

(Accredited by NBA & NAAC with 'A' Grade, Approved by AICTE, Permanently Affiliated to JNTU-H)

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QUATERLY MAGAZINE

VOLUME 1, ISSUE 1

(May 2019-July 2019)



MECHANICAL MARVELS

(QUATERLY MAGAZINE)

DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR 2019-2020

About the Department:

The Department of Mechanical Engineering was started in the year 2009 starting from the inception of the college offering four years full time Bachelors Degree in Mechanical Engineering and two years Masters Degree in Thermal Engineering. The Department of Mechanical Engineering functions with the prime goal of imparting the sound mechanical engineering education, advance the understanding and application of mechanical engineering principles, and improve the quality of life of society through teaching, research, and outreach programs. The Department is accredited by NBA (National Board of Accreditation). The Department has highly qualified and dedicated faculty members and good ambience for research in the areas of Alternative fuels, Composite Materials and CAD/CAM/CAE. The Department has conducted many guest lectures, workshops, faculty development programs, short term training courses besides undertaking funded projects from various sectors.

Vision of the Department:

To offer quality education in the area of Mechanical Engineering and allied fields and to become a centre of excellence through research and consultancy service for the sustainable development of the society.

Mission of the Department:

- To educate and empower the graduates with comprehensive knowledge in the area of Mechanical Engineering
- To promote innovations through research and consultancy
- To inculcate self-learning abilities, team spirit and professional ethics among the students to serve the society

Program Education Objectives (PEO):

The Graduates of programme will

PSO1	Capability to establish a career in Mechanical and interdisciplinary areas.
PSO2	Ability to apply and interpret the acquired Mechanical Engineering knowledge for advancement in social, economical and environmental fields
PSO3	Ability to apply and interpret the acquired Mechanical Engineering knowledge for advancement in social, economical and environmental fields

Program Specific Outcomes (PSOs):

PSO1	Capability to establish a career in Mechanical and interdisciplinary areas.
PSO2	Ability to apply and interpret the acquired Mechanical Engineering knowledge for advancement in social, economical and environmental fields
PSO3	Ability to apply and interpret the acquired Mechanical Engineering knowledge for advancement in social, economical and environmental fields

Chairman's Message:-



**“Education is simply the soul of a society
As it passes from one generation to another.”**

Education is the basis of all progress. The entire purpose of education is not to restrict itself to imparting bookish knowledge only but inculcate humanitarian values like wisdom, compassion, courage, humility, integrity and reliability in a student.

It's my pleasure to interact with you students through this platform.

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 magazine, the outside world may not know of it. The role of a college magazine is therefore vital in promoting what an institution offers. It brings out into the open things hitherto unrevealed. It brings to light the names of the unsung heroes and their mighty deeds.

CH. Gopal Reddy

Secretary Message:-



**“There can be no failure to a man who has
not lost his courage, his character, his self respect, or his
self-confidence. He is still a King.”**

The Institution is known for its enviable achievements not only in higher education but also in games and sports. We are helping the students to develop their knowledge, skills and attitude to use them for growth and prosperity of the society.

Our education empowers the society to grow in real sense by overcoming poverty, ignorance and lack of esteem. Barring all barriers, education should be spread to every stream of society and individual. We have been taking every possible measure to bring the youth under one roof that can provide them modern education to counter challengers ahead. We believe in the development of students in such a way that ensures admirable future for them.

Smt. C.VasanthaLatha

Director's Message:-



I am proud to announce the release of 'MECHANICAL MARVELS' magazine first issue. The magazine signifies the writer's penmanship and also allows them to share their ideas. I acknowledge the efforts of students and staff of Mechanical Department who have taken the initiative to promote the writing and publishing skills of the students. This helps the students to share and express their ideas in an articulate manner.

Students and staff achievements have also been presented which will be a motivational factor for the other students to achieve the standard of excellence. Glad to say that we have achieved our aim of turning this in to reality. I would like to congratulate all the students, teachers, alumni and everyone involved in bringing out its 1st edition.

Wishing everyone loads of success and bright future.

Dr. A. Raji Reddy

Dean (Academics) Message:-



It is a great pleasure and I feel honoured to be a part of the first magazine of Department of Mechanical Engineering. This is one of the greatest departments of CMR Technical Campus. Its passed out Students have shown tremendous potential not only in academics but also in co-curricular and extracurricular activities. At the International conferences and Journals, faculties and students published many technical papers. Students are showing commendable Performance in GRE, CET-MBA and GATE examinations, which can be compared with any other institution in India.

