeration. The sol-gel process is a versatile soft chemical process, widely used for synthesizing metal

oxide, ceramic and glass materials. This process as well influences the particle morphology all through the chemical transformation of the molecular precursor to final oxide. Lanthanum nitrate and Tin nitrate (30 and 40 percentage) were mixed with 0.01M citric acid using a magnetic stirrer. Viscous gel obtained by heating was dried in an air oven at 110 °C and calcined at 600 and 800 °C for 2, 4, 6 hours to get the final powder. We report the synthesis of pure and Sn doped lanthanum oxide nanoparticles by sol gel method and characterization by XRD, FT-IR, UV-vis DRS, SEM and PL techniques.

II. RESULTS AND DISCUSSION

A. POWDER X-RAY DIFFRACTION STUDIES

The X-ray diffraction patterns shown in the Figures 1a b at room temperature revealed that, highly pure and Sn doped Lanthanum oxide nanoparticles. It is clearly seen that all the peaks are coincide with 73-2141 JCPDS. It was confirmed single phase hexagonal structure and the crystallite sizes were calculated by using Debye-Scherrer formula [17]. $D = K\lambda / \beta \cos\theta$. Hence K is a constant usually 0.9, and it belongs to the crystallite shape of prepared materials, λ is the wavelength of X-ray in nanometer, θ is theta or the diffraction angle, and β is the peak width at half maximum height obtaining from small crystallite size in radians. The average crystalline size of pure and Sn doped lanthanum oxide nanoparticles is $D=26$ nm.





Optical behavior of L-Serine Phosphate, a Semi-organic improved NLO Single Crystal

Mohamed Hidayathullah A, Suresh Kumar K, and Juvin Paula A

Aalim Muhammed Salegh College of Engineering Avadi IAF, Chennai, India.

Abstract:

Nonlinear optical activity of single crystal of semi-organic amino acid L-Serine Phosphate was developed by simple slow evaporation technique. Solubility study of the prepared compound was measured and metastable zone width was found. Single crystal X-ray diffraction (XRD) study was carried out for the grown crystal. The optical properties of the crystal were confirmed by UV-Vis analysis and powder SHG tester. The Fourier Transform-Infrared Spectroscopy (FT-IR) study fairly agrees with the XRD results and functional groups were analyzed. Vickers' micro hardness studies proven the mechanical strength of the grown crystal.

Keywords: L-Serine Phosphate, single crystal, Linear and Non-Linear, strength

I. Introduction

The Importance of nonlinear optical crystals in science and technology has been recognized recently for numerous important applications [1, 2]. This includes sensors, waveguide, transmission, infrared detectors, polarizer, transducers, and for image processing. Due to the efficacy in generating new frequencies from existing laser via harmonic generation, tremendous efforts have been made to identify new materials for such process. Organic and semi-organic materials remain the most widely used crystals for frequency conversion. Organic crystals have a large nonlinear coefficient compared to inorganic crystals. But organic crystals are very sensitive to the presence of intrinsic defects and phonon subsystem [3, 4]. Inorganic crystals have high mechanical and thermal stability than that of organic crystals [5, 6]. Semiorganic crystals are those which combine the positive aspects of organic and inorganic materials resulting in desired nonlinear optical properties. Complexes of amino acids with organic and inorganic salts have been identified as promising

Article

Autonomous Fuzzy Controller Design for the Utilization of Hybrid PV-Wind Energy Resources in Demand Side Management Environment

Mohanasundaram Anthony^{1,*}, Valsalal Prasad², Raju Kannadasan³, Saad Mekhilef^{4,5}, Mohammed H. Alsharif⁶, Mun-Kyeom Kim^{7,*}, Abu Jahid⁸ and Ayman A. Aly⁹

- ¹ Department of Electrical and Electronics Engineering, Aalim Muhammed Salegh College of Engineering, Chennai 600055, India
- ² Department of Electrical and Electronics Engineering, College of Engineering Guindy, Anna University, Chennai 600025, India; valsalal@annauniv.edu
- ³ Department of Electrical and Electronics Engineering, Sri Venkateswara College of Engineering, Sripierumbudur, Chennai 602117, India; kannan.3333@yahoo.co.in
- ⁴ Power Electronics and Renewable Energy Research Laboratory (PEARL), Department of Electrical Engineering, University of Malaya, Kuala Lumpur 50603, Malaysia; saad@um.edu.my
- ⁵ School of Science, Computing and Engineering Technologies, Swinburne University of Technology, Hawthorn, VIC 3122, Australia
- ⁶ Department of Electrical Engineering, College of Electronics and Information Engineering, Sejong University, Seoul 05006, Korea; malsharif@sejong.ac.kr
- ⁷ Department of Energy System Engineering, Chung-Ang University, 84 Heukseok-ro, Dongjak-gu, Seoul 06974, Korea
- ⁸ Department of Electrical and Computer Engineering, University of Ottawa, Ottawa, ON K1N 6N5, Canada; ajahid011@uottawa.ca
- ⁹ Department of Mechanical Engineering, College of Engineering, Taif University, P.O. Box 11099, Taif 21944, Saudi Arabia; aymanaly@tu.edu.sa
- * Correspondence: mohanasundaram.a@aalimsec.ac.in (M.A.); mkim@cau.ac.kr (M.-K.K.)



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Abstract: This work describes an optimum utilization of hybrid photovoltaic (PV)—wind energy for residential buildings on its occurrence with a newly proposed autonomous fuzzy controller (AuFuCo). In this regard, a virtual model of a vertical axis wind turbine (VAWT) and PV system (each rated at 2 kW) are constructed in a MATLAB Simulink environment. An autonomous fuzzy inference system is applied to model primary units of the controller such as load forecasting (LF), grid power selection (GPS) switch, renewable energy management system (REMS), and fuzzy load switch (FLS). The residential load consumption pattern (4 kW of connected load) is allowed to consume energy from the grid and hybrid resources located at the demand side and classified as base, priority, short-term, and schedulable loads. The simulation results identify that the proposed controller manages the demand side management (DSM) techniques for peak load shifting and valley filling effectively with renewable sources. Also, energy costs and savings for the home environment are evaluated using the proposed controller. Further, the energy conservation technique is studied by increasing renewable conversion efficiency (18% to 23% for PV and 35% to 45% for the VAWT model), which reduces the spending of 0.5% in energy cost and a 1.25% reduction in grid demand for 24-time units/day of the simulation study. Additionally, the proposed controller is adapted for computing energy cost (considering the same load pattern) for future demand, and it is exposed that the PV-wind energy cost reduced to 6.9% but 30.6% increase of coal energy cost due to its rise in the Indian energy market by 2030.

Keywords: autonomous fuzzy controller (AuFuCo); demand side management (DSM); photovoltaic (PV) system; renewable energy management system (REMS); vertical axis wind turbine (VAWT)

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Comprehensive Review of KY Converter Topologies, Modulation and Control Approaches With Their Applications

K. RAMASH KUMAR¹, K. RAMEEZ RAJA²,
SANJEEVIKUMAR PADMANABAN³, (Senior Member, IEEE),
S. M. MUYEEN⁴, (Senior Member, IEEE),
AND BASEEM KHAN⁵, (Senior Member, IEEE)

¹Department of Electrical and Electronics Engineering, Dr. N. G. P. Institute of Technology, Coimbatore, Tamilnadu 641048, India

²Research Scholar, Department of Electrical and Electronics Engineering, Aulim Muhammed Salegh College of Engineering, Muthapudupet, Chennai, Tamilnadu 600053, India

³CTIF Global Capsule, Department of Business Development and Technology, Aarhus University, Herning 7400, Denmark

⁴Department of Electrical Engineering, Qatar University, Doha, Qatar

⁵Department of Electrical and Computer Engineering, Hawassa University, Hawassa 05, Ethiopia

Corresponding authors: K. Ramash Kumar (ramash1210@yahoo.co.in) and S. M. Muyeen (sm.muyeen@qu.edu.qa)

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ABSTRACT In current scenario, the challenging task in designing a DC-DC converter has high voltage gain and small output ripple waves, which researchers deal with highly complicated. Because of its topological and Continuous Conduction Mode (CCM), the KY converters have developed a better converter than all the traditional DC-DC converters to overcome this intricacy of voltage transfer gain and output ripple waves. The KY converters had comparative and various qualities when compared with the boost converter with Synchronous Rectifier (SR). The KY converter is used in photovoltaic and sustainable power applications, which are examined in this study. KY converter incorporates mode-1 and mode-2 operation and its types, for example, one plus D and one plus 2D where the KY can deliver the Nth type of KY converters. This article provides a comprehensive review and investigation of the KY converters, which incorporates their topology with control methodologies, Pulse Width Modulation (PWM) techniques, working activity of KY converters, and types for mode-1 and -2; it interprets the few strategies the KY converter is executed and its applications.

INDEX TERMS KY converters, boost converter, Cuk converter, DC to DC converter, control methodology, digital implementation.

I. INTRODUCTION

DC-DC power converters are not only becoming more popular, but they are also being respected in the current market. It's better for invariable power sources in LCDs, Ipads, MP3 players, battery-powered industrial equipment, automobile stereos, communications equipment, fuel cells, electric vehicles, and solar cell modules tec.,. Good output voltage regulation, circuit layout with fewer components, good voltage transfer gain, and reduced output ripple voltage/current are all required for these applications. Based

on their structure, concept, performance, and application, many topology DC-DC converters have been constructed and classified into six generations. In Continuous Conduction Mode (CCM), typical non-isolated DC-DC converters/Luo converters with/without linked inductance have resulted in pulsating output current, higher output voltage ripples, a greater number of components, diodes, and a right half pole zero (RHPZ) structure [1]-[3]. Many KY topologies have been created to address these cries. KY family converters are recently derived DC-DC converters. Fuzzy Logic Controller (FLC) plus Sliding Mode Controller (SMC) for KY boost converter has been reported [4]. From this article, it is found that authors were designed FLC plus SMC

The associate editor coordinating the review of this manuscript and approving it for publication was Alon Kuperman.



PERFORMANCE IMPROVEMENT OF THREE PHASE GRID-TIED PV SYSTEM WITH UPQC

Anwar Basha¹, K. Rameez Raja²

^{1,2} Assistant Professor, Department of Electrical and Electronics Engineering,

Aalim Muhammed Salegh College of Engineering, Avadi-IAF, Chennai-55.

Abstract: This paper proposes a single stage three-phase four-wire grid-connected photo voltaic (PV) system, operating with a dual compensating strategy. The DC-bus voltage at the dc-link is improved by the PV system. Since the UPQC system is based on a dual compensation strategy. The parallelly connected inverter operates as a sinusoidal voltage source, whereas the seriesly connected inverter operates as a sinusoidal current source. This project proposes, an improvement in the real power and reactive power flow through the transmission line with UPQC using PID controller when compared to the system without UPQC.

Index Terms: DG-Distributed Generation, NPC- Neutral Point Clamped Inverter, PCC- Point of Common Coupling, PLL-Phase Locked Loop, PQ-Power Quality, PV-Photo Voltaic, RES-Photo Voltaic, SSSC-Static Synchronous Series Compensator, STATCOM-Static Compensator, UPQC-Unified Power Quality Conditioner

INTRODUCTION

To provide quality power has become today's most concerned area for both power suppliers and customers due to the deregulation of the electric power energy market. Efforts have been made to improve the power quality. Aspects on power quality can be classified into three categories that is, voltage stability, continuity of supplying power, and voltage waveform. The term custom power means the use of power electronics controllers for distribution systems. The custom power increases the quality and reliability of the power that is delivered to the customers. Customers are increasingly demanding quality in the power supplied by the electric company. One of the many solutions is the use of a combined system of shunt and series active filters like Unified Power Quality Conditioner which aims at achieving low cost and highly effective control. The UPQC is the most versatile and complex of the FACTS devices, combining the features of the STATCOM and the SSSC. The Unified Power Quality Conditioner is a custom power device that is employed in the distribution system to mitigate the disturbances that affect the performance of sensitive and/or critical load. several power quality problems related with voltage and current simultaneously therefore is multi functioning devices that compensate various voltage disturbances of the power supply, to correct voltage fluctuations and to prevent harmonic load current from entering the power system.

A Single stage three phase four wire grid-connected PV system with combined operation with a unified power quality conditioner (UPQC) is presented. The power circuit of the system, which is denominated PV-UPQC, is composed of two back-to-back connected neutral-point clamped (NPC) inverters. Thereby, series-parallel active power line conditioning, as well as injection of active power into the grid and load can be simultaneously performed.

Unified Power Quality Conditioner consists of two MOSFET based Neutral Point Clamped inverters (NPC), one shunt and one series cascaded by a common DC bus. The shunt converter is connected in parallel to the load. It provides VAR support to the load and supply harmonic currents. Whenever the supply voltage undergoes sag then series converter injects suitable voltage with supply. Thus UPQC improves the power quality by preventing load current harmonics and by correcting the input power factor. The UPQC can provide simultaneous control of all basic power system parameters, transmission voltage

The production of electrical energy from renewable energy sources (RES) has grown a lot in recent decades, mainly due to increased demand for electricity, as well as the global intensive efforts to overcome the harmful environmental impacts caused by pollutant energy sources, such as oil, coal, natural gas and others.

Normally, grid-connected PV systems can be deployed by means of single-stage or double-stage power conversion. Single stage PV systems are usually composed of only a grid-tied inverter (dc/ac converter). In this case, the PV array is directly connected to the dc-bus of the grid-tied inverter. On the other hand, in double stage PV systems, an additional dc/dc converter is placed between the PV array and the inverter. In this configuration, the maximum power point tracking (MPPT) is performed by the dc/dc converter. Considering single stage-PV systems, the task to perform the MPPT is assumed by the grid-tied inverter, combined with the advantage of achieving more efficiency when compared to double stage-PV systems. In both mentioned PV system topologies, the dc/ac converter



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SF-CNN: Deep Text Classification and Retrieval for Text Documents

R. Sarasu^{1*}, K. K.

Thyagarajan², N. R.

