

## Newsletter

Department of Mechanical & Production Engineering Muffakham Jah College of Engineering & Technology, Hyderabad.

ANNUAL ISSUE OF THE YEAR 2021-22

#### **EDITORIAL BOARD:**

- Dr. Mohd. Viquar Mohiuddin, Professor & Head, M.E.D.
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- > Dr. K. Hema Latha, Associate Professor, M.E.D.
- Mr. Syed Adil, Assistant Professor, M.E.D.

#### **QUOTES:**

- "You must be the change you wish to see in the world" – Mahatma Gandhi.
- "Education is the most powerful weapon, which you can use to change the world" – Dr. APJ Abdul Kalam.
- "Science is organized knowledge. Wisdom is organized life."
   Immanuel Kant.

## VISION AND MISSION THE DEPARTMENT

*Vision:* To produce high caliber, competent, industry oriented Mechanical Engineers

**Mission:** To impart quality education by providing state of art technical facilities and enhance the professional abilities to meet the demands of the ever-changingmanufacturing industry.

# **Refresher Programme Conducted By The Department:**



Mechanical Engineering Department has successfully conducted AICTE-ISTE sponsored refresher program on "Nanotechnology Applications in Mechanical Engineering", 10<sup>th</sup> -16<sup>th</sup> December, 2021. They received a funding of Rs.93,000/- from AICTE for the conduction of the program. Nanotechnology is an emerging area which has applications in every walk of life. This emerging technology can be applied in any field of science with the aid of applied in any field of science with the aid of the core engineering like mechanical engineering. Thus, this refresher program is focused on nanotechnology applications in mechanical engineering. The inaugural session was graced by Col. Venkat, Director, FDP, AICTE, Dr. VenkatSubbaiah, Vice President, ISTE, New Delhi and Dr. Manipal Singh Rawat, Principal, MJCET. This six day online refresher program has eminent resource persons from academia like Dr. Absar Ahmed, Director, Interdisciplinary Nanotechnology centre, AMU who is recognized as top 2% scientists in nanotechnology by CSIR, Pune, Dr. Manorama, Scientist, CSIR, is considered as top 5% scientist by Stanford University, Prof. AnandhSubramaniam& Prof. Shantanu Bhattacharya from IIT Kanpur, Prof. Ghanashyam Krishna and Prof. Dibakar Das from University of Hyderabad, Prof. D. Ravi Shankaran from University of Madras, Prof. P.V. Rao from IIT Delhi, Prof. Aravind Kumar from IIT Hyderabad, Prof. A. R. Bhattacharya from IIT Bombay and from research organizations – Dr. MenakaJha,

#### **CLARION**

Scientist, INST and Mr. D. Gokul, Scientist, ISRO. The sessions on NEP 2020 were taken by Dr. Adam Khan and on Stress management by Dr. MangalDhend, founder of Vihangam Techno Holistic Organization. As per norms of AICTE-ISTE only 100 participants were selected to attend the refresher program. The participants are from PAN India i.e., Jammu and Kashmir to Kerala, Manipur to Maharashtra. The participants were from Delhi, Chhattisgarh, Gujarat, Karnataka, Telangana, Andhra Pradesh, Tamilnadu etc. The program was successfully organized by the program coordinator, Dr. Ishrat Meera Mirzana, with the support of organizing team – Dr.SyedFerhatullah Hussainy, Dr.Mohd. Viquar Mohiuddin, Dr. G. Sailaja, Dr. Raheem Junaidi. The valedictory was graced by the chief guest - Prof. T. Ramamohan Rao, Executive council member, ISTE. The department of mechanical engineering is thankful to AICTE and ISTE for providing funding to organize the refresher program and Janab. Zafar Javeedsaheb, Hon. Secretary, SUES and Dr. Basheer Ahmed, Advisor cum director, MJCET for their support and encouragement.

## SAE-BAJA 2022





SAE BAJA 2022 unveiling

e-BAJA is an intercollegiate competition in which various colleges from all over India including IITs and NITs compete. The main task involved is to design and manufacture an electric all-terrain vehicle which is capable of performing in harsh conditions. The competition had three phase which included various presentations, report submissions and finally fabrication of the vehicle. The Team was lead by Project Supervisors involved Dr. Mohammad Viquar Mohiuddin, Professor & Head MED, and Professor Dr. D. Srinivas Rao, Professor, Mechanical Engineering Department.

## HBL – TAKE OUT ROBOT -MJCET



As R & D work has been extensively carried out in the college in the field of robotics, HBL Power Systems Limited was impressed about the same when it had a visit to the college to sign an MoU with MJCET. Thus, a commercial order for design and fabrication of the "Take out Robot" was offered to Mechanical and ECE departments for the execution of the same for Injection molding machine utilized for the battery covers.