For overall personality development apart from academic, co-curricular and extracurricular is the need of the hour. Students are encouraged to participate in inter and intra-college competition. All these activities help them in getting jobs in reputed companies. They are also admitted in institution of high repute for higher studies in India and abroad. I congratulate all faculties, students and staff for their hard work in publishing e-magazine that will represent the insight of Mechanical department.

Wishing them All best of luck!

Dr. M Ahmed Ali Baig

HOD'S Message:-

I am pleased to know that our students and faculty had successful in bringing their first issue of magazine “**MECHANICAL MARVELS**” for this academic year 2019-20. **MECHANICAL MARVELS**, the departmental magazine has the prime objective of providing aspiring engineers a wide platform to showcase their technical knowledge and to pen down innovative ideas. This magazine is intended to bring out the hidden literary talents in the students and teachers to inculcate strong technical skills among them.

I congratulate and thank all the students and faculty coordinator who have made untiring efforts to bring out this magazine. I wish them all the very best for releasing more such magazines in future.

Prof. D. Maneiah

Preface

I am very much honored and pleased that the Department of Mechanical Engineering has involved in many technical and other activities in building up the student career. Faculties and Students from our department have brought laurels to the institute through their contributions in different activities like academic and research. In this regard, the department has planned to release the magazine quarterly from this academic year onwards. I am also glad to note that the Department magazine enables us to know the hidden talents among the students brought out through their articles. The magazine also gives a glimpse of the college to the public-at-large who are one of the stakeholders of the college. Hope this magazine becomes the reflection of mechanical department and will cater all the needs of readers.

Prof. D. Maneiah

Editorial Board Members**Chief Patrons**

Sri. C. Gopal Reddy, Chairman

Smt. C. Vasantha Latha, Secretary

Patrons

Dr. A. Raji Reddy, Director

Dr. M. Ahmed Ali Baig,
Professor & Dean (Academics)

Editor-in-Chief

Mr. D. Maneiah, Professor and Head

Associate Editors

Dr. A. Praveen Kumar, Associate Professor

Mr. K. Rajanikanth, Assistant Professor

Mr. J. Nagarjun, Assistant Professor

Student Editors

DAV. Tarun Kumar, Final year-Mechanical

M. Shiva Malayappa, Final year-Mechanical

A. Snehith, Third year-Mechanical

MECHANICAL ENGINEERING STUDENTS ASSOCIATION (MESA)**Aim:**

Mechanical Engineering Student Association MESA is to enhance the communication skills and develop the technical thoughts in the students to face the outside world. MESA is running successfully under the guidance of Mechanical HOD Prof. D. Maneiah for II and IV year students.

Objectives:

- To raise the level of Motivation in the students of Mechanical Department.
- To provide a platform to display individual and collective talents.
- To consider the effects of continuously changing & increasing utilization of CAD Application i.e. to consider the current technological facts with technical development programs.
- To mould and prepare the students fit for interviews, group discussion, presentation, leadership skills, technical and administration skills.
- To create a competitive, socialistic and highly interactive environment in the department.
- To work together for the rate of students, weak in communication skills in terms of motivational classes by inviting lectures.

Overall development of a student into action:

- Conducting Co-curricular and extracurricular activities to showcase their creative capabilities by conducting Guest Lectures, Workshops, Group Discussions, Mini projects, seminars etc. by the on Latest Technology.
- Inviting from industries to have Technology Up graduation.
- Alumni sharing their Experiences with the students.
- Conducting Webinars and running NPTEL video courses, etc.

MESA SHEUDLE:

SL.NO.	LIST OF PROGRAMS		Dates
1	Energy sources (renewable & non renewable)		06.08.2019
	I	II-I POSTER PRESENTATION	
	II	IV-I PPT	
2	About My dream company(in which company to join)		13.08.2019
	I	II-I PPT	
	II	IV-I POSTER PRESENTATION	
3	Motivation by a Scientist from BHEL		20.08.2019
4	Legendary scientists(MECH)		27.08.2019
	I	II-I POSTER PRESENTATION	
	II	IV-I PPT	
5	Latest Trending Mechanical technologies.		03.09.2019
	I	II-I PPT	
	II	IV-I POSTER PRESENTATION	
6	Motivation by a Scientist from DRDO.		17.09.2019
7	My Favourite Subject in Mechanical Engineering		24.09.2019
	I	II-I POSTER PRESENTATION	
	II	IV-I PPT	
8	Different labs in the department of Mechanical Engineering		15.10.2019
	I	II-I PPT	
	II	IV-I POSTER PRESENTATION	
9	Mini project Expo.		22.10.2019
10	Motivation by a great AUTHOR		29.10.2019
11	Closing of MESA		05.11.2019

