

# LORDS INSTITUTE OF ENGINEERING & TECHNOLOGY

Autonomous, Approved by AICTE/Affiliated to OU/Estd.2002.



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Survey No.32, HimayathSagar, RR Dist, Hyderabad 500008



## DEPARTMENT OF Mechanical Engineering



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Presents

## Mechronicle

MECHANICAL SEMESTER NEWS LETTER

Technical Article

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## A robot that finds lost items

*This robotic arm fuses data from a camera and antenna to locate and retrieve items, even if they are buried under a pile.*

*Adam Zewe / MIT News Office  
October 5, 2021*

A busy commuter is ready to walk out the door, only to realize they've misplaced their keys and must search through piles of stuff to find them. Rapidly sifting through clutter, they wish they could figure out which pile was hiding the keys. Researchers at MIT have created a robotic system that can do just that. The system, RFusion, is a robotic arm with a camera and radio frequency (RF) antenna attached to its gripper. It fuses signals from the antenna with visual input from the camera to locate and retrieve an item, even if the item is buried under a pile and completely out of view.

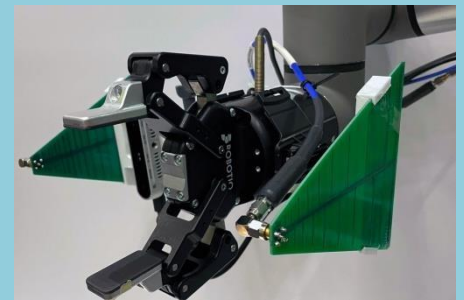


Figure: A robot that find lost items

The RFusion prototype the researchers developed relies on RFID tags, which are cheap, battery-less tags that can be stuck to an item and reflect signals sent by an antenna. Because RF signals can travel through most surfaces (like the mound of dirty laundry that may be obscuring the keys), RFusion is able to locate a tagged item within a pile.

Using machine learning, the robotic arm zeroes-in on the object's exact location, moves the items on top of it, grasps the object, and verifies that it picked up the right thing. The camera, antenna, robotic arm, and AI are fully integrated, so RFusion can work in any environment without requiring a special set up.

**College Vision:**

Lords Institute of Engineering and Technology strives for excellence in professional education through quality, innovation and teamwork and aims to emerge as a premier institute in the state and across the nation.

**College Mission:**

1. To impart quality professional education that meets the needs of present and emerging technological world.
2. To strive for student achievement and success, preparing them for life, career and leadership.
3. To provide a scholarly and vibrant learning environment that enables faculty, staff and students to achieve personal and professional growth.
4. To contribute to advancement of knowledge, in both fundamental and applied areas of engineering and technology.
5. To forge mutually beneficial relationships with government organizations, industries, society and the alumni.

**Department Vision:**

To impart high standards of quality education which enhance students' career efficaciously, to become a holistic well-qualified engineer who are competent, innovative, entrepreneurial and research oriented to meet the standards of new millennium.

**Department Mission:**

**DM1:** An integrated educational approach that blends knowledge of engineering fundamentals, technical skills, practical knowledge and research.

**DM2:** To enrich undergraduate experience of distinctive academic curriculum through interaction with major stake holders, hands-on learning, team work, management and multi-disciplinary skill set.

**DM3:** To make students aware of professional responsibilities, ethics, global demands, sustainable solutions, environmental, technological challenges and the needs of lifelong learning.

**DM4:** To prepare students in developing solutions of global standards through research and innovation, design and development of demand-based projects, entrepreneurial skills and employability capabilities.

**Program Educational Objectives (PEOs)**

The educational objectives of the Mechanical Engineering program are designed to produce competent engineers who are ready to contribute effectively to the advancement of Mechanical Engineering causes and to accommodate the needs of the profession. The Mechanical Engineering department is dedicated to graduating Mechanical Engineers who

**PEO1:** To establish themselves as successful professionals with strong fundamental knowledge in basic and engineering sciences to find suitable solutions of technological and real-life challenges using innovative tools.

**PEO2:** To enhance technical competency and problems solving skills through state of art facilities for adequate solutions to technical problems.