Shanker³

1 Computer Science and Engineering, Dhanalaksmi College of Engineering, Anna University, Chennai, India

2 R. M. D Engineering College, Anna University, Chennai, India

3 Computer Science and Engineering, Aalim Muhammed Salegh College of Engineering, Anna University, Chennai, India

* Corresponding Author: R. Sarasu. Email: sar1234rag@gmail.com

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Haemoglobin Measurement from Eye Anterior Ciliary Arteries through Borescope Camera

Mohamed Abbas Ahamed Farook^{1,*}, S. Rukmanidevi² and N. R. Shanker³

¹Department of Electronics and Communication Engineering, Vel Tech Multi Tech Dr Rangarajan Dr Sakunthala Engineering College, Chennai, 600062, India

²Department of Electronics and Communication Engineering, R.M.D Engineering College, Chennai, 601206, India

³Department of Computer Science and Engineering, Aalim Muhammed Salegh College of Engineering, Chennai, 600055, India

*Corresponding Author: Mohamed Abbas Ahamed Farook. Email: abbas_nice786@yahoo.co.in

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Abstract: Nowadays, smartphones are used as self-health monitoring devices for humans. Self-health monitoring devices help clinicians with big data for accurate diagnosis and guidance for treatment through repetitive measurement. Repetitive measurement of haemoglobin requires for pregnant women, pediatric, pulmonary hypertension and obstetric patients. Noninvasive haemoglobin measurement through conjunctiva leads to inaccurate measurement. The inaccuracy is due to a decrease in the density of goblet cells and acinar units in Meibomian glands in the human eye as age increases. Furthermore, conjunctivitis is a disease in the eye due to inflammation or infection at the conjunctiva. Conjunctivitis is in the form of lines in the eyelid and covers the white part of the eyeball. Moreover, small blood vessels in eye regions of conjunctiva inflammations are not visible to the human eye or standard camera. This paper proposes smartphone-based haemoglobin (SBH) measurement through a borescope camera from anterior ciliary arteries of the eye for the above problem. The proposed SBH method acquires images from the anterior ciliary arteries region of the eye through a smartphone attached with a high megapixel borescope camera. The anterior ciliary arteries are projected through transverse dyadic wavelet transform (TDyWT) and applied with delta segmentation to obtain blood cells from the ciliary arteries of the eye. Furthermore, the Gaussian regression algorithm measures haemoglobin (Hb) with more accuracy based on the person, eye arteries, red pixel statistical parameters obtained from the left and right eye, age, and weight. Furthermore, the experimental result of the proposed SBH method has an accuracy of 96% in haemoglobin measurement.

Keywords: Hemoglobin measurement; borescope camera; smartphone; anterior ciliary arteries region



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5

Magneto-resistance sensor-based rotor fault detection in induction motor using non-decimated wavelet and streaming data

S. Kavitha, N. S. Bhuvaneshwari, R. Senthilkumar & N. R. Shanker

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Motor Torque Measurement Using Dual-Function Radar Polarized Signals of Flux

B. Chinthamani^{1*}, N. S. Bhuvaneshwari², R. Senthil Kumar³ and N. R. Shanker⁴

¹Department of Electronics and Instrumentation Engineering, Easwari Engineering College, Chennai, 600089, India

²Department of Electrical and Electronics Engineering, GKM College of Engineering and Technology, Chennai, 600063, India

³Department of Electrical and Electronics Engineering, Saveetha Engineering College, Chennai, 602105, India

⁴Department of Computer Science and Engineering, Aalim Muhammed Salegh College of Engineering, Chennai, 600055, India

*Corresponding Author: B. Chinthamani. Email: bchinthamani74@gmail.com

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Abstract: Motor Torque (MT) measurement plays a vital role for evaluating the performance of squirrel cage induction motor during operating conditions. Accurate and continuous measurements of MT provide information regarding driving load capacity, performance degradation of motor, reduces downtime and increases the efficiency. Traditional inline torque sensors-based measurement becomes inaccurate during abrupt change in load during starting condition of motor due to torque spikes. Mounting of torque sensor on motor is a major problem during torque measurement. Improper mounting of sensor acquires signals from other inefficient driveline components such as gearbox, couplings, and bearing. In this paper, we propose a non-contact method for MT measurement using dual-function ultra-wide band radar sensor and called as motor torque- design for reliability (MT-DFR) method, which measures torque through and air gap magnetic flux. Torque is orthogonal to air gap flux density. Air gap flux varies with motor speed, different load, and supply voltage. Dual-function ultra-wide band radar sensor signal reflect from Air gap flux and polarized. Polarized signals of Dual-function ultra-wide band radar process with multi-synchro squeezing transform (MSST) and obtain Instantaneous Frequency (IF) of air gap magnetic flux. MSST provides better representation of reconstructed signal with higher concentration for oscillatory electromagnetic waves. MT measured from IF of MSST and Gaussian process regression. Proposed method of MT measurement performs in different loading conditions such as no load, static and transient load conditions, and induced torque spikes. The proposed MT-DFR method predicts the torque with 98.10% accuracy compared to traditional method and ground truth verified.


Keywords: Induction motor; ultra-wide band radar; polarization; multi-synchro squeezing transform; instantaneous frequency; gaussian process regression; torque prediction



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Original Article | [Published: 25 January 2022](#)

Running State Monitoring of Induction Motor Windings Using Near Infra-red Sensor Residual Signal and Q Factor Analysis

[M. Ismail Gani](#) , [N. M. Jothi Swaroopan](#) & [N. R. Shanker](#)

Journal of Electrical Engineering & Technology **17**, 1761–1774 (2022)


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Abstract

In Electric motors, identification of insulation and winding faults in stator and rotor during running state is a challenging task. Winding and insulation fault is identified through burning smell of coil, evaluating the efficiency of motor, or dismantling of motor. Motor running with winding and insulation faults lead to coil-to-coil and phase-to-phase short circuit fault. Winding insulation and winding coil fault in motor leads to unbalanced and differential flux radiation. Monitoring the winding and insulation during running state of motor is a challenging task. In this paper, monitoring of stator and rotor winding is proposed through NIR sensor during running state of motor. Near Infra-Red (NIR) sensor is fixed in air gaps of motor. NIR reflect rays from winding flux

Optimization | [Published: 26 August 2022](#)

Visualization of occipital lobe and zygomatic arch of brain region through non-linear perspective projection using DCO algorithm

[R. Partheepan](#) , [J. Raja Paul Perinbam](#), [M. Krishnamurthy](#),[R. Shanker](#), [S. Krishna Kumari](#) & [B. Chinthamani](#)*Soft Computing* **26**, 11599–11610 (2022)89 Accesses | [Metrics](#)

Abstract

Radiologist diagnose the brain disease through shape and boundary regions of brain in medical image such as CT, MRI, and PET. Automatic medical image segmentation and enhancement method perform less in boundary regions due to artefacts such as dense objects and slice overlap. Manual enhancement and segmentation method never differentiates the shape and location of regions in brain CT/MRI images.

Dyadic cat optimization (DCO) algorithm is proposed for segmenting brain regions in medical images such as CT and MRI through Nonlinear perspective Foreground and Background projection. DCO algorithm eliminates the artefacts in the boundary regions of brain and enhances the boundaries and shape such as pterygomaxillary fissure, occipital lobe,

Multi-Site Air Pollutant Prediction Using Long Short Term Memory

Chitra Paulpandi*, Murukesh Chinnasamy and Shanker Nagalingam Rajendiran

Anna University, Chennai, 600066, Tamil Nadu, India

*Corresponding Author: Chitra Paulpandi. Email: chitrapaulpandi09@gmail.com

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Abstract: The current pandemic highlights the significance and impact of air pollution on individuals. When it comes to climate sustainability, air pollution is a major challenge. Because of the distinctive nature, unpredictability, and great changeability in the reality of toxins and particulates, detecting air quality is a puzzling task. Simultaneously, the ability to predict or classify and monitor air quality is becoming increasingly important, particularly in urban areas, due to the well documented negative impact of air pollution on resident's health and the environment. To better comprehend the current condition of air quality, this research proposes predicting air pollution levels from real-time data. This study proposes the use of deep learning techniques to forecast air pollution levels. Layers, activation functions, and a number of epochs were used to create the suggested Long Short-Term Memory (LSTM) network based neural layer design. The use of proposed Deep Learning as a structure for high-accuracy air quality prediction is investigated in this research and obtained better accuracy of nearly 82% compared to earlier records. Determining the Air Quality Index (AQI) and danger levels would assist the government in finding appropriate ways to authorize approaches to reduce pollutants and keep inhabitants informed about the findings.

Keywords: LSTM; epochs; deep learning; air quality index; particulates; neural networks

1 Introduction

It is due of air that we are living today. Every month, we breathe roughly 1 million times without realizing the consequences of the air pollution we inhale. Over 93 percent of the world's population is exposed to dangerous air pollution chemicals such as Nitrogen Oxides (NO_x), Carbon Oxides (CO_x), Sulphur Oxides (SO_x), Particulate Matter (PM), Ozone (O₃), and Ammonia (NH₃) on a daily basis. Indoor air pollution is also much worse than outdoor pollution. Everyday products contain toxic compounds.

Noise, land, water, and air pollution are all major pollutants that influence humans and other living things. Among the several types of pollution, air pollution is the most serious. Natural disasters, automobiles, industries, crop fires, dust storms, man-made smokes such as burning of wood, plastics, natural gas, and coal, deforestation, population, and other factors all contribute to air pollution in India and is typically lower in summer than in the winter. Air pollution increases the risk of a variety of health



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Load Balancing: DCN Servers based on Regression Analysis During Heavy and Frequent Messages

G. Sulthana Begam¹ · M. Sangeetha² · N. R. Shanker¹

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Abstract

Data center network (DCN) consists of server-farms and provides various services, which includes software, storage and applications. DCN uses software-defined networking (SDN) to centralize control for enhancing performance, scalability and security in servers. Load balancing in DCN server is significant and efficient management of resources improves network performance. In this paper, logistic regression based load balancing (LLB) algorithm is proposed for Energy-aware task scheduling, routing and server load balancing of SDN based DCN, which minimizes packet loss, delay, energy efficiency, operational cost maximizes throughput, optimizes load balance during heavy and frequent messages. The proposed LLB algorithm addresses the dynamic nature of DCN in terms of span and size of message flows. LLB algorithm dynamically selects optimal server for routing based on energy consumptions of server. LLB proposes routing strategy and finds optimal routing path based on Logistic Regression analysis with considering the utility function of DCN servers and bandwidth utilization of the network. The proposed algorithm is based on Logistic regression analysis, reduces the energy consumption by 4.7–18% and improves the server utilization by 86%, in comparison to heuristic algorithms, because of stochastic gradient decent weights calculation.

Keywords Software defined networking · Data center networking · Load balance · Machine learning · Regression analysis · Energy efficiency · OpenFlow

✉ G. Sulthana Begam
sulthanabshafi@aalimec.ac.in

M. Sangeetha
msangeethadr@gmail.com

N. R. Shanker
nr_phd@yahoo.co.in

¹ Computer Science and Engineering, Aalim Muhammed Salegh College of Engineering, Chennai 600055, India

² Information Technology, Coimbatore Institute of Technology, Coimbatore 641014, India




Induction motor's rotor slot variation measurement using logistic regression



J. Anish Kumar, N. M. Jothi Swaroopan & N. R. Shanker


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Research Article

Early Detection of Pediatric Cardiomyopathy Disease Using Window Based Correlation Method from Gene Micro Array Data

K. Jayanthi¹, C. Mahesh¹, A. Arthi², K. T. Rajendran³, B. Vijayalakshmi⁴,
and N. R. Shanker⁵

¹Veltech Rangarajan Dr. Sagunthala R & D Institute of Science and Technology, Chennai, India

²R.M.K Engineering College, Chennai, India

³Saveetha School of Engineering, Courtallam, India

⁴Sri Parasakthi College for Women, Courtallam, India

⁵Aalim Muhammed Salegh College of Engineering, Chennai, India

Correspondence should be addressed to K. Jayanthi; jayanthi2contact@gmail.com

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Disease prediction through gene is a challenging task. Researchers have proposed algorithms to identify disease from genes. Traditional algorithms prioritize through annotation and combines the structures in biological process or molecular functions and compared with annotations of known disease genes for classification. Pediatric Cardiomyopathy is a disease due to disorder in heart muscle and identification at early stage is a challenging problem. In this paper, the above problem solves through Window Based Correlation (WBC). In WBC, Global data is reduced to spatial data using block reduction technique. After Data reduction, strong relationship analysis between the genes is identified through RMSE values between the genes. This RMSE values helps to detect the pediatric cardiomyopathy at early stage using Window based correlation method. From the results, ablation study proves an accuracy of prediction is about 85%.

1. Introduction

In human body, DNA Structure is similar in all cells and they are dissimilar in sequence, when affected by diseases. DNA consists of gene which generates a code of sequence for proteins. Genes are expressed through proteins. Proteins are specified by encoding Genes and different proteins are produced during cell regeneration. The production of protein is affected through any biological process change, which arises due to disease, stress, food and ambient changes. The proteins are produced through process of molecular biology.

Transcription of a gene from DNA into temporary molecule is called as RNA. Furthermore, the translation of the gene is represented as cellular components which builds a protein using the RNA. The DNA and RNA have similar property where each has a chain of chemicals known as

bases. The bases are termed as Adenine, Cytosine, Guanine and Thymine and generally represented as A, C, G and T. Four bases are common for DNA and RNA. Thymine RA has Uracil referred as U. Genes are building blocks of inheritance and genes are passed from one to other generation. Genes contains DNA holds information of protein synthesis.

Protein performs building block in cells. If irregularity occurs other above process results in genetic disorder. However, mutation change in DNA content of cell will change genes. Changes in gene mutation cause's irregularities in making a protein. The irregular protein never performs well and leads to genetic disorder.