MESA BODY MEMBERS:

Chief patron	Sri. C. Gopal Reddy, Chairman
Patrons	Smt. C. Vasantha Latha, Secretary Dr. A. Raji Reddy, Director Dr. M. Ahmed Ali Baig, Professor & Dean (Academics)
Head of the Department	Prof. D. Maneiah
Faculty Advisor	Zareena SK J.Nagarjun
President	A.Sai Krishna IV-B
Vice president	B.Santosh Reddy IV-A B.Nikhil Reddy II-C
Secretary	S.Shiva Shankar IV-C Yogesh II-A

ADVENTURE RELOADED

SAE Baja Virtuals 2019: Ashley (Final year-B) writes....



Society of Automotive Engineers is a society that has been guiding innovation in the automobile community and has been a corner stone for automotive research and development. In order to promote real-life engineering applications and healthy engineering practices, they conduct several competitions for the engineering students all across the globe.

One such is Baja (pronounced as ba-ha) which is an annual All-Terrain Vehicle (ATV) Building Competition. It gathers a great amount of spectators, competitors and companies as well. The Competition has two races, one held in ARAI Test track in Pithampur (January) and another in Punjab (March) with two categories: mBaja (Conventional gasoline engine) and eBaja (Electric Drive train). There were more than 200 colleges applying for mBaja and more than 40 colleges applying for eBaja this year. First the teams apply for virtual round where they showcase the vehicle plan, analysis and design. If selected from virtuals, the teams will head to build the vehicle in due course of time.

Our college team was formed of 25 members, majority of final years & few third years of Mechanical Engineering and two second years of ECE Background. The race against time began when we first registered and had started preparing the presentation for virtuals. A delegation of 5 members representing the team - Bazooka consisting of Nilesh (Captain & Driver, Steering), Ashley (Vice-Captain, Brakes & Electronics), Suraj (Design), Srujan (Suspension) and AmmuAbishek (Powertrain) accompanied by the Faculty Advisor Mr. M. Ajay Kumar, travelled to Chitkara University, Chandigarh for virtuals held from 12th July to 14th July 2019. We had presented our presentation, our calculations, analysis results, innovations, work plan and budget, design validation plan. Three members of the team also attempted the test on rulebook, general vehicle parameters, and generic mechanical subjects. It was truly a great experience and we are looking forward to the day when a new creation will be born in this campus, not only driving across all terrains, but beyond the limits, into glory and success. The time spent to design the vehicle, part by part, bolt by bolt was really an enthralling experience and a great learner. We are really grateful to the management, Director, our HOD, Prof. D. Maneiah and the mechanical faculties' fraternity for guiding us constantly and supporting us in this journey. We also thank DIY-Guru for providing us with the technical aspects of the vehicle building and design.

GRANTS/CONSULTANCY

We are glad to share that the Department of Mechanical Engineering has received the Project worth of **Rs.36 lakhs** from the Department of Science and Technology, Government of India under the TIDE scheme. We thank the Management, Director, Head of the Department for their continuous support and motivation.

The details of the project are as follows:

- **Project Title :** DEVELOPMENT OF BIO-DEGRADABLE PROSTHETIC LIMBS USING 3D-PRINTING FOR MOMENT DISABILITY PEOPLE
- **Total Cost :** Rs. 35,90,316/-
- **Funding Agency :** DST/SEED/TIDE/2018/109
- **Principal Investigator:** **Co-Principal Investigators:**



Dr.M.Shunmugasundaram
Professor



Dr. M. Ahmed Ali Baig
Prof. & Dean (Academics)



Mr. M.Ajay Kumar
Asst. Prof.

- **Outcome:**

One of the best solution is to develop prosthetic devices within a short period of time is additive manufacturing or 3-D Printing. In this project the bio-degradable materials are going to use for manufacturing the prosthetic limbs using Fused Deposition Modeling (FDM). The bio-degradable materials are used to reduce the weight, cost and increase the durability of the limbs. The FDM process is one of the better and affordable additive manufacturing techniques for developing the prosthetic limbs at low cost by compare to other technologies. This will increase durability, comfort and reduces the stresses on the bone of the patient. The costs of the prosthetic limbs are also reduced.