**PEO3:** Acquire high skill-set by continuous training, multi-disciplinary activities, team work, effective communications, Information Technology tools usage and ethics so that students shall acquire good job opportunities and also will help in their higher education.

**PEO4:** Giving consultancy services to industrial, Societal challenges and promoting department-industry interactions, by enhancing technical, managerial, environmental responsibilities and lifelong learning with sustainable development.

### **Program Specific Outcomes (PSOs)**

**PSO1:** Professional Skills: An ability to understand the basic concepts in mechanical Engineering and to apply them to various areas, like production, thermal, designing etc., in the design and implementation of complex systems.

**PSO2:** Problem-Solving Skills: An ability to solve complex Mechanical Engineering problems, using latest hardware and software tools, along with analytical skills to arrive cost effective and appropriate solutions.

### **FOUNDER AND CHAIRMAN'S MESSAGE:**

The pride of every student and staff would be in his/her college. A College may reach heights of glory but without materials like a college newsletter, the outside world may not know of it. The essential purpose of our college newsletter is to inform, engage, inspire and entertain a diverse readership-including alumni, parents, students, faculty, staff and other friends of the college-by telling powerful stories that present a compelling, timely and honest portrait of the college and its extended family.

I am happy that there is a dedicated team of

staff and students who have brought out the Newsletter of Mechanical Engineering Department of our college.



### **SECRETARY 'S MESSAGE:**

Engineers play the most vital role in nation building. They create new inventions using best engineering technologies to make human life more comfortable, secure and productive. We need enormous number of engineers to write next story of success. We have identified the needs of modern engineering and technology education for modern age students, with a vision and mission accompanying transparency, accountability and accessibility which keeps us abreast and also ahead of our competitors. At the outset, I send my greetings to the Editorial Board of Mechanical Engineering Department, for working on the newsletter. This newsletter should be a good source of guidance for faculty and coming batches of students in choosing activities of their choice in their future for building their careers. I appreciate the efforts of the Editorial team who have done an excellent job in compiling activities over theyear and disseminate them through this Newsletter as well as on the college website.

### **VICE CHAIRMAN'S MESSAGE:**

**Lords Institute of Engineering and Technology,** (Autonomous) was established to impart academic excellence by providing a conducive environment for the overall personality development of young technocrats. Spanning more than a decade, the college is covering many milestones year after year incorporating all modern mechanisms of technological research and application. Within this span of time, it has emerged as one of the leading Engineering colleges. LIET renders perfection in



academics and dynamic environment to motivate everyone –the management, faculty and students to deliver their best. Our objective is to create a class of qualified, innovative and dynamic professionals for the Engineering sector, for self-employment and for academic & research institutions of socio-economic importance.

### **PRINCIPAL'S MESSAGE:**

Our college has grown abundantly in the recent past. It continues to sustain its growth. People reading this newsletter will realize the tremendous changes that are happening in the campus. The newsletter is presenting a glimpse of the growth of the institution on many fronts. The highly qualified and dedicated members of the staff have always stood shoulder to shoulder with the management and has carried out their duties with high level of commitment. This newsletter has recorded achievements such as conferences attended by staff

members and students, competitions won by the hugely talented students, innovative projects carried out by students with the guidance of faculties, among others. Let's give our best and make this institution a modern sanctuary of learning through our diligence, devotion and dedication. I congratulate all the contributors and the editorial board for bringing out such a beautiful newsletter.



### **VICE-PRINCIPAL'S MESSAGE:**

It gives me immense joy to learn that our college has its deep roots in the field of education in the city of Hyderabad. I feel proud and privileged to be the part of this Magnificent Institution. At this juncture, I gratefully acknowledge the yeomen service rendered by the Visionary Predecessors, dedicated teachers and ever supporting parents who have worked selflessly and tirelessly to bring this newsletter of Mechanical Engineering department. I am pleased to acknowledge that our college lays its stress not just on academic excellence but also on "character formation with academic excellence".