Disease prediction through genes is a difficult challenge. Researchers proposed algorithms [1-3] to identify the disease from genes. Traditional algorithms prioritize through annotation and combine structures in biological process or

Modified Mackenzie Equation and CVOA Algorithm Reduces Delay in UASN

R. Amirthavalli¹, S. Thanga Ramya² and N. R. Shanker³

¹Department of Computer Science and Engineering, Velammal Engineering College, Chennai, 66, India

²Department of Information Technology, R. M. D Engineering College, Tiruvallur, 1206, India

³Department of Computer Science and Engineering, Aalim Muhammed Salegh College of Engineering, Chennai, 55, India

*Corresponding Author: R. Amirthavalli. Email: amirthavallisenthil@gmail.com

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Abstract: In Underwater Acoustic Sensor Network (UASN), routing and propagation delay is affected in each node by various water column environmental factors such as temperature, salinity, depth, gases, divergent and rotational wind. High sound velocity increases the transmission rate of the packets and the high dissolved gases in the water increases the sound velocity. High dissolved gases and sound velocity environment in the water column provides high transmission rates among UASN nodes. In this paper, the Modified Mackenzie Sound equation calculates the sound velocity in each node for energy-efficient routing. Golden Ratio Optimization Method (GROM) and Gaussian Process Regression (GPR) predicts propagation delay of each node in UASN using temperature, salinity, depth, dissolved gases dataset. Dissolved gases, rotational and divergent winds, and stress plays a major problem in UASN, which increases propagation delay and energy consumption. Predicted values from GPR and GROM leads to node selection and Corona Virus Optimization Algorithm (CVOA) routing is performed on the selected nodes. The proposed GPR-CVOA and GROM-CVOA algorithm solves the problem of propagation delay and consumes less energy in nodes, based on appropriate tolerant delays in transmitting packets among nodes during high rotational and divergent winds. From simulation results, CVOA Algorithm performs better than traditional DF and LION algorithms.

Keywords: Gaussian process regression (GPR); golden ratio optimization method (GROM); corona virus optimization algorithm (CVOA); water column variation; dissolved gases; acoustic speed; divergent wind; rotational wind

1 Introduction

UASN plays a vital role in monitoring and surveillance of ocean areas in various depths. The monitoring and surveillance applications such as pollution monitoring, underwater exploration, seismic exploration, underwater navigation and tracking, hydrography, oceanography, Unmanned Underwater Vehicle (UUV), anti-submarine warfare needs efficient routing algorithms in different ocean environments and water column variations. The ocean environments are depth, salinity, temperature, and pressure. The water column variations are geometric and Doppler effects, rotational and divergent wind stress, dissolved



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Aberrant behavior prediction and severity analysis for autistic child through deep transfer learning to avoid adverse drug effect

B. Prabha^a*, M. Priya^b, N.R. Shanker^c, E. Ganesh^d

^a Department of Computer Science and Engineering, Keseru Lalithambal Education Foundation, Vadivaram, Andhra Pradesh, India

^b Department of Physics, Savitri Engineering College, Chennai, India

^c Department of Computer Science and Engineering, Azim Muhammed College of Engineering, Chennai, India

^d Department of Electronics and Communication Engineering, Savitri Engineering College, Chennai, India

ARTICLE INFO

Keywords:
Deep transfer learning
IP webcam
Adverse drug effect
Action recognition

ABSTRACT

Autism Spectrum Disorder (ASD), in child is identified through various parameters such as social skills, repetitive behaviors, speech and nonverbal communication. Among the above parameters repetitive behavior plays a vital role for physician to prescribe dosage of drugs. The repetitive behavior and more aggressiveness in the autistic child is the symptom for growth of the disease. To control the repetitive behavior, the physician prescribe the dosage level of drug based on Aberrant Behavior Checklist (ABC). The ABC is measured only for few seconds by the physician and such measurement need continuous monitoring for proper prescription of drugs and also to avoid adverse drug effect. The above problem solve through IP Webcam app based ASD recognition for continuous monitoring and replaces the empirical method of ABC measurement. In this paper, the proposed method recognizes behavior and changes in autistic child through activity detection and repetitive behaviour, due to overdosage of drugs. In proposed method, hybrid framework incorporates training of deep CNN model for the monitoring of ASD children in natural environment through Autismdata.Net. Moreover, Transfer learning avoids the over-fitting problem in small size Autismdata.Net dataset through CNN in severity analysis of child. The behavior of ASD children is evaluated through Autismdata.Net dataset and validated through drug thermo-regulation of autistic child. Action recognition accuracy of the proposed method is much better than the clinical literature/therapist analysis/observation. The proposed system helps physician for regulation of dosage level to ASD children.

1. Introduction

ASD patients find difficulty in day-to-day communication such as verbal, non-verbal, social interaction, and behavior [1]. ASD in child shows symptoms such as Rett's syndrome, autistic, pervasive development and Asperger's. ASD in child is about 1:59 ratio, according to the medical records of Centers for Disease Control and Prevention (CDC), U.S.A. [2]–2018. The CDC record data shows ASD in boys and girls such as 1:37 (boys) and 1:151 (girls). CDC record proves that the boys are affected more than girls. ADHD (Attention Deficit Hyperactivity Disorder) [3] foundation record of Australia states that ASD is diagnosed only after 4 years of age and severity of the disorder increases up to the age of 20 years and decrease in severity is after 21 years of age. However, the medical record from the various foundation and hospital reveal that ASD symptom seen only below 2 years of age. The medical statistics show the

increase of ASD in children of about 10% to 17% for every year. Furthermore, Adverse Drug Reaction (ADR) effect in ASD children leads to kidney failure, cardiac arrest, irregular heartbeats, blood pressure, and coma. The drug dosage level for ASD person depends on the behavior and clinical trait. Clinical trait is a trial and error approach, followed by the physician for drug prescription with dosage level. The clinical trait identifies a new dosage level after several tests, and effect of dosage level is not monitored in the child through regular activity in day-to-day life, which leads to ADR. Furthermore, ASD children show different symptom in activity, which varies from child to child. The ASD symptom diagnose [4] through clinical traits only and never with medical reports or continuous monitoring. The clinical trait in ASD identification is done through vision, neurological disorder, genetic and weight/pre-birth [5]. Furthermore, the prescription of drug and dosage levels for ASD patients depends on the clinical trait. In clinical traits,

* Corresponding author.
E-mail address: jyojo.prabha@gmail.com (B. Prabha).



Aberrant behavior prediction and severity analysis for autistic child through deep transfer learning to avoid adverse drug effect

B. Prabha^{a,*}, M. Priya^b, N.R. Shanker^c, E. Ganesh^d

^a Department of Computer Science and Engineering, Kieriti Lakshminah Education Institutions, Vallaburam, Andhra Pradesh, India

^b Department of Physics, Sreevidya Engineering College, Chennai, India

^c Department of Computer Science and Engineering, Auliyah Muhammed College of Engineering, Chennai, India

^d Department of Electronics and Communication Engineering, Sreevidya Engineering College, Chennai, India

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increase of ASD in children of about 10% to 17% for every year. Furthermore, Adverse Drug Reaction (ADR) effect in ASD children leads to kidney failure, cardiac arrest, irregular heartbeats, blood pressure, and coma. The drug dosage level for ASD person depends on the behavior and clinical trait. Clinical trait is a trial and error approach, followed by the physician for drug prescription with dosage level. The clinical trait identifies a new dosage level after several tests, and effect of dosage level is not monitored in the child through regular activity in day-to-day life, which leads to ADR. Furthermore, ASD children show different symptom in activity, which varies from child to child. The ASD symptom diagnose [4] through clinical traits only and never with medical reports or continuous monitoring. The clinical trait in ASD identification is done through vision, neurological disorder, genetic and weigh/pre-birth [5]. Furthermore, the prescription of drug and dosage levels for ASD patients depends on the clinical trait. In clinical traits,

* Corresponding author.
E-mail address: jaym.prabha@gmail.com (B. Prabha).

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Visualization of dentate nucleus, pontine tegmentum, pontine nuclei from CT image via nonlinear perspective projection

R. Partheepan¹ · J. Raja Paul Perinbam² · M. Krishnamurthy³ · N. R. Shanker⁴

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Abstract

Neurologist analyses shape and structure of brain parts through any medical images such as CT, MRI, and PET for disease diagnosis. For diagnosis, automatic medical image segmentation segments the parts of brain with low contrast, and artefacts are never removed over boundary region in different parts of brain. Manual segmentation shows poor differentiation in boundary regions due to artefacts or streaks. In this paper, we propose dyadic CAT optimisation (DCO) algorithm for segmenting the brain regions from CT and MRI images via nonlinear perspective foreground and background projection. DCO algorithm provides exact structure and shape of brain regions and eliminates artefacts in boundary regions. DCO algorithm delineates the boundary region such as dentate nucleus, pontine tegmentum, pontine nuclei, petrosal nerve, petrous part of temporal bone, crista galli, internal occipital crest, and mastoid emissary foramen in brain image with high visibility and enhanced boundary and differentiates deformable shape. Performance of DCO algorithm is evaluated through 50 MRI and CT brain images and eight images with complex bone and muscle mass structures of brain. DCO algorithm shows an accuracy of 90% through structural similarity index.

Keywords CT · MRI · PET · Dentate nucleus · Pontine tegmentum · Pontine nuclei · Boundary visualization

1 Introduction

CT images are prone to artefact with low contrast in boundary regions of brain due to reconstruction of image. Artefacts are classified as four types, such as physics-based artefacts, patient-based artefacts, scanner-based artefacts, and helical and multisection artefacts [1]. Physics-based artefacts occur during acquisition of data from CT images. Patient-based artefacts arise due to movement of patient during scanning [2]. Scanner-based artefacts in CT image are because of inappropriate function of scanner in CT machine. Dense

objects create streaks in CT image. In dense objects regions, CT scan image shows low contrast and unclear boundary; when X-ray beam passes over the object, photon with higher energy absorbs less than photon with lower energy [3].

The brain structure differs from person to person, even in similar age-group person. Neurodegenerative disorders, such as Parkinson's disease (PD), Alzheimer's disease (AD), Prion disease, motor neuron diseases (MND), Huntington's disease (HD), spinocerebellar ataxia (SCA), and spinal muscular atrophy (SMA), are diagnosed through deformations in shapes of brain regions and boundary edges. Neurodegenerative diseases are diagnosed through variability in brain structure from CT atlas through nonparametric and parametric approaches [4]. In parametric measurement, regression analysis and volumetric measure technique apply for structure measures. The nonparametric measurement executes the region of interest (RIO) segmentation algorithm, which is performed manually and automatically. Brain structure is measured in CT or MRI imaging through ventricle-brain ratio, and brain structure size is proportional to head estimation size.

✉ R. Partheepan
rpartheepance@gmail.com

¹ Department of Electronics and Communication Engineering, J.N.N Institute of Engineering, Chennai, Tamil Nadu, India

² Department of Electronics and Communication Engineering, Kings Engineering College, Chennai, Tamil Nadu, India

³ Department of Computer Science and Engineering, Kings Engineering College, Chennai, Tamil Nadu, India

⁴ Department of Electronics and Communication Engineering, Aalim Muhammed Salegh College of Engineering, Chennai, Tamil Nadu, India

Load Balancing in DCN Servers through SDN Machine Learning Algorithm

G. Sulthana Begam¹ · M. Sangeetha² · N. R. Shanker¹

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Abstract

Development in Internet technologies increases Internet users exponentially. Increase in users leads to more data center network (DCN) and heavy data traffic in servers. Data traffic in servers is managed through software-defined networking (SDN). SDN improves utilisation of large-scale network resource and performance of network applications. In SDN, load balancing technique optimises the data flow during transmission through server load deviation after evaluating the network status dynamically. However, load deviation in network needs optimum server selection and routing path with respect to less time and complexity. In this paper, we proposed a multiple regression-based searching (MRBS) algorithm for optimum server selection and routing path in DCN to improve performance even under heavy load conditions such as message spikes, different message frequencies, and unpredictable traffic patterns. MRBS selects the server based on regression analysis, which predicts types of traffic and response time based on the server data parameters such as load, response time, and bandwidth and server utilisation. MRBS combines heuristic algorithm and regression model for efficient server and path selection. The proposed algorithm reduces the delay and time more than 45% and shows better server utilisation of 83% when compared with traditional algorithms due to stochastic gradient decent weights estimation.

Keywords Data center networks (DCN) · Software-defined networking (SDN) · Load balancing · Regression model · Server selection · Openflow

1 Introduction

The DCN [1] increases due to more usage from Internet applications such as streaming videos, e-commerce, social networking, and data storage from these applications expands up to 40 ZB every year. This growing demand for data storage and access needs efficient load balancing methods for reducing latency and response time. Any request forwarded to the server needs a load balancing mechanism to select the optimum server and path to achieve maximum

throughput, as well as reduce resource utilisation for better user satisfaction. The load balancing mechanism is for the selection of the optimum server and also depends on the routing path from the request of a node to a server. The DCN applies SDN algorithms for load balancing mechanism.

SDN [2] has emerged as an efficient network technology, capable of supporting innovation in future network functions and applications, which can be implemented quickly and efficiently. Major benefits include low operating costs through simplified hardware and network management, effectively utilising all available server resource. SDN consists of data and control plane, simple forwarding devices represent a data plane, and control plane consists of a controller program to perform various network control functions involving monitor and control behavior of the underlying network. The SDN with Floodlight controller improves the load balancing in DCN server clusters, which forwards a request to the destination server based on the heuristic algorithm, designed to select the best path and server. Performance of open-source controllers in SDN such as POX, NOX, Trema, Ryu, OpendayLight, Floodlight, and ONOS

✉ G. Sulthana Begam
sulthanabshafi@ualimec.ac.in

M. Sangeetha
msangeethadr@gmail.com

N. R. Shanker
nr_phd@yahoo.co.in

¹ CSE, Aalim Muhammed Salegh College of Engineering, Chennai 600055, India

² CSE/IT, Coimbatore Institute of Technology, Coimbatore 641014, India

2021-2021
17



Efficient Optimization Algorithms for Minimizing Delay and Packet Loss in Doppler and Geometric Spreading Environment in Underwater Sensor Networks

A. Rajeswari¹ · N. Duraipandian¹ · N. R. Shanker² · Betty Elezebeth Samuel³

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Abstract

This paper proposes a Cooperative Ray Optimization Algorithm (CoROA) algorithm that helps minimizing the delay and packet loss arising as result of Doppler and the geometric spreading environment in underwater acoustic networks. The existing algorithms perform routing and energy management for an underwater network in the temperature and salinity environment. The proposed CoROA algorithm is known for the efficient performance in different environments such as spatial and temporal variation for improving the battery life, network lifetime and throughput. The CoROA algorithm has more than one path through relay node to reach the destination node and improves the packet delivery, throughput and minimizes the delay and packet drop. The CoROA algorithm compares well with the existing algorithms that include AODV, Lion Optimized Cognitive Acoustic Network and Cat Optimization Algorithm in cognitive networks and shows better performance in terms of efficiency.