Students Articles

A.Snehith III Mech-C writes:

The team consisting of 4 members from Mechanical Engineering Department have attended the workshop about **AUTOMOBILE AND IC ENGINE DESIGN** at NIT Warangal dated 15-17 March 2019. Here, we were informed of the design methodology and thinking strategies for going about building a vehicle. Being an interactive session, we were taught on designing the chassis, choice of power transmissions, modes of coupling the two gear trains and integrating the IC engine for maximum torque and speed conditions. The whole work shop as a whole opened our minds to a variety of design possibilities and also methods going applied about designing, manufacturing and the testing the car.



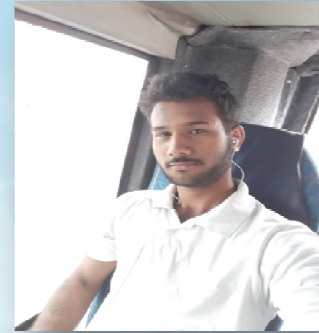
Our students with Mr. Durga prasad (Hyundai)

M.Shiva Malayappa IV Mech-B writes:

Global 3D Labs proudly presents the inauguration of the B. M. Birla Science Museum on 26 July 2019. ‘**Do it yourself**’ styled competition will be conducted to increase awareness about space technologies through various tools of the Industry 4.0. The competition was to enhance the students creativity in designing. Where the students got the prizes and participated certificates. These are the students of CMRTC who participated in competition and won the prize.



Ammu Abhishek III Mech-A writes:



The difference between life and death is just a vehicle called “AMBULANCE”. When a person meets with an accident, or when a building catches fire or a natural calamity occurs, the only hope for victim and his family is an ambulance. But according to EMRI, the average response time has gone up with an ambulance taking 40 minutes to rush a patient to a Hospital owing

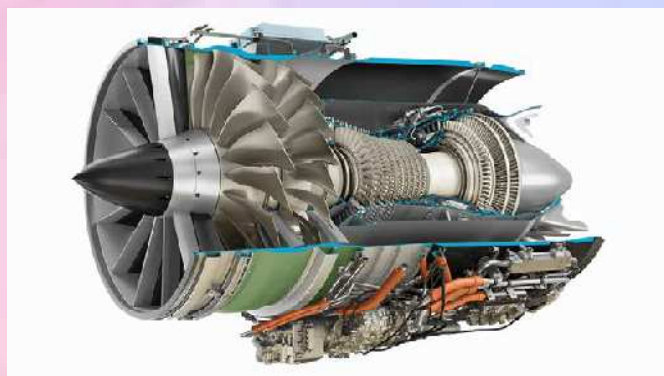
increased traffic density”. To overcome this problem, the solution we suggesting is DRONE AMBULANCE. A drone ambulance consists of a med box with necessary first aid and some gadgets like temperature sensor, etc. This drone can be controlled by just sitting in a control room it is monitored by a professional doctor who can guide a common man to do first aid. An ambulance will be following this drone to carry the patient to hospital after temporary treatment. The modern day traffic has become an issue for paramedical services. so in near future it will be of a great use.

K. Sai Teja III Mech-C writes:

GE unveils new supersonic commercial jet engine:

GE Aviation has given impetus to the revival of civilian supersonic flight by revealing a new family of engines designed to fly faster than the speed of sound. Called the Affinity, the new engine will be incorporated into the Aerion AS2 supersonic business jet, which is being developed in partnership with Lockheed Martin, GE Aviation and Honeywell, and could cut the time of a transatlantic flight by three hours.

GE claims that the Affinity, which is based on the company's supersonic fighter jet experience and lessons learned from building engines for the Boeing 787 Dreamliner, will be up to the job. GE isn't giving out any details at the moment, but it says that the new family of engines will operate at up to 60,000 ft (18,000 m) and be able to meet the new noise requirements currently under revision by various air authorities. Design to reduce air drag over the wing by up to 60 percent, and overall drag by 20 percent. The AS2 is scheduled to make its first flight in 2023 and is aiming for certification in 2025.