### **CHIEF EDITOR'S MESSAGE:**

It gives me great pleasure to bring you the Newsletter of the 1st Semester of AY 2021-22. This issue offers a panoramic view of the academic, professional and cultural activities of the college. The name and fame of an institute depends on the caliber and achievements of the students and teachers. I would like to place on record my gratitude and heartfelt thanks to all those who have contributed to make this effort a success. I profusely thank the management for giving support and encouragement and a free hand in this endeavor. The editorial team thanks all its patrons for their support for the newsletter. On that note, I wish you all 'Bonne lecture'. I welcome suggestions from all our readers who wish to see their ideas incorporated in the subsequent issues. Please feel free to provide your feedback and send pertinent information with photos for inclusion in our forthcoming issues of newsletter.

## Industrial Visit to Masqati Dairy Products Pvt Ltd

An Industrial Visit to **Masqati Dairy Products Pvt Ltd** is organized on **24th Nov 2021** by **Dr. Syed Azam Pasha Quadri, vice Principal and HOD** of Mechanical Engineering Department. 6 faculty members and 77 students visited and explore the processing of milk and production of **Ice- cream, Ghee, Paneer, Badam Milk and other dairy products**.

Firstly, the milk is boiled to around  $30^{\circ}\text{C}$  and after adding some sugar, stabilizers etc., the milk is again heated to around  $60^{\circ}\text{C}$  -  $70^{\circ}\text{C}$ . It is then passed through chiller plate to aging tank, where temperature is reduced to less than  $10^{\circ}\text{C}$ . The milk is processed for 5-6 hrs. to get fine cream, texture and no crystal formation in aging tank. Next in mixer the ingredients, flavor etc. are added and mixed. At last, it is stored in cold storage. The temperature in cold storage is around  $-24^{\circ}\text{C}$  to  $-30^{\circ}\text{C}$ . The milk is tested before it is collected at the farm and again upon arrival at the dairy (industry).



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DEPARTMENT OF MECHANICAL ENGINEERING  
**Organizes**  
**INDUSTRIAL VISIT TO**  
**MASQATI DAIRY PRODUCTS PVT. LTD.**  
ON  
**24<sup>th</sup> November 2021**  
FOR B.TECH FINAL YEAR STUDENTS



This guarantees it has the desired quality and doesn't contain anything unwanted things such as antibiotics. The milk is then separated into cream and skimmed milk by a centrifugal separator. The fat is again mixed according to the requirement such as fully fat, semi-skimmed or skimmed milk. Then the milk is homogenized in the homogenizer. The milk is then quickly heated to  $72^{\circ}\text{C}$  for 15sec and then cooled to around  $4^{\circ}\text{C}$  in a heat exchanger which kills harmful bacteria. For making it fully pasteurized the milk is heated to higher temperatures (around  $140^{\circ}\text{C}$ ). Finally, the milk is packed and delivered.

The raw milk is collected and heated to a temperature of  $35^{\circ}\text{C}$  to  $40^{\circ}\text{C}$ . The cream present in milk is separated by using separator. The skimmed milk is stored in a collecting tank and composition is added according to the final product requirement. Now the milk is pasteurized and sugar and flavors are added in required quantity and mixed thoroughly. Then it is homogenized and stored in storage tank. At last, the required quantity of milk is packed in bottles and delivered to market.

## HOD Interaction with Students

A Meeting is conducted on **06th Jan, 2022** by Head of the department Dr. Syed Azam Pasha Quadri with students to take a note on grievances in the presence of **Assistant and Associate Professors, Lords Institute of Engineering and Technology (Autonomous).**



## Inspection by Principal Sir

A Sudden inspection was done by Principal in various laboratories for cross checking the smooth conduct of labs and taken grievances on **31st Dec 2021**. He verified Attendance registers, Log registers, stock registers, Lab manual, Equipment's, lab batches etc.



## Parent Teacher meet 2K21

Parent-Teachers Meeting for OU-III Semester and V Semester students held on 30/12/2021, at Head of the Department chamber, LIET (A) from 2:30PM Onwards.

The main objective of the meeting is to create a common platform, where Faculties and parents come together to discuss student's performance and devise ways to enrich the teaching learning process. Whilst this happens on a total offline basis in which 45 Parents visited offline. With the current pandemic we took some calls online to a digital platform through Google Meet.

The meeting has started with welcoming parents. Mentors shared their mentees performance in all aspects including their performance in III, V semester, also students' attendance, Internal Marks, OU recent results, CRT for Placements (planning for next semester), Any indiscipline, College / department development activities, Strengths of your department/ College, etc.