One of the most widely used technologies in industries is robotics. The increasing demands and development require complex procedures and precise approach especially in the manufacturing. This is achieved by the introduction of 3-axis servo robot in such workplaces. The most effective usage of the robot is when it is completely autonomous and is intelligent enough to perform the required operations on different types of objects. Take-Out robot presents this usage by implementing the concepts of picking and placing an object to a required area. The objects present in the workspace are determined with their coordinates in the workspace. The Z-axis of Take-out robot reaches the object's position using mechanical power transmission, picks the object with its end effector, and places it at the desired position within the workspace. Thus, Take-Out robot is an efficient manipulator.

The objective is to incorporate automation into the system by using a PLC, the coordinates of the object in the workspace are determined. This gives the joint angles through which the axis of the Take-Out robot is to be actuated, to reach the object. Hence the arm executes the pick and place task. One of the tasks involved over here is communication. The final key point of this project is the integration of the above-mentioned tasks to form a robust and complex 3-Axis servo robot system that is very strong enough to pick up objects for the task of placing as would be done by a human being.

The Take-out Robot will be utilized for Injection Molding Machine, first two phases of the project have been completed and the next phase consists of the procurement of materials by HBL, which will be assembled and tested at MJCET facility. The project is being accomplished by Mechanical and ECE department faculty and students.

# DEPARTMENTAL ACTIVITIES

## Workshops, Seminars and FDP's Conducted by Department

The following workshops were conducted:

- One week workshop on "Research Methodology Part -1" from 13<sup>th</sup> to 18 September 2021. The Participants were benefited and updated their skills in writing technical papers with adequate examples.
- > One week workshop on "Research Methodologies Part- 2 from 8<sup>th</sup> to 13<sup>th</sup> November 2021.
- > One week workshop on "Research Methodology Basic Level" from 24<sup>h</sup> to 29<sup>th</sup> January 2022.
- > One week workshop on "Research Methodology and Types" from 7<sup>h</sup> to 12<sup>th</sup> March 2022.
- > One week workshop on "Research Methodology Advance Level" from 16<sup>th</sup> to 21 st May 2022.
- One week workshop was organized by MED, on Research Methodology Advanced Level from 16<sup>th</sup> to 21<sup>st</sup> May 2022.
- > One day seminar on start up entrepreneurship development was organized on 7th July 2021.
- > One day seminar was organized by MED, on start-up entrepreneurship development on 7<sup>th</sup> July 2021.
- One week workshop was organized by MED, on Understanding Automotive Industry from 23<sup>rd</sup> to 28<sup>th</sup> August 2021.
- ▶ One week workshop on Research Methodology Part 1, from 13th to 18th September 2021.
- One Week Online Induction / Refresher Program on Nanotechnology Applications in Mechanical Engineering AICTE – ISTE Sponsored was organized by MED from 10<sup>th</sup> to 16<sup>th</sup> December 2021.
- A One week workshop was organized by MED, on Research Methodology Part 1, from 13<sup>th</sup> to 18<sup>th</sup> September 2021.
- A seminar on Project based Learning was conducted on 14<sup>th</sup> December, 2021 with resource person as Mr. Bharat Maharaj, General Manager, P&W/UTC India Pvt ltd.
- > One week workshop on Research Integrity and awareness from 17 th to 22 nd January 2022.
- A Seminar on Electric Vehicles by Dr. Mohammed Mohiuddin, Professor, MED, MJCET was arranged on 25<sup>th</sup> May 2022.
- A workshop was conducted on CNC training on 15<sup>th</sup> November, 2022 with resource person as Dr. Hakeemuddin, Ahmed, Professor and Head, MANNU Polytechnic College, Kadapa.

## **RESEARCH PROJECTS:**

Two projects of MED are approved in the year 2021-22.

- Amount of Rs. 200000 (Rupees Two Lakhs Only) is granted for the project titled "Design and Fabrication of Student Formula Racing Vehicle" in April, 2022. The project is under the guidance of Mr. Mohd. Viquar Mohiuddin, Professor & Head, M.E.D, and Mr. Hasham Ali, Assistant Professor. MED, MJCET.
- Amount of Rs. 250000 (Rupees Two Lakhs Fifty Thousand Only) is granted for the project titled "Take Out Robot And Injection Molding Machine" in October, 2021. The project is under the guidance of Mr. Mohd. Viquar Mohiuddin, Professor & Head, M.E.D, and Mr. Hasham Ali, Assistant Professor. MED, MJCET.

## **INDUSTRIAL VISITS ARRANGED FOR THE STUDENTS:**

- An Industrial visit to B.H.E.L R&D, Hyderabad was arranged on 23<sup>rd</sup> January, 2021, where 7 Faculty members were involved.
- An Industrial Visit to Surana Industries, Hyderabad was arranged on 18<sup>th</sup> June 2022.

An Industrial visit to Nuclear Fuel Complex, Hyderabad was arranged on 25<sup>th</sup> August, 2022, where in 20 faculty members and 67 students were involved. The trip was organaized on the occasion of Azadi ka Amrit Mahotsav, MJCET in collaboration with NFC. The trip was organized in continuation with the "Industry Expert talk" on 20<sup>th</sup> August, 2022, for the faculty and students (B.E and M.E programmes) of MED, CED, EED, ECE and CSE.