Bharadhwaj III-C writes

Questions faced in MRF Interview

1. Tell me about yourself.
2. Describe your projects. (Lot of questions from projects)
3. What are your other areas of interest?
4. What is the section modulus, explain its significance in designing?
5. Have you ever worked with an analysis software?
6. What is the difference between designing softwares?
7. Where do you want to see yourself after 5 years?
8. Would you like to go for higher studies?
9. Where do you want to work for our organization?
10. Any questions from your side?

K.SRIKANTH, Assistant Professor Writes

I am happy to share that I have published a book titled

Development of Labyrinth Type Solar Thermal Energy Storage System For drying Application

With ISBN NO. 978-620-0-11406-8

Co-Authors: Prof. D.Maneiah, Dr. A. Praveen Kumar

The book was published by LAMBERT Academic Publications, Germany



PLACEMENTS 2019



SURYANENI ROHAN RAO
157R1A03E8
ALIENS (2.40 LPA)



MEKALA UDAY VARDHAN
REDDY
157R1A0340
AMAZON (2.20 LPA)



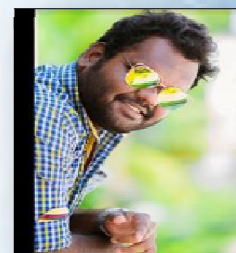
ABDUL KARIM FAISAL
157R1A0362
AMAZON (2.20 LPA)



YENUMULA MENESWAR
REDDY
157R1A03C0
FACE (3.0 LPA)



BALABADRA SRINIVAS
167R5A0318
JUST DAIL(2.9LPA)



ASINIPARTHI JASWANTH
KUMAR
157R1A0308
MULTIVISTA (2.0LPA)



BEPYATA SHIVA
SAI157R1A0312
MULTIVISTA (2.0LPA)



TRIKONA NAGARAJ
167R5A0326
ALIENS (2.40 LPA)



YENIGALLA VISHESHA SAI
157R1A03F2
MAHAVEER (2.4LPA)



K.RAMU
157R1A0398
MASTERS PRECI TOOLS
(1.8LPA)



S.SAIKIRAN
157R5A0340
MASTERS PRECI TOOLS
(1.8LPA)



NANAVATH MANJULA
157R1A0397
SPICEJET (4.2LPA)



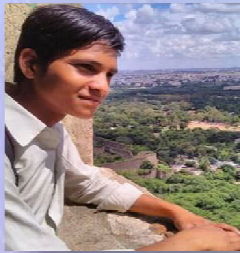
SANTOSH
157R1A0382
STORM INTERNATIONAL
GROUP (4.0LPA)



MD.IFTEKHAR
167R5A0301
CYCHE DIE CASTING
(2.16LPA)



R.RAKESH KUMAR
167R5A0316
CYCHE DIE CASTING
(2.16LPA)



SIDDESHWAR
167R5A0314
MARS (2.16LPA)



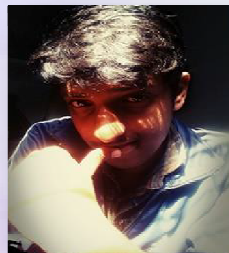
PRASHANTH KUMAR
167R5A0310
NAINA POWERS LIMITED
(1.8LPA)



MANOJ
167R5A0303
VASANTHA TOOLS LIMITED
(1.6LPA)



RAJKUMAR
167R5A0309
GMJ TRADERS &DEVELOPERS
(2.5LPA)



SAI SANDEEP
167R5A0308
RENUKA PLASTICS PVT LTD.
(2.0LPA)



MOHAMMED AFRID
167R5A0321
GMJ TRADERS
&DEVELOPERS (2.5LPA)



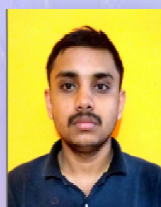
V SANDEEP
157R1A03B2
WINDCARE PVT LTD
(2.5LPA)



SRI NAGA SUMANJARI DEVI
157R1A0390
APIK DIGITAL
(1.8LPA)

NPTEL MOODLE COURSES

Swayam-NPTEL is the largest provider of MOOCs in India today, especially the Engineering stream, with a credible proctored certification exam that clearly qualifies and differentiates the learners who do these courses. From March 2014 NPTEL has been offering online certification for its courses, the highlight being the certification exam through which the student gets an opportunity to earn a certificate from the IITs! These are available at: <https://swayam.gov.in>. To take this initiative forward and to encourage more students across colleges NPTEL initiated the Local Chapter Concept. CMR Technical Campus initiated the step to walk with the timeline and started the NPTEL chapter. In the last semester 167 students and 10 faculties have registered and received certificates. Currently all the second year, third year and final year students and faculties are registered for NPTEL courses in our Department. The following students are national level toppers in NPTEL online exam in Rapid Manufacturing.