Keywords Cooperative ray optimization algorithm · LOCAN · Doppler and geometric environment · Throughput · Packet delivery ratio

✉ A. Rajeswari
rajivefit@gmail.com

N. Duraipandian
emailpandiandurai@gmail.com

N. R. Shanker
drnrshanker@aalimec.ac.in

Betty Elezebeth Samuel
bsamuel@jazanu.edu.sa

¹ Velammal Engineering College, Chennai, TN, India

² Department of Computer Science and Engineering, Aalim Muhammed Salegh College of Engineering, Chennai, TN, India

³ Jazan University, Jazan, Kingdom of Saudi Arabia

Mixed pixel removal in north Tamil Nadu region for accurate area measurement

P. Mani¹ | S. Rajendiran Nagalingam² | K. Celine Kavida³ | G. Elanchezhian⁴

¹Department of ECE, Misrimal Navjee Munoth Jain Engineering College, Chennai, India

²Department of CSE, Aalim Muhammed Salegh College of Engineering, Chennai, India

³Department of Physics, Vel Tech Multi Tech Dr.Rangarajan Dr.Sakunthala Engineering College, Chennai, India

⁴Department of ECE, Aalim Muhammed Salegh College of Engineering, Chennai, India

Correspondence

P. Mani, Department of ECE, Misrimal Navjee Munoth Jain Engineering College, Chennai, Tamil Nadu 600 097, India.

Email: ramprabu0388@gmail.com

Abstract

In remote sensing, vegetation and water areas delineation from satellite image plays a vital role for urban and rural planning. Delineation of vegetation and water area is a challenging task due to mixed pixels and geometric distortion over the boundary region. Geometric distortion arises due to change in velocity and speed of satellite during image acquisition, and mixed pixels arises due to different surfaces in a particular area. Traditional methods apply classifier algorithms such as support vector machine, neural network, and fuzzy for vegetation and water area delineation. The traditional methods require more training dataset and consume more interpretation time for delineation. In this article, we propose transverse dyadic wavelet transform (TDyWT) to delineate vegetation and water area from Landsat 8 images. The TDyWT method enhances the boundary and curvature area of satellite image for accurate delineation. From the experimental results, the proposed TDyWT approach delineates the area of subclass for vegetation and water areas with 95% of accuracy with respect to the ground truth.

KEYWORDS

geometric distortion, Landsat 8 image, mixed pixels, remote sensing, transverse dyadic wavelet transform



Multiple Controllers in SDN – A Comprehensive Survey

Mr.M.Ahsan Shariff M.Tech.

Assistant Professor, Dept. of Computer Science and Engineering,
Aalim Muhammed Salegh College of Engineering, Chennai-600055.

Abstract: Software-defined networking technology is an approach that decouples the data plane and control plane providing programmatically efficient network configuration in order to improve network performance and monitoring than traditional network management. The controller is a central unit that controls the SDN model. Through this controller, all the communication takes place. In spite of such capability, one of the difficulties of the SDN controller is a single point of failure hence If the controller fails or is hacked, the entire system will either fail or get corrupted. Multiple controllers help to improving the network reliability because the data plane can continue to operate even if one controller fails. Furthermore, a single SDN controller has many drawbacks on both performance and scalability. Thus, multiple controllers are required and critical for large-scale networks. This paper surveys latest researches on multiple controllers of SDN, benefits and challenges of multiple controllers are discussed after giving an overview of SDN and OpenFlow in the paper. Finally, we conclude this survey paper with some proposed works and suggested open research directions

Keywords: Software Defined Networking (SDN), OpenFlow, Multiple Controllers

I. INTRODUCTION

It is difficult for network administrators to operate and manage when considering dynamic application requirements with traditional network architecture. Hence Software Defined Networking (SDN) has been proposed to solve those problems. SDN separates data plane and control plane by providing the programmability to configure the network. SDN controller is convenient for network operators and researchers by obtaining the global information of the whole network. Unlike traditional network, by decoupling the control plane and data plane in SDN, control planes are merged into a single unit named controller. SDN controller is able to provide Application Programming Interfaces (APIs) to upper applications and allow operators to deploy various network policies based on the requirements. The SDN control plane may take in different forms either single controller or multiple controller architecture. Based on the earlier studies, many medium-sized networks were carried out by a single controller whereas multiple controllers are still required in many circumstances like efficiency, scalability, and availability of the networks. Through load balancing, response latency can be reduced and new controllers can be added dynamically to achieve higher performance with the help of multiple controllers. It also provides redundancy mechanism to avoid single point of failure and improves the various aspects of the control plane like scalability, robustness, consistency and security. OpenFlow is a widely adapted protocol that defines an open standard Application programming interface for Software defined networks. Most Current controllers operations are associated with the OpenFlow protocol like POX, NOX, Beacon and Floodlight. Open Networking Foundation (ONF) manages OpenFlow standards where ONF is dedication and adoption of SDN. OpenFlow proposed that a switch can establish communication with multiple controllers to improve reliability of the control plane.

II. OVERVIEW OF SDN

It describes the basic theories of SDN, including SDN architecture, SDN controllers and a typical southbound interface. SDN breaks the vertical integration by decoupling control plane from data plane. With such separation, switches become simple forwarding devices and the control logic can be implemented in a logically centralized controller. It is responsible for policy enforcement, network configuration, topology management, link discovery, flow table entry and so on. SDN architecture normally contains three layers (i.e., infrastructure layer, control layer and application layer) and two interfaces (i.e., southbound interface and northbound interface). Figure 1 shows a simplified SDN architecture.


RESEARCH ARTICLE

Automated rain fall prediction enabled by optimized convolutional neural network-based feature formation with adaptive long short-term memory framework

Ananthajothi K  Karthick T, Amanullah M

First published: 14 February 2022

<https://doi.org/10.1002/cpe.6868>

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CLOUD AIDED SHARED DATA WITH DIGITAL SIGNATURE USER REVOCATION

H.Ayisha Ashifa*

*Assistant Professor Dept. of Information Technology, Chennai, India.

Abstract— Storage and sharing of data in cloud can be easily edited by users. To overcome this data modification in cloud a signature is provided to each individual who access the data in cloud. Once the data is edited by the user on a block, the user must ensure that the sign is provided on that specific block. When a user gets revoked from accessing the cloud the existing user of that cloud must re-sign the data signed by the revoked user. To re-sign the data the user must download the entire data and sign it. This difficulty is rectified with the a novel public auditing mechanism idea of proxy re-signatures. In addition to this, security of the data is also enhanced with the help of a public verifier who is always able to audit the integrity of shared data without retrieving the entire data from the cloud.

Index Terms — Cloud Computing, Proxy Re-Signer, Shared Data, User Revocation.

I. INTRODUCTION

Cloud computing means storing, allocating and accessing data and plans above the internet instead of our system's hard drive. The cloud is just a metaphor for the Internet. Cloud resources are normally not merely public by several users but are additionally vibrantly reallocated each demand. This can work for allocating resources to users. The aim of cloud computing is to apply established supercomputing, or high-performance computing domination, normally utilized by martial and scrutiny abilities, to present tens of trillions of computations each subsequent, in consumer-oriented requests such as commercial portfolios, to hold personalized data, to furnish data storage or to manipulation colossal, immersive computer games.

With data storage and allocating services endowed by the cloud, people can facilely work jointly as a cluster by allocating data alongside every single other. More specifically, after a user creates public data in the cloud, every single user in the cluster is able to not merely access and modify shared data, but additionally share the latest edition of the shared data alongside the rest of the group. Even though cloud providers pledge a extra safeguard and reliable nature to the users, the integrity of data in the cloud could yet be compromised, due to the attendance of hardware/software wrecks and human errors. To protect the integrity of data in the

cloud, a number of mechanisms have been proposed, such as public auditing, network security, digital signature etc... In these mechanisms, a signature is attached to every single block in data, and the integrity of data depends on the correctness of all the signatures. One of the most momentous and common features of these mechanisms is to permit a public verifier to effectually check data integrity in the cloud without downloading the whole data, denoted to as public auditing. When a user gets revoked from accessing the cloud the continuing user of that cloud have to re-sign the data authorized by the revoked user. To re-sign the data the users have to download the whole data and sign it. This difficulty is rectified alongside the novel are auditing mechanism believed of proxy re-signatures. In supplement to this, protection of the data is additionally enhanced alongside the aid of a area verifier who is always able to audit the integrity of public data lacking reclaiming the whole data from the cloud.

II. RELATED WORK

Boyang Wang et al [5] counseled a Certificateless public auditing mechanism in 2013. In that a public verifier does not demand to grasp certificates to select the right area key for the auditing. Instead, the auditing can be worked alongside the assistance of the data owner's individuality, such as her term or email address, that can safeguard the right public key is used. Meanwhile, this public verifier is yet able to audit data integrity lacking reclaiming the whole data from the Cloud but here the author didn't focus on revocation concept.

Nowadays, countless associations outsource data storage to the cloud such that a associate of an association (data owner) can facilely allocate data alongside supplementary associates (users). Due to the attendance of protection concerns in the cloud, both proprietors and users are counseled to confirm the integrity of cloud data alongside Provable Data Ownership (PDP) beforehand more utilization of data. Though, preceding methods whichever unnecessarily expose the individuality of a data proprietor to the untrusted cloud or each area verifiers, or familiarize momentous overheads on verification metadata for maintaining anonymity. Hence Sherman S. M. et al [4] counseled a easy, effectual, and openly verifiable way



Fuzzy Logic for Student Performance Evaluation

Asst.Prof. Dhivya Bharathi P
dept. Information Technology

Saba Zehra Syed
dept. Information Technology

MadhuMega.A
dept. Information Technology

Aalim Muhammed Salegh College of
Engineering

Aalim Muhammed Salegh College of
Engineering

Aalim Muhammed Salegh College of
Engineering

Chennai, India
dhivyabharathi.p@aalimec.ac.in

Chennai, India
syedsaba1974@gmail.com

Chennai, India
madhumega2000@gmail.com

Abstract— In educational systems/institutions typically the success is measured by academic performance or how well students Evaluation must be done in best possible fairer manner if not degrade their future prospects and career opportunities. This study proposes a new performance evaluation method based on Fuzzy logic systems. Results of our methods for some real samples shows that our approach can be practical method for evaluating students performance in the university.

The objectives of proposed system is to provide more transparent and fairer result to all students. To achieve this makes use of Fuzzy logic.

Keywords—student performance evaluation, Fuzzy logic system, data.

I. INTRODUCTION (HEADING 1)

- Student performance evaluation is one of the most important tasks in an evaluation institute. In educational institutions the success is measured by academic performance, or how well a student meets standards set out by governmental educational policies and/or the institutional rules and regulations. As career competition growing ever fiercer day by day the importance of students doing well in all sectors including academic institutes has caught the attention of parents, legislators and government education departments.
- Fuzzy logic was put forward earliest in 1965 by L.A. Zadeh. One of the primary applications of fuzzy logic was subway systems in Sendai city of Japan. Educational assessment is the process of documenting, usually in measurable terms, knowledge, based on the criteria incorporated. The assessment is formally defined as a measure of skills, attitudes and belief. In recent times, towards describing what a student has learned or can do in greater detail different types of documentations are in use.
- This can be done in performance evaluation by Fuzzy logic technique. In order to apply the fuzzy set in

education domain effectively, there have been a lot efforts in defining the effective membership. Bai and Chen define fuzzy membership functions for fuzzy rules. The Fuzzy Logic techniques were proposed for determining the level of a student's understanding of a certain subject matter in the context of Intelligent Tutoring System, and in a fuzzy approach was

- proposed to assess student performance based on several criteria with a strong suggestion that the method be applied to Computer Assisted Instruction.
- We'll simply clean the data from the info set during pre-processing. It is conventional to separate the desired knowledge from the undesirable knowledge. With historical knowledge, the RECURRENT Neural Network-based model is trained. Then, during the next 6 hours, we'll construct a graph that will help us predict accurately. Given the enormous number of techniques available, we have chosen to use two primary algorithms: pre-processing and RECURRENT neural network (RNN). Preliminary process of information is to prepare it for further analysis by the primary processor. This term refers to any initial process stage in which multiple steps are required to organize knowledge for the user. A RECENT Neural Network (RNN) is a Deep Learning rule that processes incoming images and is capable of distinguishing one image from others. When compared to other classification methods, the amount of pre-processing required is significantly less.



AALIM MUHAMMED SALEGH COLLEGE OF ENGINEERING

Nizara Educational Campus, Muthapudupet, Avadi – IAF, Chennai – 600055

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)
NAAC Accredited Institution



06/07/2021

This is to inform to the members of Research and Development Cell to attend the Meeting for the Academic year 2021-22, to be held on 07/07/2021 at 04:00 PM in IQAC Chamber. The members are requested to attend the meeting without fail.

Agenda

- Activity plan for the academic year 2021-22.


Prof. Dr. M. Afzal Ali Baig
06/07/21
PRINCIPAL

Copy To:

Trustee- Administrator

HOD/Civil, CSE, EEE, ECE, IT, MECH, S&H

Committee Members

Principal file, office copy.