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**DEPARTMENT OF MECHANICAL ENGINEERING**  
*Cordially Welcomes*  
**PARENTS OF B.E 2<sup>ND</sup> & 3<sup>RD</sup> YEAR STUDENTS**  
FOR  
**PARENT-TEACHER MEETING**  
ON  
**30<sup>th</sup> December 2021**  
at  
**MAIN BLOCK. LIET(A) CAMPUS.**



Parents became aware of the institute's rules and regulations, methodologies of teaching & learning for the overall welfare of students. Parents were encouraged to appreciate student's participation in all academic activities.

The PTM came to an end with the conclusion that the progress and development of the students depend on the joint efforts of parents and teachers.

## MoU with Mekuva Technologies Pvt. Ltd

Department of Mechanical Engineering has signed an MOU with Mekuva Technologies Pvt. Ltd for Collaboration in 3D Printing Technology and purpose of this MoU is to have Industrial Training & Visits, Research and Development, Skill Development Programs and Dr. Azam Pasha Quadri, HoD-Mechanical has discussed on establishment of Centre of Excellence (CoE) in 3D Printing Technology in the Institution in the nearby future.



## Alumini Reconnect 2020-2021

Lords Institute of Engineering and Technology has organized the alumni meet on 24/12/2021 (Friday). The alumni meet is conducted every year in order to reconnect with the alumni and celebrate their success and achievements, which shall be encouragement for present students.

Dr. C. V. Narasimhulu, Principal welcomed all the alumni members and in his address, he has encouraged the alumni that they can act as a bridge between the Institute and the Industry for strengthening tie up with industry.

Mr. Ramavath Suman, President and Convener of the Lords Alumni Association, briefed annual report and achievements of Lords Alumni Association during Academic Year 2020-2021 and requested all the alumni to continue their support.

The key members from the management also felicitated the gathering the Chairman Mr. CA. Basha Moinuddin wished all the alumni grand success in their lives and in all their endeavors. Secretary Ms. Rizwana Begum





informed alumni that her heart was brimming with joy on seeing the alumni and wished them all success. Vice Chairman Mr. Syed Touseef Ahmed motivated the alumni to contribute to the Alma Mater in terms of MoUs, Internship and Placements and congratulated the alumni on their successful careers.

The time came to recollect the student life, the cultural programs have begun and later alumni students expressed their views and suggestions for the development of the college. Alumni students took active participation in interactive session and all the alumni were awarded with Appreciation Certificates and Mementos. Total 163 alumni attended for the Reconnect-2k21. The program ended with vote of



thanks by Ms. Jaya Laxmi, expressed sincere thanks to the alumni who are present out of their busy schedule and encouraged students to continue the association with LORDS Institute of Engineering and Technology.

Finally, all Alumni enjoyed sumptuous dinner organized by the college and mingled with Alumni



body members

Vimmigari Karthik, Joint Secretary Mr. Nagesh Mochhi, Treasurer Mr. P. Madhu Sudhan, from across batches.

## Inauguration of Center of Excellence in Additive Manufacturing

Lords Institute of Engineering and Technology (Autonomous) had inaugurated Center of Excellence in Additive Manufacturing

(CEAM ) in Collaboration with Meekuva Technologies Pvt. Ltd Hyderabad under Mechanical Engineering Department on 26.02.2022. Speaking on the event Chief Guests Prof. Sanke Narsimhulu- Professor, Osmania University, Shri. G. Giri Babu- Deputy Director, Commissionerate of Technical Education (CTE) in Government of Telangana and Dr. R. N. Yadav, Professor of ECE, Moulana Azad National Institute of



Technology, Bhopal has appreciated the establishment of the CEAM for the development of the skills of the students in the current trends of the Mechanical Industry.