ASHWANI ASHISH 77%



BENKI SANTOSH REDDY 79%



ASHLEY JUDE 78%



KONDA VIDYA SAGAR 78%



L.SAI KRISHNAN 77%



SIVANGI VENU 74%



KARIPE NAGA PRASAD 74%

We are happy to share that our faculties Mr.Nageswararao, and Mr. A. Ramesh, Assistant Professors in the Department of Mechanical engineering have reviewed and translated the files of NPTEL course “*Fluid Dynamics and turbo machines*” for 22 hours in Telugu language and received certificate of appreciation from IIT Madras.



STUDENTS INTERNSHIP:

S.No	COMPANY	Hall ticket number	Name of the Candidate	No. of days
1	ECIL	167R1A0369	DEGALA A V TARUN KUMAR	30
2	LOCO SHED KAZIPET	187R5A0354	ANKAM SNEHITH	15
3	LOCO SHED KAZIPET	187R5A0356	KORABOINA SAI TEJA	15
4	SR TECHNOLOGIES	157R1A03D9	MD KHAJA MOINUDDIN	15
5	BHEL	167R1A03A1	ARRA ANIL REDDY	15
6	BHEL	167R1A03A2	BANOTH NAVEEN	15
7	KTPS	167R1A03A3	BANOTH VINAY	15
8	ITC	167R1A03A5	CHINNALA SHASHIDHAR	15
9	NAMBIRAJAN FOUNDATION	167R1A03A8	ADITYA PANGULURI	15
10	PARAMOUNT AUTO BAY SERVICES	167R1A03B0	KONDURU SAI ANIRUDH	15
11	DIESEL LOCO SHED	167R1A03B1	KONNE AKHIL	15
12	GLOBAL 3D PROJECTS	167R1A0368	M.SHIVA MALAYAPPA	15
13	THE SINGARENI COLLIERIES COMPANY LTD	177R5A0355	VADDEPALLI SAIKRISHNA	15
14.	MAHINDRA TRACTORS SHOWROOM	177R5A0359	D.JEEVAN KUMAR	15
15.	BHEL	177R5A0362	G.SAI KUMAR	15
16.	BHEL	177R5A0363	D.PRASANTH	15
17.	PRASAD SEEDS PVT LTD	177R5A0367	K.NAGARAJU	15
18.	BHEL	177R5A0368	SUNKARI SHIVASHANKAER	15
19.	BHEL	177R5A0369	TATIPAMULA ABHISLISH	15
20.	BHEL	177R5A0370	K.YESHWANTH RAO	15
21.	PRASAD SEEDS PVT LTD	177R5A0371	MADUPALLY VIJAY KUMAR	15
22.	PRASAD SEEDS PVT LTD	177R5A0372	GANGARAPU HARISH	15
23.	BHARATH DYNAMICS LIMITED	177R5A0346	B.PURNACHANDER RAJU	15
24.	MAHINDRA TRACTOR PLANT	177R5A0347	KONDA VINAY KUMAR	15
25.	MAHINDRA TRACTOR PLANT	177R5A0348	KOTHA KAPU.GOUTHAM RAJ	15
26.	BHARATH DYNAMICS LIMITED	177R5A0344	M SRIKANTH	15
27.	BHEL	177R5A0343	POLASA SAI KUMAR	15