AALIM MUHAMMED SALEGH COLLEGE OF ENGINEERING
AVADI - IAF, CHENNAI – 600055

RESEARCH AND DEVELOPMENT CELL

MINUTES OF MEETING

AGENDA	Measures to improve research and development		
DATE & TIME	07.07.2021 at 4.00 P.M	DEPARTMENT	All Departments
PREPARED BY	Prof. Dr. S. Ramkumar	NO. OF PAGES	IQAC Chamber
		03	
VENUE			

1.Meeting Objectives

- Motivating faculty to publish papers in Journals/International Conferences
- Encouraging students/faculty to apply for Industry projects
- Conducting Workshop on how to Write Technical Papers and apply for Patents

2.Members Present

Prof. Dr. M. Afzal Ali Baig - Principal, (Convener)
 Asso.Prof. Dr. S. Sathish - Associate Professor & Head / MECH
 Prof. Dr. N. R. Shanker - Professor/CSE
 Asst.Prof. Dr. S. Ramkumar - Assistant Professor & Head / MECH
 Asso.Prof. Dr. A. Amanullah - Associate Professor & Head / IT
 Asso.Prof. Dr. A.S. Salma Banu - Associate Professor & Head / ECE
 Asst.Prof. G. Sulthana Begum–Assistant Professor& Head/CSE
 Asst. Prof. M. F. Nazeer Ahmed- Assistant Professor / CIVIL
 Asst.Prof. A. Ashma - Assistant Professor & Head / S&H
 Asso. Prof. Dr. K. Suresh Kumar - Associate Professor / S&H
 Asst. Prof. A. Mohanasundaram - Associate Professor /EEE
 Asst. Prof. K. Rameez Raja - Assistant Professor / EEE
 Asst.Prof. Mohamed Mydeen A - Assistant Professor / ECE

3.Agenda and Notes, Decision, Discussion and Issues

Topics	Discussion
Introduction	Convener welcomed all the members present for the meeting.
[1]. Submission of Papers for Faculty	The Convener proposed the following suggestions. ◆ To motivate the faculty members and publish more research papers in Journals and International Conferences.


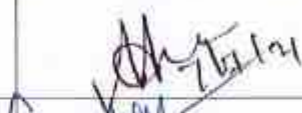

<p>[2]. Applying for Industry Projects.</p>	<ul style="list-style-type: none"> ◆ To increase the quality of students project and converting them into research paper. ◆ Making the students to understand the importance of presenting a paper in National/International conference. ◆ To encourage the students/faculty to apply for Industry projects and use the laboratory infrastructure for the same ◆ To send more students to Training / Internship programme
<p>[3]. Conducting Workshop for the Academic year.</p>	<ul style="list-style-type: none"> ◆ Plan to conduct a 2-Day Workshop on “How to write a Technical paper and how to apply for Patents” for all the faculty members for the Academic year. ◆ Eminent persons from other Institutions/Industry personnel to be called as Resource person for the Workshop ◆ The Workshop to be conducted without any Registration Fees for all Faculty members and other affiliated institutions. ◆ To encourage the faculty members to enroll for PhD. ◆ To encourage the faculty members and the students to take up NPTEL, MOOC Courses. ◆ To make each department conduct webinars, seminars and conferences. ◆ To obtain patent for students’ projects. ◆ To encourage the faculty members to teach content beyond the topics prescribed in the syllabus using journals and projects as teaching material. ◆ To encourage the students to publish papers on their project related topics. ◆ To discuss about patents, journals and Intellectual Property Rights (IPR) in Pre-project work sessions. ◆ To make the students prepare papers in accordance with the journal format. ◆ To encourage each department to have high Research standards considering the conferences, patents and journal publication.
<p>Conclusion</p>	<p>The meeting ended with thanks.</p>


7/7/21
Co - Convener


08/08/21
Convener


23/7/21
Principal

SIGNATURE OF THE MEMBERS PRESENT FOR THE MEETING:

S.No	Name of the Faculty	Designation	Role	Signature
1	Dr. M. Afzal Ali Baig	Principal	Convener	 7/7/21
2	Dr. S. Sathish	Associate Professor & Head / MECH	Co-Convener	 7/7/21
3	Dr. N.R. Shanker	Professor/CSE	Member	 7/7/21
4	Dr. S. Ramkumar	Assistant Professor/MECH	Member	 7/7/21
5	Dr. A. Amanullah	Associate Professor & Head / IT	Member	 07/07/21
6	Dr. A.S. Salma Banu	Associate Professor & Head / ECE	Member	 7/7/21
7	Mr.K. Rameez Raja	Assistant Professor/EEE	Member	 7/7/21
8	Ms.A. Ashma	Assistant Professor & Head/ S&H	Member	 7/7/21
9	Dr. K. Suresh Kumar	Associate Professor/S&H	Member	 7/7/21
10	Ms. G. Sulthana Begum	Assistant Professor & Head/CSE	Member	 7/7/21
11	Mr. A. Mohanasundaram	Assistant Professor /EEE	Member	 07/07/21
12	Mr. A.Mohamed Mydeen	Assistant Professor/ECE	Member	 7/7/21
13	Mr. M. F. Nazeer Ahmed	Assistant Professor/ Civil	Member	 07/7/21



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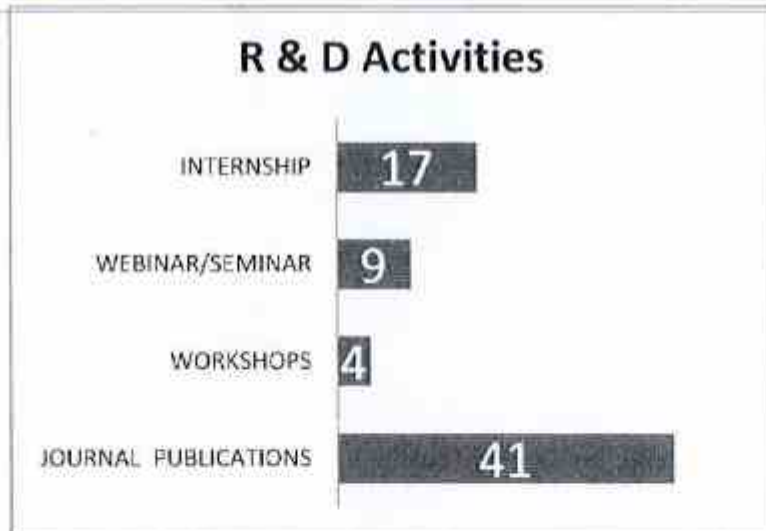
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Academic Year 2021-2022



Abstract of R & D activities of the Institution

JOURNAL PUBLICATIONS	41
WORKSHOPS	4
WEBINAR/SEMINAR	9
INTERNSHIP	17



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13/5/22

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12/6/22

Verified By

Head

Department of Science and Humanities

[Signature]
13/5/22

Principal

Modified Mackenzie Equation and CVOA Algorithm Reduces Delay in UASN

R. Amirthavalli¹, S. Thanga Ramya² and N. R. Shanker³

¹Department of Computer Science and Engineering, Velammal Engineering College, Chennai, 66, India.

²Department of Information Technology, R. M. D Engineering College, Tiruvallur, 1206, India

³Department of Computer Science and Engineering, Aalim Muhammed Salegh College of Engineering, Chennai, 55, India

*Corresponding Author: R. Amirthavalli. Email: amirthavallisenthil@gmail.com

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Abstract: In Underwater Acoustic Sensor Network (UASN), routing and propagation delay is affected in each node by various water column environmental factors such as temperature, salinity, depth, gases, divergent and rotational wind. High sound velocity increases the transmission rate of the packets and the high dissolved gases in the water increases the sound velocity. High dissolved gases and sound velocity environment in the water column provides high transmission rates among UASN nodes. In this paper, the Modified Mackenzie Sound equation calculates the sound velocity in each node for energy-efficient routing. Golden Ratio Optimization Method (GROM) and Gaussian Process Regression (GPR) predicts propagation delay of each node in UASN using temperature, salinity, depth, dissolved gases dataset. Dissolved gases, rotational and divergent winds, and stress plays a major problem in UASN, which increases propagation delay and energy consumption. Predicted values from GPR and GROM leads to node selection and Corona Virus Optimization Algorithm (CVOA) routing is performed on the selected nodes. The proposed GPR-CVOA and GROM-CVOA algorithm solves the problem of propagation delay and consumes less energy in nodes, based on appropriate tolerant delays in transmitting packets among nodes during high rotational and divergent winds. From simulation results, CVOA Algorithm performs better than traditional DF and LION algorithms.

Keywords: Gaussian process regression (GPR); golden ratio optimization method (GROM); corona virus optimization algorithm (CVOA); water column variation; dissolved gases; acoustic speed; divergent wind; rotational wind

1 Introduction

UASN plays a vital role in monitoring and surveillance of ocean areas in various depths. The monitoring and surveillance applications such as pollution monitoring, underwater exploration, seismic exploration, underwater navigation and tracking, hydrography, oceanography, Unmanned Underwater Vehicle (UUV), anti-submarine warfare needs efficient routing algorithms in different ocean environments and water column variations. The ocean environments are depth, salinity, temperature, and pressure. The water column variations are geometric and Doppler effects, rotational and divergent wind stress, dissolved



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Average Rotor Slot Size Variation Measurement in Induction Motor Using Variable Q-Factor Transforms and Regression Algorithms

J. Anish Kumar¹ · N. M. Jothi Swaroopan² · N. R. Shanker³

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Abstract

Induction motor rotor slots expand because of thermal and magnetic stress. Curving and stretching (CS) of magnetic flux develops a force on laminated surface of induction motor rotor, which is called magnetic stress. Major problem that arises frequently in motor is magnetic stress, which is never measured or monitored. The magnetic stress and induction motor rotor slot variation are proportional. CS of magnetic flux leads to high rotor slot gap variations on laminated surface of rotor. This variation damages the rotor. Magnetic stress increases the harmonics and reduces the performance of the motor. In this paper, regression algorithms predict the average rotor slot size variation (ARSSV) of induction motor in running condition. ARSSV is predicted by multiple linear and logistic regression algorithms. The input parameters for prediction are obtained from ORaDWT and TQWT sub-band energy values of various sensor signals and rotor slot sizes variations measured through microscope camera image. As a result of profound examination, ARSSV is higher than 78% against normal of rotor slot size which leads to damages such as sparking, high harmonics generation and vibration of induction motor. The ARSSV prediction accuracy is about 93.4%. The faults such as rotor slot expansion, rotor burn, rotor crack and broken rotor bar are prevented by ARSSV prediction at initial stage.

Keywords Magnetic stress · Rotor faults · Average rotor slot size variation · GMR sensor · Multiple linear regression

1 Introduction

Induction motors have less maintenance and high loading capacity. Induction motor consists of two main parts namely stator and rotor. Induction motor (IM) runs due to the rotating force developed between stator and rotor. In IM, stator has stator core, outer frame and stator winding with insulation. Stator coils are excited during three-phase supply. Rotor inside the stator rotates coaxially with stator during excitation. Figure 1 depicts magnetic field and current flow directions in induction motor. In induction

motor, high magnetic (Gerlach et al. 2021) and thermal stress (Sikanen et al. 2018) are produced in rotor due to several reasons such as inrush current during starting of motor, overload conditions, no load conditions, transient current, high voltage and high current. All these conditions lead to rotor stress (Wang et al. 2021).

Centrifugal force and thermal stress on laminated surface of rotor will increase because of high-speed running state of induction motor. Permanent magnet motor is brittle and has high compression strength (800Mpa) (Huang and Fang 2016). Numerical and analytical approaches are used for calculation of rotor stress. The analytic approaches of rotor stress measurements (Klohr et al. 2006; Wang et al. 2007; Borisavljevic et al. 2010; Burnand et al. 2017; Chai et al. 2016; Wu et al. 2019) have drawbacks because of rotational symmetry of the rotor assumptions. Displacement method of calculation is applied for rotor stress measurement (Wang et al. 2007; Borisavljevic et al. 2010). For rotor stress measurement, existing approaches incorporate axial stress (Burnand et al. 2017) and never included edging effect or geometry discontinuity. The calculation of

✉ J. Anish Kumar
janishengg@gmail.com

¹ Department of Electrical and Electronics Engineering, Saveetha Engineering College, Chennai 602105, India

² Department of Electrical and Electronics Engineering, R.M.K. Engineering College, Kavaraipettai 601206, India

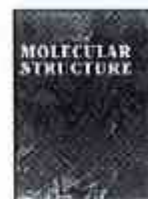
³ Department of Computer Science and Engineering, Aalim Muhammed Salegh College of Engineering, Chennai 600055, India





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Synthesis of new nicotinic acid hydrazone metal complexes: Potential anti-cancer drug, supramolecular architecture, antibacterial studies and catalytic properties.

A. Ashma^{a,c}, Showket Yahya^b, A. Subramani^c, R. Tamilarasan^d, G. Sasikumar^c, S.J. Askar^e,
 A. Hamad A. Al-Lohedan^f, Muthusamy Karnan^g

^aDepartment of Chemistry, Aalim Muhammed Salegh College of Engineering, Chennai 600055, India

^bDepartment of Biocchemistry, University of Madras, Guindy campus Chennai -25, India

^cDepartment of Chemistry, Apollo Arts and Science College, Poonamallee 602105, India

^dDepartment of Chemistry, Vel Tech Multi Tech Dr. Rangarajam De Sakunthala Engineering College, Avadi, Chennai, India

^ePost-Graduate and Research Department of Chemistry, The New College(Autonomous), Chennai 600014, India

^fChemistry Department, College of Science, King Saud University, P.O. Box. 2455, Riyadh 11451, Saudi Arabia

^gGrassland and Forage Division, National Institute of Animal Science, Rural Development Administration, Cheonan, Chungcheongnam-do 31000, South Korea



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Catalytic activity

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Antibacterial activity and anticancer activity

ABSTRACT

In this study, Eight new transition metal complexes (Co(II), Ni(II), Cu(II), and Zn(II)) were obtained via condensation with thiophene-appended nicotinic acid hydrazone ligands (L5 and L6), synthesized and characterized structurally by spectroscopically and thermogravimetrically. We study the catalytic properties by multi-component Biginelli reaction with catalytic amount of our transition metal complexes in the presence of solvent. While increasing the catalyst concentration from 1.414×10^{-2} mmol into 5.486×10^{-2} mmol there is no appreciable change. In vitro anti-cancer activity of L5 & L6 and their metal complexes was done on human colorectal cancer HT29 cell line, the synthesized metal complexes showed higher anti-proliferative activity at lower concentrations compared to the free ligands alone. The synthesized molecules can be extended into 2D and 3D supramolecular networking through π - π stacking, H-bonding and hydrophobic contacts by the receptor thymidylate synthase. Antibacterial activity of synthesized Co(II) and Zn(II) complexes showed significant inhibition on the growth of both gram positive and gram negative bacteria compare to the free L5 and L6 ligands. These results were display that thiophene-appended nicotinic acid hydrazide derivatives, in particularly complexes L5-Zn(II) and L5-Co(II), might be used for the design of new antineoplastic agents.