### కొత్త పాకడలతో..విజయాల సాధించాలి

#### ● ఉస్మానియా ప్రొఫెసర్ నర్సింలు

నవతెలంగాణ-గండిపేట్

విద్యార్థులు వరిశ్రమ రంగాల్లో టెక్నికల్, కొత్త పాకడలతో విజయాలను సాధించాలని ఉస్మానియా మూనిసిపల్ ప్రొఫెసరులు నర్సింలు, గిరిబాబు తెలిపారు. ఆదివారం గండిపేట్ మండలం హిమాయత్ సాగర్



లాడ్ ఇంజనీరింగ్ కాలేజీలో మీకువా టెక్నాలజీ ప్రవేట్ లిమిటెడ్ సహకారంతో సెంటర్ ఆఫ్ ఎక్సలెన్స్ ఇన్ అడిటివ్ మ్యానుఫ్యాక్చరింగ్ను ప్రారంభించారు. ఈ కార్యక్రమానికి వారు ముఖ్య అతిథిగా పాల్గొని విద్యార్థులు, ఉపాధ్యాయులను ఉదేశించి ప్రసంగించారు. కార్యక్రమంలో కాలేజీ చైర్మన్ పిఎ భాషా మొహిన్ దీన్, కార్యదర్శి రిజ్వానా బేగం, సెక్రటరీ సయ్యద్ తౌసీఫ్ ఆహ్మద్, సయ్యద్ తన్వీర్, ఆహ్మద్, రాజుకుమార్ తదితరులు పాల్గొన్నారు.



Dr. Syed Azam Pasha Quadri, HoD-Mechanical Department & Director - CEAM speaking on the event conveyed the support of the Mr. CA Basha Mohiuddin - Chairman, Mrs. Rizwana Begum - Secretary, Mr. Syed Touseef Ahmed - Vice Chairman, Mr. Syed Tanvir Ahmed - Joint Secretary of for the establishment and Mr. U Raj Kumar - Managing Director of Meekuva Technologies Pvt. Ltd, Hyderabad.

## Student Activities

### *Internships in 2021*

S. No.	Name of the Company	No. of students	Duration
1	Abhinandan Bajaj	03	1 Month
2	Enrun India	07	1 Month
3	Professional Educational Services	09	1 Month
4	Shiva CNC Solutions and Technologies Pvt. Ltd. Nacharam Hyd.	01	1 Month

## Faculty Achievements

### Patents Publications

S. No.	Application Number	Name of Faculty	Title of the Invention	Date of Publication
1	202141040268	1. Mr. Ramavath Suman 2 . Dr. Syed Azam Pasha Quadri 3 . Mr.L.V.R.G. Prasad 4 . Mrs. Gyananjali Prusty	Remotely Operable Multifunction Agriculture Apparatus	24/09/2021

### Paper Publications

S.No.	Name of the Faculty	Title of the paper	Name of the Journal/Conference	Volume ,issue no & pageno	ISSN Number and year of publication
1.	Mr. Ramavath Suman	Fabrication and Assembly of Rotimaking Machine	International Journal OfScientific Research In Science, Engineering And Technology	Volume 8, Issue 6 Page Number :39-49	2394-4099 NOV-DEC 2021
2.	Dr. Syed Nawazish Mehdi	Fault Diagnosis of steam turbine by wearDebris Analysis	International journal ofAnalytical and Experimental Model analysis(IJAEMA)	Volume 13, Issue 12, Page: 360-366	ISSN 0886-9367
3.	Mr.SamathamMadhukar	Fabrication and Assembly of Rotimaking Machine	International Journal OfScientific Research In Science, Engineering And Technology	Volume 8, Issue 6 Page Number :39-49	2394-4099 NOV-DEC 2021
		Design and assembly of rotti making machine using CATIA V5	International Journal Of Current ,Engineering And Technology	Vol.11, No.6	2277-4106 NOV-DEC 2021
4.	Mr. Kumar Naik	Fabrication and Assembly of Rotimaking Machine	International Journal OfScientific Research In Science, Engineering And Technology	Volume 8, Issue 6 Page Number :39-49	2394-4099 NOV-DEC 2021
5.	MenakaMuchetti	Fabrication and Assembly of Rotimaking Machine	International Journal OfScientific Research In Science, Engineering And Technology	Volume 8, Issue 6 Page Number :39-49	2394-4099 NOV-DEC 2021
		Design and assembly of rotti making machine using CATIA V5	International Journal Of Current ,Engineering And Technology	Vol.11, No.6	2277-4106 NOV-DEC 2021