Faculty Publications in the last academic year (2018-2019)**Journals**

1. **M.Shunmugasundaram & D.Maneiah**, “Wastage Minimization and manufacturing Cost Reduction Raw Edge Cogged belts by Lean Manufacturing Method” International Journal of Mechanical Engineering & Technology, 2018, Vol.9, No.7, pp.565-574.(Scopus Indexed)
2. **M. Shunmugasundaram, D.Maneiah & RajanikanthKoora**, “Design and Implementation of Cellular Manufacturing System in Medium Scale Industry by Traditional Methods”, International Journal of Mechanical Engineering & Technology, 2018, Vol.9, No.8, pp.678-686(Scopus Indexed)
3. **M. Shunmugasundaram, D.Maneiah & CH.Nagaraju**, “Design and analysis of functionally graded cylindrical shell by applying static and buckling load” International Journal of Mechanical Engineering & Technology, 2018, Vol. 9, No. 11, pp. 1808-1821.(Scopus Indexed)
4. **M. Shunmugasundaram, A. Praveen Kumar & D. Maneiah**, “An experimental analysis and process parameter optimization on friction stir welded dissimilar alloys” International Journal of Mechanical Engineering & Technology, 2018, Vol. 9, Issue 2, March 2019, pp. 407-414.(Scopus Indexed)
5. **SK. Khasim Sharif and Jana Nagarjun**, Design and Modelling of Diesel Particulate Filter to Reduce the Emissions from CI Engine, International Journal of Mechanical Engineering and Technology 10(1), 2019, pp. 226–233.(Scopus indexed)
6. **Tulasi Tirupati, Kursam Krishana, K Rajanikanth & J Durga Prasad Reddy**, A Review on Ligno cellulosic Biomass Conversion to Diesel Compatible and Useful Platform Chemicals. International Journal of Mechanical Engineering and Technology 10(7), 2019, pp. 2133 - 2140.
7. **K.Ratna Kumari, A. Raji Reddy**, Investigation on effect of nano particle additives in biodiesel on CI engine, International Journal of Management, Technology and Engineering Volume 8, Issue XII (2018), pp. 4124-4134.
8. **M.Ahmed Ali Baig, Asthosh Saxena**, Maximization of Photovoltaic Energy Generation by Time and Location Based Sun Tracking System, International Journal of Mechanical and Production Engineering Research and Development Vol. 8, Issue 4, (2018)pp. 437-444 (Scopus Indexed)

9. **Sher Afghan khan, Abdul aabid & M. Ahmed Ali Baig**, Design and fabrication of unmanned arial vehicle for Multi-mission Tasks, International Journal of Mechanical and Production Engineering Research and Development Vol. 8, Issue 4, (2018) pp. 475-484 (Scopus Indexed)
10. **A.Praveen Kumar**, 2019. Experimental analysis on the axial crushing and energy absorption characteristics of novel hybrid aluminium/composite-capped cylindrical tubular structures, Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications; pp.1-19. <https://doi.org/10.1177/1464420719843157> (**SCI Impact factor=1.56**)
11. **A.Praveen Kumar**, Annisa Jusuf, Sigit Puji Santosa and Tatacipta Dirgantara (2019) Investigations on the influence of spherical caps in the axial impact characteristics of press-formed cylindrical tubular structures, Advances in Structural Engineering, pp. 1-14. <https://doi.org/10.1177/1369433218819576> (**SCI Impact factor=1.32**).
12. **A.Praveen Kumar**, S. ShriVaathsav, 2019. Influence of forming parameters on the crash performance of capped cylindrical tubes using LS-DYNA follow-on simulations. International Journal on Interactive Design and Manufacturing, pp. 1-19 <https://doi.org/10.1007/s12008-019-00552-z>. (**Scopus indexed**)
13. **A.Praveen Kumar** and M Sathish Kumar (2019). Deformation characteristics of press-formed cylindrical tubes with shallow and hemispherical caps for frontal crash protective structures. International Journal of Protective Structures, 1–19, 86, pp. 83-93. <https://doi.org/10.1177/2041419619830701> (**Scopus indexed**)
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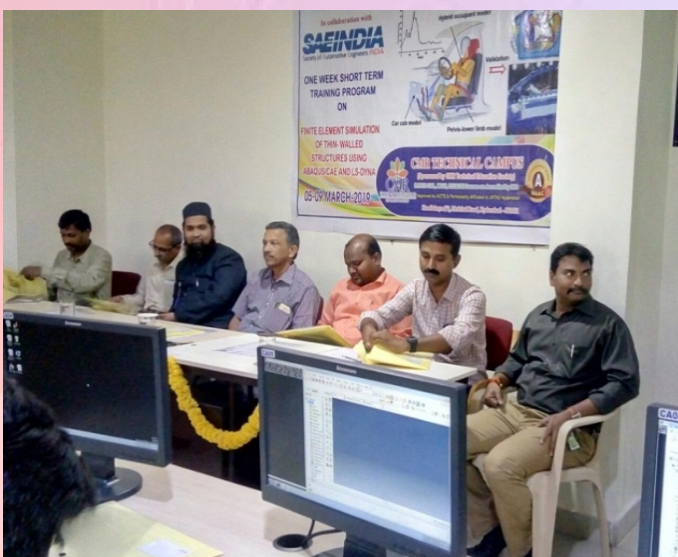
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Conference