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1. Introduction

Schiff base metal complexes including the transition metals in the first row in the periodic table, to be specific cobalt (II), copper (II), and nickel (II), were widely studied and their significance in improving chosen drug exercises is obvious [1–3]. Until this point in time, the majority of the change metal buildings including Schiff base ligands have demonstrated to display solid natural potencies notably in antibacterial, mitigating, antifungal, antiviral, and antimalarial, anti-proliferative, antitubercular, and antipyretic properties [4–8]. Hence Schiff bases derived from acetophenone are an area for developing new bioactive molecules. Schiff base obtained from 2, 4-dihydroxyacetophenone was evaluated for its

antimicrobial activity against gram-positive organisms [9]. Metal complexes of Mn (III) and V (III) with 2, 6-dihydroxyacetophenone Schiff bases were also screened for their antibacterial activity [10]. Schiff base namely 1-(5-chloro-2-hydroxyphenyl) ethylidene-1-(2-hydroxy-5-methyl phenyl)-ethylidene carbonylhydrazide and its transition metal-based complexes have also been studied for their antimicrobial activity [11]. Schiff base obtained from ethylene diamine with 2, 4-dihydroxyacetophenone and also with 1-phenylbutane-1,3-dione and its transition metal complexes have been screened to set up their potential as antibacterial agents, antioxidants, and DPPH radical scavengers [12]. Schiff base of 2-aminopyrimidine with 2-hydroxy acetophenone and its uncommon earth metal edifices were accounted for their antibacterial exercises [13]. Lanthanide Schiff base ligands got from L-serine [14] and threonine [15] with 5-bromo salicylaldehyde have additionally been screened for their antibacterial action. Cobalt (II),

* Corresponding author.

E-mail address: sajasekar@vsnl.com (S.J. Askar Ali).



Investigation of mechanism of metal ions adsorption from aqueous solutions using *Prosopis juliflora* roots: Batch and fixed bed column studies

Sujatha S.¹, Gokulan R.², Zunaitur Rahman³, and Yogeshwaran V.^{1*}

¹Department of Civil Engineering, K. Ramakrishnan College of Technology, Trichy, Tamil Nadu – 621112, India

²Department of Civil Engineering, GMR Institute of Technology, Srikakulam, Andhra Pradesh – 532 127, India

³Department of Civil Engineering, Aaim Muhammed Salegh College of Engineering, Avadi, Chennai – 600 055, India

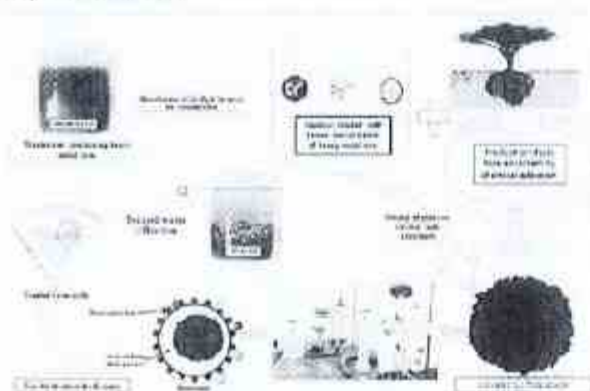
⁴Department of Civil Engineering, Sri Krishna College of Engineering and Technology, Coimbatore – 641008, India

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*to whom all correspondence should be addressed: e-mail: svyogi23190@gmail.com

<https://doi.org/10.30955/gnj.004063>

Graphical abstract



Abstract

Adsorption of heavy metal ions (Cr, Pb & Zn) using *Prosopis Juliflora* roots has been investigated by batch adsorption and fixed bed column process. The various properties of adsorbent were analyzed and the FT-IR spectra & SEM studies of *Prosopis Juliflora* powder, before and after adsorption of metal ions also examined. From the batch adsorption study, maximum amount of metal ion adsorption was found to be 87.12% for Cr (VI), 92.28% for Pb (II) and 95.62% for Zn (II) metal ions. The Freundlich isotherm model fitted well than the Langmuir adsorption isotherm with high regression values. From the column study, optimum bed height of 5 cm, flow rate of 5 mL/min and metal ion concentration of 100 mg/L was obtained by breakthrough analysis. The fixed bed column study followed Thomas & Yoon-Nelson model plots with good correlations and maximum desorption rate was achieved by adding 0.3N of concentrated H₂SO₄.

Keywords: Adsorption, metal ions, isotherm studies, breakthrough analysis, kinetic modelling, desorption studies.

1. Introduction

Water pollution is one of the serious issues that we are facing from earlier stage. Clean water is required for all the communities, animals and plants, industrial process etc. Supply of clean water without any pollutants is one of the critical challenges and many countries are facing these kinds of problems from earlier stages (Akpen *et al.*, 2018). The water gets highly polluted in recent days due to extreme activities of industrial manufacturing and other pathogenic activities. Then the water becomes unsuitable for drinking due to changes in their physical and chemical properties (Badmus *et al.*, 2007). The pollution in water may be created by the presence of dyes, metal ions, suspended and dissolved solids and other organic & inorganic pollutants with very high concentration levels (Hasanpour *et al.*, 2020). Among various pollutants in the water, heavy metal pollution is one of the serious issues due to metal ion's toxicity and accumulation; it is very dangerous to the surrounding environment and human beings (Biswajit *et al.*, 2011). Increasing heavy metal pollution in day by day, the present world faces many health issues such as cancer, respiratory problems and other health issues (Table 1). Hence, it is necessary to reduce/remove the accumulation of heavy metal ions presents in the wastewater before discharging them into the water bodies. Many research works have been conducted to remove the accumulation of heavy metal ions from the wastewater (Yunnen *et al.*, 2017). To develop an innovative treatment process because of urgent need, the adsorption process has focused on removing metal ion concentration using batch and fixed bed process (Hasanpour *et al.*, 2021). This process has many advantages such as low capital cost, selective metal removal, desorption with no sludge generation (Qin *et al.*, 2015). Adsorption is the process of accumulation of atoms, ions or gaseous molecules to the adsorbate surface by batch mode or fixed bed column type (Hasfanila *et al.*, 2012). Using various adsorbate materials



Properties of Plasma Sprayed Al_2O_3 -13 TiO_2 and ZrO_2 Blended Coatings on Biomedical Alloy

Sathyavageeswaran Sathish, Narayanaswamy Balaji, Geetha Manivasagam & Singanahalli Thippa Reddy Aruna

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76	110120104087	RAJITHI KUMARU	17	17	18	18	18	18	18	84
77	110120104088	SHARMEEN U	18	18	18	18	18	18	18	92
78	110120104089	SRIJITH K M	18	18	18	18	18	18	18	87
79	110120104090	UMAR ABUJULA M	18	18	18	18	18	18	18	91
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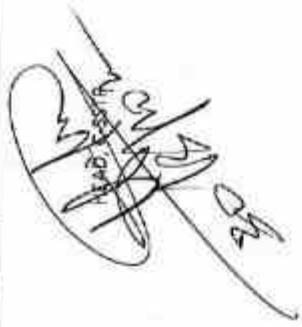
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Centre for SOFT SKILL TRAINING PROGRAMMME
ODD SEMESTER OF ACADEMIC YEAR (2021-2022)



EVALUATION PROCEDURE : SSTP Session

Name: SOFT SKILLS

SEM/YEAR/Sec : III/II/A & B

DEPARTMENT : CSE

S.No.	Register Number	Name of the Candidate	EV-1 MARKS
			100 Marks
1	110120104001	AASIM AHMED N	91
2	110120104002	ABDUL HAFEEL H. A	92
3	110120104003	ABDUL HALIK H	85
4	110120104004	ABDUL QAYYUM HK	75
5	110120104005	ABDUL WADOOD M	86
6	110120104006	AEJAZ AHMED G	85
7	110120104007	AFILA THAHSEEN S. H.	91
8	110120104008	AHMED M	91
9	110120104009	AIMAN RABIYA U	85
10	110120104010	AKASH A	85
11	110120104011	ALI JAMEEL H.F	93
12	110120104012	ARSHAD G	86
13	110120104013	ATHIYA ZAINAB	91
14	110120104014	BALAJI S	84
15	110120104015	BENOGE A C	86
16	110120104016	FARNAZ SULTHANA A	91
17	110120104017	HARIHARAN S	91
18	110120104018	HAZEEM AHMAD N	90
19	110120104019	HEMANTH S	86
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24	110120104024	MOHAMED BASITH ALI A	90
25	110120104025	MOHAMED JAASIR A	84
26	110120104026	MOHAMED MAHFOUZ S S H	84
27	110120104027	MOHAMED MOHAIDEEN M	93
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30	110120104030	MOHAMED RASEEN S	90
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32	110120104032	MOHAMED ZAFER R	87
33	110120104033	MOHAMED ZAVID AKTHER Z	90
34	110120104034	MOHAMMED AARIF S	90
35	110120104035	MOHAMMED IRFAN K	90



36	110120104036	MOHAMMED MOYDIN ABDUL KADER T	85
37	110120104037	MOHAMMED MUZAMMIL	86
38	110120104038	MOHAMMED RIYASATH K M D	90
39	110120104039	MOHAMMED SADDAM KASSALI I	90
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41	110120104041	MOHAMMED TAWFEEQ A	91
42	110120104042	MOHAMMED THOUSIF A	87
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80	110120104701	AHMED AABIDH HAJJI	87

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SSTP FACULTY MEMBER

Prof. P. S. S. S.
30/3/22

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CIRCULAR

AMSCE/CIRCULAR/045/2020-21

06.07.2021

This is to inform all the Faculty Members that they must Register and complete one NPTEL online Certificate Examination course from the forthcoming academic year 2021-2022.


Dr. M. AFZAL ALI
PRINCIPAL
PRINCIPAL

AALIM MUHAMMED SALEGH
COLLEGE OF ENGINEERING

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Muthapudupet, Avadi IAF, Chennai - 600 055

CENTRE FOR SOFT SKILL TRAINING PROGRAMME

Dated on: 04.08.2021

Circular and Time Table for NPTEL Phase - II

Odd Semester 2021-2022

Week / Day	Department / Year / Section	Time
Every Week / Saturday	Interested II Year Students of All the Department	09.00 AM - 10.00 AM

Note:

1. NPTEL Phase II sessions are online training, Examination and Certification courses offered by NPTEL Team of all Indian Institute of Technology and Indian Institute of Science Bangalore across our Great Nation.
2. NPTEL Phase – II sessions will be taken care by respective mentors of our college. Mentors should register for the selected courses along with their mentees (Registered Students).
3. Interested students strength from 5 to 10 (from each section from second year) must be registered for a course.
4. With effect from 07.08.2021

[Signature]
04/08/2021

Timetable Incharge, SSTP

[Signature]
04/08/2021

Coordinator (NPTEL - LC - SPOC)

[Signature]
Head, Centre for SSTP 4/8/2021

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Vice-Principal

[Signature]
Principal
04/08/21

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AALIM MUHAMMED SALEGH COLLEGE OF ENGINEERING

Muthupudupet, Avadi IAF, Chennai - 600055

Centre for Soft Skill Training Programme

NPTEL ONLINE CERTIFICATE EXAMINATION - JULY - DECEMBER 2021

Faculty Performance Details



S.No	Name of the Faculty	Designation	Department	Name of the Course	Course Duration (No of weeks)	Certificate Type
1	Bakhyalakshmi S	Assistant Professor	Computer Science and Engineering	Programming in Java	12	Elite + Silver
2	Dhivya Bharathi P	Assistant Professor	Information Technology	Programming in Java	12	Elite + Silver
3	Dr S Sathish	Professor / Principal	Mechanical Engineering	Advanced Machining Processes	8	Elite
4	R Manikandan	Assistant Professor	Mechanical Engineering	Joining Technologies for Metals	8	Elite
5	Ayaz Ahmed	Assistant Professor	Mechanical Engineering	Joining Technologies for Metals	8	Elite
6	M Mohammed Yusuf	Assistant Professor	Mechanical Engineering	Joining Technologies for Metals	8	Elite
7	T N Jafar Ali	Assistant Professor	Mechanical Engineering	Joining Technologies for Metals	8	Elite
8	J Hadeeb Rallaman	Assistant Professor	Mechanical Engineering	Fundamentals of manufacturing processes	12	Elite
9	Dr M Atzal Ali Baig	Professor	Civil Engineering	Fluid Mechanics	12	Successfully Completed
10	A Mohammed Mydeen	Assistant Professor	Electronics and Communication Engineering	Developing Soft Skills and Personality	8	Successfully Completed
11	M Sheik Mohamed	Assistant Professor	Mechanical Engineering	Joining Technologies for Metals	8	Successfully Completed

20/12/2021

Asst. Prof. M. Shaik Mohamed
Coordinator (NPTEL - LC - SPOC)