6.	Mr. Nithin Chandra Manas	Design and assembly of rotti making machine using CATIA V5	International Journal OfCurrent ,Engineering And Technology	Vol.11, No.6	2277-4106 NOV-DEC 2021
7.	Mr. DharamkarSaiSuman	Design and assembly of rotti making machine using CATIA V5	International Journal OfCurrent ,Engineering And Technology	Vol.11, No.6	2277-4106 NOV-DEC 2021
8.	Mr. Asif Kattimani	Design Analysis andFabrication of Multi Purpose Load Carrier	International Journal OfAll Research Education And Scientific Methods(Ijaresm),	Volume 9, Issue 10	2455-6211 October-2021
		Modelling And Analysis of Helical Ropeway String	Journal of Emerging technology and Innovative Research(JETIR)	Volume 9, Issue 6	(ISSN- 2349 - 5162 ) June 2022
		Computational FluidDynamics Study on AirSolid Flow in a Spray Dryer for Effluence Analysis	Pharmaceutical Application	Volume 20 Issue 11 Page 4003-4007	ISSN 1303-5150
		Fault Detection In Metallic Beam Using Vibrational Analysis By Fem	Dickensian Journal	Volume 22, Issue 7 Page No: 522-535	Issn No : 0012-2440 July 2022
		Evaluation of Fatigue Life of Nickel Alloy forGas Turbines Hub	International Journal ofAll Research Education and Scientific Methods (IJARESM)	Volume 10, Issue 6 Page No: 2769-2774	, ISSN: 2455-6211 June 2022.
9.	Mohd Khalid Ahmed		International Journal OfAll Research Education	Volume 9, Issue 10	2455-6211 October-2021
		Design Analysis and Fabrication of Multi Purpose Load Carrier	And Scientific Methods(Ijaresm),		
		Fault Detection In Metallic Beam Using Vibrational Analysis ByFem	Dickensian Journal	Volume 22, Issue 7 Page No: 522-535	Issn No : 0012-2440 July 2022
10.	Mohd Ibrahim	Modelling And Analysis of Helical Ropeway String	Journal of Emerging technology and Innovative Research(JETIR)	Volume 9, Issue 6	(ISSN- 2349 - 5162 ) June 2022

		Computational Fluid Dynamics Study on AirSolid Flow in a Spray Dryer for Effluence Analysis	Pharmaceutical Application	Volume 20 Issue 11 Page 4003-4007	ISSN 1303-5150
11.	K. Prashanth	Design Analysis and Fabrication of Multi Purpose Load Carrier	International Journal ofAll Research Educationand Scientific Methods (IJARESM)	Volume 9, Issue 10	ISSN: 2455-6211 October-2021
12.	Syed Aslam	Computational Fluid Dynamics Study on AirSolid Flow in a Spray Dryer for Effluence Analysis	Pharmaceutical Application	Volume 20 Issue 11 Page 4003-4007	ISSN 1303-5150

Conference Publication

Sr No	Name of the Author/s	Title	Name of Conference	Month and year of Conference	National/International
1	Samatham Madhukar, Gyara Ajay Kumar, Dharamkar Sai Suman, Syed Azam Pasha Quadri, and U. Ashok Kumar	Smart innovation, Systems and technology	Samatham Madhukar, Gyara Ajay Kumar, Dharamkar Sai Suman, Syed Azam Pasha Quadri, and U. Ashok Kumar Madhukar	Volume 265, Proceedings of ICIMES 2021	National
2	Menaka Muchhetti, Samatham Madhukar † and D Sai Suman † and Nithin Chandra Manas	Design and Assembly of Rotti Making Machine using CATIA V5	International Journal of Current Engineering and Technology	Nov/Dec 2021	National
3	Dr Syed Nawazish Mehdi	Comparison of H-Based Vertical Axis Wind Turbine Blades NACA Series with CFD	5th International Conference on Smart Computing and Informatics (SCI-2021)	Sep 2021	International

Congratulations to **Dr S. Nawazish Mehdi** for getting **Seva Ratna Award-2021** for his distinguished contribution in the field of Engineering for the betterment of society by ECIF (Elders Clubs International Foundation)