1. Salman Ahmed N. J., H. M. T. Khaleed, **Maughal Ahmed Ali Baig**, T. M. Yunus Khan, and Sarfaraz “Effect of viscous dissipation on aiding flow heat and mass transfer in porous cavity” Cite as: AIP Conference Proceedings 2104, 030058 (2019); Published Online: 07 May 2019, <https://doi.org/10.1063/1.5100485>.
2. T. M. Yunus Khan, **Maughal Ahmed Ali Baig**, Azeem, N. Ameer Ahamad, and Irfan Anjum Badruddin “Heat and mass transfer with viscous dissipation in porous medium: FEM based methodology” Cite as: AIP Conference Proceedings 2104, 030058 (2019); Published Online: 07 May 2019, <https://doi.org/10.1063/1.5100485>.
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5. **M.Shunmugasundaram**, D.Maneiah, M.Sai Krishna kanth, G.Kranthi Kumar" Experimental Investigation and Process Parameter Optimization on Mechanical Properties of Friction Stir Butt Welded Joints of Dissimilar Alloys” International Conference (ICDMC2019) held at VelTech University, Chennai, 28 & 29 March 2019.

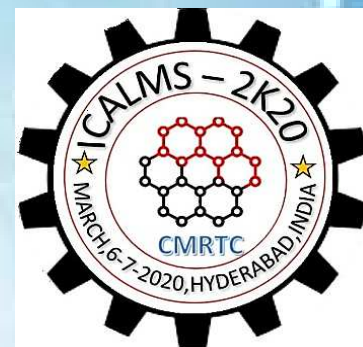
STUDENTS SHORT-TERM TRAINING PROGRAMME

The Department of Mechanical Engineering have organized One week short term training program on ***“FINITE ELEMENT SIMULATION OF THIN-WALLED STRUCTURES USING ABAQUS/CAE AND LS-DYNA”*** from **05-09 March 2019** in collaboration with SAE India chapter. 29 B.Tech students were participated in the program. The short-term training programme aims discussed the themes such as (1) Basics of finite element analysis procedures. (2) Material modeling and properties assignment. (3) Application of loading and boundary conditions. (4) Impact crash simulation of thin-walled structures. (5) Hands-on experience of FEM using ABAQUS/CAE and LS-DYNA.



The most awaited event**First International Conference on Advanced Light-weight Materials and Structures (ICALMS-2k20)**

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We are glad to share with you that the Department of Mechanical Engineering is organizing its **“First International Conference on Advanced Light-weight Materials and Structures (ICALMS-2k20)”** scheduled on 6-7, March 2020. The conference theme for the ICALMS 2k20 is *“Innovations & Future Trends in the era of advanced composites”*, with the objective of exploring the latest research into composite materials and how they will be used in the future covering multiple applications including aerospace, construction, wind energy, automotive, electronics and so on. Leading experts from India and abroad would be sharing their experience and expectations in this conference. All the accepted abstracts will be published in the conference proceedings with ISBN Number. All the registered papers (extended to 8-10 pages) will be published in any one of the below mentioned Scopus indexed High quality, reputed Journals after double blind peer review by technical experts.

1. **Materials Today: Proceedings (Elsevier)**
2. **Lecture Notes in Mechanical Engineering (Springer Nature)**
3. **FME Transactions (University of Belgrade)**
4. **International Journal of Vehicle Structures and Systems (MATFREE)**

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From Student Editors Desk:

Dear Friends,

We feel honoured and pleased for the opportunity we got to present before you the much awaited First issue of our Department magazine **“MECHANICAL MARVELS”**. This issue brings forward the memories of events which the department has witnessed during the academic year 2019-2020. We can definitely say that the department has scaled new heights as every year passed. Representing the student community, we put this onus on to the dynamic and student friendly Head of Department Prof. D Maneiah, who with his visionary thoughts and actions has infused a confidence in students that they can achieve anything when backed with hard and smart work.

We tried our best in gathering all the events happened throughout the year and present to you all as magazine. We take this opportunity to thank all the faculties and friends who helped along with all departmental responsibilities spared time, in giving a proper shape to this first issue. We thank all the Faculties in moulding us as engineers.

**THE DESIGN TEAM****DAV TARUN KUMAR****M.SHIVA MALAYAPPA****A.SNEHITH**

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