Head, Centre for SSTP

20/12/2021
Principal



AALIM MUHAMMED SALEGH COLLEGE OF ENGINEERING

Muthapudupet, Avadi IAF, Chennai - 600055

Centre for Soft Skill Training Programme


NPTEL ONLINE CERTIFICATE EXAMINATION - JULY - DECEMBER 2021


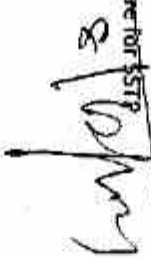
Students Performance Details



S.No	Register No	Name of the Student	Year / Semester	Department	Name of the Course	Course Duration (No of weeks)	Certificate Type
1	110118114018	Mahmoodh Naril U	IV / VII	Mechanical Engineering	The Future of Manufacturing Business: Role of Digital Technologies	8	Elite + Silver
2	110118114029	Mohamed subail S	IV / VII	Mechanical Engineering	The Future of Manufacturing Business: Role of Digital Technologies	8	Elite + Silver
3	110118114039	Mohammed Ifran M	IV / VII	Mechanical Engineering	The Future of Manufacturing Business: Role of Digital Technologies	8	Elite + Silver
4	110118104040	Mohd Azam	IV / VII	Computer Science and Engineering	Python for Data Science	4	Elite + Silver
5	110120104021	Meeran Nasif	II / III	Computer Science and Engineering	Programming in Java	12	Elite + Silver
6	110120104023	Mohamed Aazain H	II / III	Computer Science and Engineering	Programming in Java	12	Elite + Silver
7	110120104061	Thameemullah	II / III	Computer Science and Engineering	Programming in Java	12	Elite + Silver
8	110120104009	Ayman Rabiya U	II / III	Computer Science and Engineering	Programming in Java	12	Elite + Silver
9	110120104068	Suhail N IV	II / III	Computer Science and Engineering	Python for Data Science	4	Elite
10	110118114018	Mahmoodh Naril U	IV / VII	Mechanical Engineering	Advances in welding and joining technologies	8	Elite
11	110120104014	Balaji S	II / III	Computer Science and Engineering	Programming in Java	12	Elite
12	110120104019	Hazeem Ahmed	II / III	Computer Science and Engineering	Programming in Java	12	Elite
13	110120104054	Sofiya Ranil N	II / III	Computer Science and Engineering	Programming in Java	12	Elite
14	110120104042	Mohammed Thousif	II / III	Computer Science and Engineering	Programming in Java	12	Elite
15	110120104013	Athiya Zainab	II / III	Computer Science and Engineering	Programming in Java	12	Elite

16	1101201040051	Shahid Kalluudrahan Sami	II / III	Computer Science and Engineering	Programming in Java	12	Elite
17	110118104040	Mohd Azem	IV / VII	Computer Science and Engineering	Problem solving through Programming In C	12	Elite
18	110120205001	Aamir Dawood	II / II	Information Technology	Programming in Java	12	Elite
19	110120205002	Abdul Azees A	II / III	Information Technology	Programming in Java	12	Elite
20	110120205003	Abdul Harisud Naseer A	II / III	Information Technology	Programming in Java	12	Elite
21	110120105010	Mohamed Towfiq	II / III	Electrical and Electronics Engineering	Analog Electronic Circuits	12	Successfully Completed
22	110120114022	Velumugan C	II / III	Mechanical Engineering	Fundamentals of manufacturing processes	12	Successfully Completed


 Prof. Prof. M. Shaik Mohamed
 Coordinator (NPTEL - IC - SPOC)


 Head, Centre for SSTP



 Principal
 8/12/2021

AALIM MUHAMMED SALEGH COLLEGE OF ENGINEERING

PAL'S ACTIVITY (2021-22)

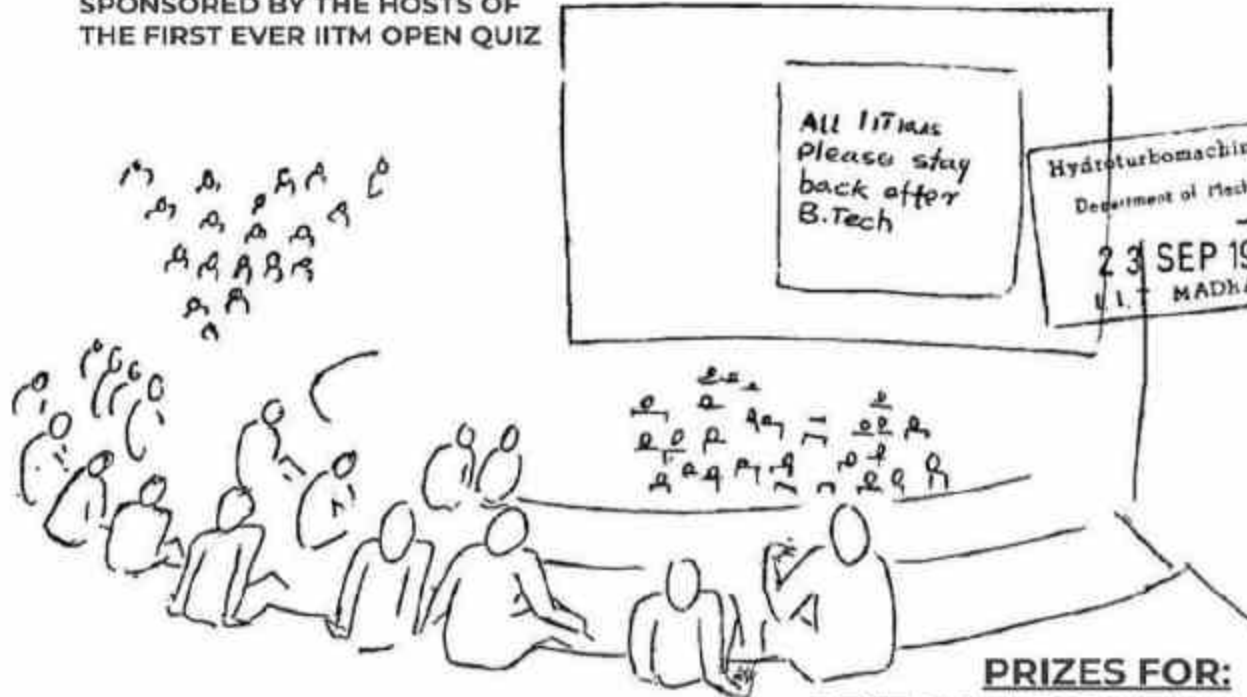
S.No.	Date	Name Of The Programme	Mode	Venue
1.	02.05.2021	litm Open Quiz	Online	PALS, Chennai
2.	15.06.2021	Design Thinking For Innovation	Online	Saveetha Engineering College
3.	16.06.2021	Emerging Technologies 3d Printing	Online	Saveetha Engineering College
4.	17.06.2021	How To Be A Successful Mechanical Engineer	Online	Saveetha Engineering College
5.	26.06.2021	India's First 3d Printed House	Online	PALS, Chennai
6.	14.07.2021 To 16.07.2021	Tata Elxsi	Online	PALS, Chennai
7.	10.07.2021	Business Canvas Model - Bmc	Online	Hindustan Institute Of Technology & Science
8.	10.07.2021	Ipr & Ip Management For Startups	Online	Hindustan Institute Of Technology & Science
9.	02.08.2021 To 07.08.2021	Little Engineer 2021 Tinkering Workshop	Online	Thiagarajan College Of Engineering
10.	07.08.2021	I2i - Industry To Institute Meet	Online	PALS, Chennai
11.	20.08.2021	Engineers - The Creative Doctors Of Convenience	Online	PALS, Chennai
12.	21.08.2021	Marketing Channels And Key Metrics	Online	PALS, Chennai

IITM OPEN QUIZ

CASH PRIZES WORTH 42K

SEPT '83

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BEST COLLEGE TEAM
BEST SCHOOL TEAM

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ADMISSIONS OPEN 2021-22

☎ 8939902737 / 044 6672 6690

DEPARTMENT OF MECHANICAL ENGINEERING

(☎) WEBINAR ON

DESIGN THINKING

for Innovation



15th JUNE
2021



05:00 PM
06:00 PM



NARESH KUMAR THANIGAIVEL

Advanced development Engineer
@ PHILIPS, Singapore



Join Meeting

<https://tinyurl.com/k4vsxxj4>

Coordinators: Dr.V.Muthukumar, Professor/Mechanical

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www.saveetha.ac.in



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ADMISSIONS OPEN 2021-22

☎ 8939902737 / 044 6672 6690

DEPARTMENT OF MECHANICAL ENGINEERING

(🎧) LIVE WEBINAR ON

EMERGING TECHNOLOGIES **3D PRINTING**



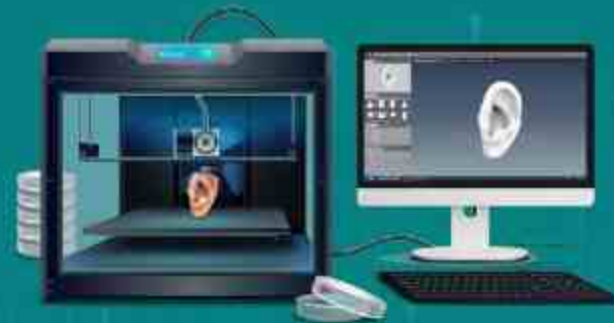
16th JUNE
2021



11:00 AM
12:00 PM



Mr. Vignesh Sekar
Research Scholar
Taylor's University, Malaysia



Join Meeting

<https://tinyurl.com/k4vsxxj4>

Coordinator: Dr. V. Muthukumar, Professor / Mech

INDUSTRY 4.0 Ready Curriculum imparting 21st Century Skills www.saveetha.ac.in



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DEPARTMENT OF MECHANICAL ENGINEERING

🔊 LIVE WEBINAR ON

HOW TO BE A SUCCESSFUL **MECHANICAL ENGINEER**



**17th JUNE
2021**



**05:00 PM
06:00 PM**



Mr. Jayanth Kumaran
Assistant Manager
R&D Electric Vehicle,
Force Motors Ltd, Maharashtra



Join Meeting <https://tinyurl.com/k4vsxxj4>

Coordinator: Dr. V. Muthukumar, Professor / Mechanical

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INDIA'S FIRST 3D PRINTED HOUSE

By

Dr. Manu Santhanam

Professor, Civil Engineering, IITM

Date : 26th JUNE 2021

Time : 10.30 AM – 12.30 PM

PHONE +91 98416 39338
EMAIL palspgm@palspgm.com
WEB SITE www.palspgm.com

**With the Support from
IIT MADRAS**

IIT Madras Alumni Association Office,
CCW building,
IIT M Campus,
Chennai – 600 036

AALIM MUHAMMED SALEGH COLLEGE OF ENGINEERING

ICT ACADEMY ACTIVITY (2021-22)

Past Activities Report

FACULTY MEMBERS TRAINED FROM Your INSTITUTION – 16

Trained For Various Domains in

- Microsoft Azure AI Engineer Associate
- Cloud Practitioner (AWS)
- Emotional Intelligence
- Creative Thinking
- Celonis Business Process Mining Expert

POWER SEMINARS

- Power Seminar Conducted on Our Campus – 1
- Students Participated in Power Seminar – 100

CSR PROJECT

- 30 Students are Trained in Robotic Process Automation for inspirisys CSR Project

CONTESTS & AWARDS (STUDENTS)

- APPLICATIONS FOR YOUTH TALK CONTEST – 14
- REGIONAL SHORTLISTED FOR YOUTH TALK CONTEST - 01
- APPLIED FOR KALAM BOOK SUMMARY WRITING CONTEST - 7

INDUSTRY-INSTITUTE INTERACTION

- PARTICIPATED IN BRIDGE CONFERENCE – 3 Faculty
- PARTICIPATED IN CONVERGENCE -25 Faculty &Students
(5G CONFLUENCE 2022, Service Now Partnership Launch)

Learnathon & Skill-A-Thon

- 296 Attended the Program for Learnathon 2022
- 90 Attended the Program for Skill-a-thon 2022.

Service Now Student Day Program

- 5 Students participated in the Program for Service Now Student Day Program

Imagine Chennai 2023

- 50 Students participated in the Program at Chennai Trade Center



STUDENTS FEEDBACK FORM

EVALUATING THE TEACHING PROCESS

(To be filled by Students)

Name of the Student & Reg.No (optional): 110120105006

Academic Year : 2021-2022

Department : EEE

Semester/Sec : 1st

This feedback is being sought from you as a part of the continual improvement program in vogue in every department. Please give your fair and unbiased response. You may rank the Teacher on a scale of 1-5 in each box as your feedback score for each parameter.

(5 - Excellent 4 - Very Good 3 - Good 2 - Satisfactory 1 - Poor)

S. No.	SUBJECT CODE	MA8491	EE8401	EE8402	EE8403	EE8404	TC845
	NAME OF THE FACULTY MEMBER	Mr. Vinayagam	Er. Mohana Sundar	Er. S. P. Vairajulu	Er. A Anwar Raza	Er. S. Rajesh Karan	Er. M. S. Rajan
	Please read the lines below as "The Teacher."						
1	Comes to the class on time	5	5	5	5	5	5
2	Comes well prepared for the class	5	5	5	5	5	5
3	Engages classes regularly and maintains discipline.	4	5	5	5	5	5
4	Speaks clearly and audibly, writes and draws legibly.	A	E	3	5	5	5
5	Covers all the topics on time.	5	5	4	5	5	5
6	Offers timely assistance and counseling to the Students.	4	5	3	5	5	4
7	Asks questions to promote interaction and reflective thinking.	A	5	4	4	5	5
8	Explains clearly and effectively the concepts/principles with appropriate examples.	5	5	4	5	4	5
9	Encourages, compliments and praises the originality and creativity displayed by the Students.	5	5	5	5	5	5
10	Is understanding and unbiased in dealing with the Students.	5	5	4	5	4	5

Remarks (if any): NIL



STUDENTS FEEDBACK FORM

EVALUATING THE TEACHING PROCESS

(To be filled by Students)

Name of the Student & Reg.No (optional): -

Academic Year: 2021-2022

Department : EEE

Semester/Sec : IV

This feedback is being sought from you as a part of the continual improvement program in vogue in every department. Please give your fair and unbiased response. You may rank the Teacher on a scale of 1-5 in each box as your feedback score for each parameter.

(5 – Excellent 4 – Very Good 3 - Good 2 - Satisfactory 1 – Poor)

S. No.	SUBJECT CODE	MA6491	EE8401	EE8402	EE8403	EE8451	IC8451
	NAME OF THE FACULTY MEMBER	Mr. Vinayagam	Er. A. Mohana Sundaram	Er. Vaniyullab	Er. Anwar Rajesh Babu	Er. I. Karan	Er. M.S. Rajesh
Please read the lines below as "The Teacher."							
1	Comes to the class on time	5	5	5	5	5	5
2	Comes well prepared for the class	4	5	4	5	4	5
3	Engages classes regularly and maintains discipline.	5	5	5	5	5	5
4	Speaks clearly and audibly, writes and draws legibly	4	5	5	5	4	5
5	Covers all the topics on time.	5	4	5	5	5	5
6	Offers timely assistance and counseling to the Students.	5	5	5	5	5	5
7	Asks questions to promote interaction and reflective thinking.	5	5	4	5	5	5
8	Explains clearly and effectively the concepts/principles with appropriate examples.	5	5	5	4	5	5
9	Encourages, compliments and praises the originality and creativity displayed by the Students.	5	4	4	5	5	5
10	Is understanding and unbiased in dealing with the Students.	4	5	5	5	5	5

Remarks (if any):



AALIM MUHAMMED SALEGH COLLEGE OF ENGINEERING

"Nizara Educational Campus" Muthapudupet, I.A.F Avadi
Chennai - 600 055



FACULTY FEEDBACK FORM

Academic year: 2021-2022

As a part of Continuous Quality Improvement, your feedback is valuable as it helps us to develop and improve our standards on facilities and services.

Faculty Name: A. Anwar Basha

Date: 06-06-2022

Subject Code: EE 8403

Subject Title: Measurement & Instrumentation

Year/Semester: I / IV

Department: EEE

PARAMETERS (Put the tick ✓ mark)	YES	NO
Is Self- directed Learning possible?	✓	
Is there effective Written and Oral Communication skills?	✓	
Were the objectives of the course realized?	✓	

PARAMETERS	Excellent	Very Good	Good	Average	Below Average
Reflection on ethical maturity and good citizenship.			✓		
Exploration on context- driven Research skills.		✓			
Focus on Inter- disciplinary synthesis.		✓			
Students' performance.		✓			
The Challenge posed by the course intellectually.		✓			
To what this course exposed you to new knowledge and practices?		✓			

- The level of the course was
 - (a) Too low
 - (b) Moderate
 - (c) Too high
- To what extent the course content met with your expectation
 - (a) > 90 %
 - (b) 70 - 90 %
 - (c) 50 - 70 %
 - (d) < 50%

A. Anwar Basha
Signature



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Chennai - 600 055



FACULTY FEEDBACK FORM

Academic year: 2021 - 2022

As a part of Continuous Quality Improvement, your feedback is valuable as it helps us to develop and improve our standards on facilities and services.

Faculty Name: K. Khaja Mohideem

Date: 25/11/2021

Subject Code: Open Elective - II: OCE552

Subject Title: Geographic Information System

Year/Semester: III / V

Department: Computer Science and Engineering

PARAMETERS (Put the tick ✓ mark)	YES	NO
Is Self- directed Learning possible?	✓	
Is there effective Written and Oral Communication skills?	✓	
Were the objectives of the course realized?	✓	

PARAMETERS	Excellent	Very Good	Good	Average	Below Average
Reflection on ethical maturity and good citizenship.		✓			
Exploration on context- driven Research skills.	✓				
Focus on Inter- disciplinary synthesis.		✓			
Students' performance.	✓				
The Challenge posed by the course intellectually.	✓				
To what this course exposed you to new knowledge and practices?		✓			

- The level of the course was
 - (a) Too low
 - ✓ (b) Moderate
 - (c) Too high
- To what extent the course content met with your expectation
 - (a) > 90 %
 - ✓ (b) 70 - 90 %
 - (c) 50 - 70 %
 - (d) < 50%

K. Khaja Mohideem
Signature 25/11/21



AALIM MUHAMMED SALEGH COLLEGE OF ENGINEERING

MUTHAPUDUPET, AVADI - I.A.F., CHENNAI - 600 055



ALUMNI FEEDBACK FORM

As a part of Continuous Quality Improvement, your Feedback is valuable as it helps us to develop and improve our standards on Facilities and Services.

Name of the Alumnus (Optional) : ABDUR RAQUIB N Branch : E-C-E
Batch : 2017-2021 Phone No : 9003109055 E-Mail ID : nasserab15@gmail.com

Please Tick Against the Appropriate Box.

PARAMETERS	Excellent	Very Good	Good	Average	Below Average
How do you rate your learning process at College?			✓		
Technical knowledge obtained during your period of study.			✓		
How do you rate the teaching process in the Institution?				✓	
How do you rate the Extra-curricular activities in the Institution?			✓		
How do you rate the Co-curricular activities in the Institution?				✓	
Faculty - Student interaction		✓			
Overall discipline.			✓		
Your opinion about placement and training.		✓			
Transport facility during your studies.		✓			
Hostel facilities.					
How do you rate the relevance of the training given in the College to your present job?			✓		
Counseling and guidance provided for the Students.			✓		
How do you rate the facilities provided in the Institution?					
Laboratories/Equipment			✓		
Library				✓	
Computers/Internet			✓		
Overall assessment			✓		
Employment Details: DESIGNATION: SOFTWARE ENGINEER, INTELLIGENT LIFECYCLE SERVICES DIV. LTF					

How will you talk about the Institution? - Proudly / Satisfactory / Not Satisfactory

Three aspects you appreciate the most:

1. Not pressurizing student on fee payment
2. Has a good environment, Spacious classrooms
3. Has given more freedom to students, when compared to other colleges

Signature of the Student

N-Abdur Raquib N



AALIM MUHAMMED SALEGH COLLEGE OF ENGINEERING
MUTHAPUDUPET, AVADI - I.A.T., CHENNAI - 600 055



ALUMNI FEEDBACK FORM

As a part of Continuous Quality Improvement, your Feedback is valuable as it helps us to develop and improve our standards on Facilities and Services.

Name of the Alumnus (Optional) : M. Aparna Branch : ECE
Batch : 2017-2021 Phone No : 6383771983 E-Mail ID : aparnas19041999@gmail.com

Please Tick Against the Appropriate Box.

PARAMETERS	Excellent	Very Good	Good	Average	Below Average
How do you rate your learning process at College?		✓			
Technical knowledge obtained during your period of study.			✓		
How do you rate the teaching process in the Institution?		✓			
How do you rate the Extra-curricular activities in the Institution?			✓		
How do you rate the Co-curricular activities in the Institution?			✓		
Faculty - Student interaction.		✓			
Overall discipline.		✓			
Your opinion about placement and training.		✓			
Transport facility during your studies.					
H. Q. facilities.					
How do you rate the relevance of the training given in the College to your present job?					
Counseling and guidance provided for the Students.			✓		
How do you rate the facilities provided in the Institution?					
Laboratories/Equipment		✓			
Library		✓			
Computers/Internet		✓			
Overall assessment		✓			

How will you talk about the Institution? - Proudly / Satisfactory / Not Satisfactory

Three aspects you appreciate the most:

1. Amazing Infrastructure
2. Supportive professor
3. Discipline

Signature of the Student



AALIM MUHAMMED SALEGH COLLEGE OF ENGINEERING
MUTHAPUDUPET, AVADI - I.A.F., CHENNAI - 600 055



ALUMNI FEEDBACK FORM

As a part of Continuous Quality Improvement, your Feedback is valuable as it helps us to develop and improve our standards on Facilities and Services.

Name of the Alumnus (Optional) : Faizha parveen. S.A Branch : ECE
Batch : 2017-2021 Phone No : 9677142096 E-Mail ID : Faizhaparveens0@gmail.com

Please Tick Against the Appropriate Box.

PARAMETERS	Excellent	Very Good	Good	Average	Below Average
How do you rate your learning process at College?	✓				
Technical knowledge obtained during your period of study.	✓				
How do you rate the teaching process in the Institution?	✓				
How do you rate the Extra-curricular activities in the Institution?	✓				
How do you rate the Co-curricular activities in the Institution?	✓				
Faculty - Student interaction.	✓				
Overall discipline.	✓				
Your opinion about placement and training.	✓				
Transport facility during your studies.	✓				
Hostel facilities.	✓				
How do you rate the relevance of the training given in the College to your present job?	✓				
Counseling and guidance provided for the Students.	✓				
How do you rate the facilities provided in the Institution?					
Laboratories/Equipment	✓				
Library	✓				
Computers/Internet	✓				
Overall assessment	✓				
Employment Details:	✓				

How will you talk about the Institution? - Proudly / Satisfactory / Not Satisfactory

Three aspects you appreciate the most:

1. Entrepreneurship 2. Discipline

3. Infrastructure.

Signature of the Student

Faizha



CSE Department NBA Wing <cse_nba@aalimec.ac.in>

NBA EMPLOYER FEEDBACK 2023 Caterpillar India Pvt Ltd - BCP Division - Candidate Feedback - Reg

1 message

Dr.E.Ganesh <drganesh@aalimec.ac.in>

Wed, Mar 15, 2023 at 6:50 PM

To: cse_nba@aalimec.ac.in

Cc: AMARSHREE V <amarshree.V@aalimec.ac.in>, "Dr. PRABU M" <drprabu@aalimec.ac.in>, cse@aalimec.ac.in

----- Forwarded message -----

From: **amsengg placement** <amsenggplacement@gmail.com>

Date: Wed, Mar 15, 2023 at 10:50 AM

Subject: Fwd: Caterpillar India Pvt Ltd - BCP Division - Candidate Feedback - Reg

To: <drganesh@aalimec.ac.in>, yusuf1427 <yusuf1427@gmail.com>

----- Forwarded message -----

From: **Rafath Ahmed** <Shafi_Ahmed_Rafath@cat.com>

Date: Wed, Mar 15, 2023 at 12:45 AM

Subject: Caterpillar India Pvt Ltd - BCP Division - Candidate Feedback - Reg

To: Ravikumar Raju <raviams@gmail.com>

Dear Sir,

This is with great pride and complete satisfaction that I am writing to you as it marks the 4th year partnering with your Prestigious institute – AMS College of Engineering and Polytechnic – Chennai for Campus Placement drives. We started off in the year 2020 offering Job opportunities for the students graduating from your Institute

AMS college is identified as one our trusted sources to rely on when it comes to hiring Technical and Engineering Graduates – Freshers over the years.

Having said that I would like to make some special mentions about 2 specific Engineering students who joined us in the year 2022.

In the year 2022 we hired 2 Engineering students from Mechanical and Computer Science majors from AMS Engineering College and the name are:-

1. Mohammed Afreed – Male – B.E Mechanical
2. Sathiswarri Marimuthu – Female – B.E Computer Science

Mohammed Afreed – Joined us as a Team Lead in our Assembly operations in 2022. He is a quick learner and is very keen on getting into details of the Job he does. Afreed shows interest in the work he does and never fails to deliver his job on time. Further, he is a team player working collaboratively with his peers and cross functional department members. He is an individual with good discipline coupled with great time management skill. We are glad to have him here as a Team Lead and we fore see him to become a successful Engineer in the nearest future.

Sathishwarri Marimuthu – Joined as a Technical Trainer in the Training and Induction team in 2022. She is a smart and bright young graduate who trains and inducts the new joiners. She also designs and develops training modules for new joiners. Sathishwarri is strong when it comes to data tracking and analysis, she is approachable and an aggressive learner with great potential. We are proud to have a diverse employee taking up this role of a trainer and we see her getting transformed as a matured Engineer over the days.

Once again, I truly appreciate your efforts in Molding and Uplifting the next generation of students and producing Smart and Talented Technical and Engineering professionals the Industries need.

Thank You very much. I value your relationship.

Regards,
Rafath Ahmed
Talent Acquisition Partner - India Recruitment - CI
Caterpillar India Pvt Ltd,
BCP Division, Thiruvallur
M : 7338848038

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—
Dr.E.Ganesh B.E., M.E., Ph.D.,
Department of Computer Science and Engineering
Aalim Muhammed Salegh College Of Engineering
AVADI, IAF, Chennai-55



AALIM MUHAMMED SALEGH COLLEGE OF ENGINEERING

"Nizara Educational Campus." Muthapudupet, IAF Avadi
Chennai - 600 055



PARENT FEEDBACK FORM

Academic Year: 2021 - 2022

As a part of continuous quality improvement, your feedback is valuable as it helps us to develop and improve our standards on facilities and services.

Name of the Parent/ Guardian: Liyakath Ali .A

Date: 07.06.2022

Student Name: Mohamed Rilwan.L

Department: Electrical and Electronics Engineering.

Relationship with the Student: Father

Occupation: Employee.

Phone number: 96599563860

PARAMETERS (Put the tick ✓ mark)	YES	NO
Is the College following admissions procedure as per Government norms?	✓	
Is the College fees structure as per Government norms?	✓	
Whether the College is ragging free?	✓	
Whether the campus is secular and practices religious freedom?	✓	
Whether the Student counselor contacts regularly to the Parent/ Guardian	✓	
Whether the information about your son/ daughter's Educational Performance is informed regularly?	✓	
Are the College activities posted regularly?	✓	
Whether the Students are encouraged to participate in various Sports, Co-curricular activities?	✓	

PARAMETERS	Excellent	Very Good	Good	Average	Below Average
Cleanliness, ambience and security arrangements in the college campus.		✓			
Facilities provided by the college. (laboratory/library/hostel/transport)		✓			
The quality of teaching offered by the college.	✓				
Examination system adopted by the college.	✓				
Students' involvement in social activities.	✓				

- How will you share your perspective about the Institution?
 - (a) Proudly
 - (b) Satisfactory
 - (c) Not Satisfactory
- Please give your valuable suggestions for the improvement of the College.


Signature