## **GUEST LECTURES ORGANIZED BY THE DEPARTMENT:**

- A Guest Lecture on Modern Manufacturing Processes was conducted on 18<sup>th</sup> April, 2022 by Mr. Sarthak Surana, Managing Director, Surana Industries.
- A Guest Lecture on "Organizational Activites & Career Opportunities" by Shri RVRL Vishveshwar Rao Garu, General Manager, (EPC) was arranged on 20<sup>th</sup> August 2022.
- A Guest Lecture on "Refinement of Polymers & Composite Products" by Prof. Dr. Jens Schuster, Director & Head, Hochschule Kaiserslautern, University of Applied Science, Germany was arranged on 12<sup>th</sup> Dec 2022.

## PAPERS PUBLISHED / PRESENTED BY FACULTY MEMBERS:

- Dr. Syed Ferhatullah Hussainy "Density of fluoride glasses through artificial intelligence techniques", Ceramics International, Volume 47, Issue 21, 2021, Pages 30172-30177, ISSN 0272-8842, https://doi.org/10.1016/j.ceramint.2021.07.196.
- Dr. Shaik Khadar Vali, "Investigation of hybridized composite pressure vessel," E3S Web Conf., 309 (2021) 01157, https://doi.org/10.1051/e3sconf/202130901157
- Dr. Mohammad Sadak Ali Khan "Investigation the Flexural Characteristics of GFRP Composite Laminate with Artificial Delamination", Proceedings of the 2nd Indian International Conference on Industrial Engineering and Operations Management Warangal, Telangana, India, August 16-18, 2022, IEOM Society International.
- Dr. Mohammad Sadak Ali Khan "Experimental Analysis of Flexural Properties of E-Glass/Epoxy Laminate Composite with Artificial Delamination," IOSR Journal of Mechanical and Civil Engineering (IOSR-IMCE), e-ISSN: 2278-1684, p-ISSN: 2320-334X, Vol. 19, Issue 1 Ser. IV (Jan. – Feb. 2022), pp: 10-18.
- 5. Dr. Mohammad Sadak Ali Khan, "Optimization of Exhaust Nozzles in High-Speed Vehicles," Patent Application No: 202241026557 A. dated 03 June 2022.
- Dr. Mohd. Viquar Mohinuddin, "Parametric Optimzation of Aluminium Alloy Centrifugal Casting Using Simulation Technique," IOSR Journal of Mechanical and Civil Engineering (IOSR-IMCE), e-ISSN: 2278-1684, p-ISSN: 2320-334X, Vol. 17, Issue 5 Ser. V (Sep. – Oct. 2020), pp: 13-20.
- 7. Dr. Mohd. Viquar Mohinuddin, "Solar Charkha Retrofit, Trends in Machine Design," https://engineeringjournals.stmjournals.in/index.php/TMD/index. Vol 9, No 3 (2022)
- Dr. Ishrat M.M, "Study of Phonology, Grammar and Semantic Changes within Historical Linguistics, Technoarete Transactions on Language and Linguistics, Vol – 1, Issue – 1, January 2022
- Dr. D. Srinivas Rao, "Machining improvement on MDN 350 alloy with optimum machining parameters," International Conference on Advancements in Materials and Manufacturing, 2021, MLR Institute of Technology, Hyderabad, August 27-28, 2021.

- Dr. G. Prasanna Kumar "Structural Analysis on Major Components of an Automobile Using FEA, Proceedings of the International Conference on Advanced Materials and Computational Methods in Mechanical Engineering", 2022,ISBN: 978-93-96259-89-9
- Dr. G. Prasanna Kumar, "Analysis of optimum stacking sequence of GFRP composite laminate under axial loading condition", Materials Today: Proceedings, Volume 62, Part 6,2022,Pages 2940-2945, ISSN 2214-7853, https://doi.org/10.1016/j.matpr.2022.02.510.
- Dr. K. Hema Latha "Design and analysis of magneto-rheological brake envelope", Proceedings of the International Conference on Advanced Materials and Computational Methods in Mechanical Engineering (ICAMCMME- 2022)", ISBN: 978-93-96259-89-9
- 13. Dr. K. Hema Latha, "Design and Analysis of a Remotely Operated Mini Forklift Bot", E3S Web Conf., 309 (2021) 01168, https://doi.org/10.1051/e3sconf/202130901168
- 14. Dr. K. Hema Latha, "AeroDynamic Axial Flow Fan Design To Study the Improvement In Efficiency", Volume X Issue VI June 2021, Science, Technology and Development
- 15. Dr. K. Hema Latha, "An Effective Examination of Compressible Magneto rheological Shock Absorber with Temperature Fluctuation," Volume 20; Issue 8-2021, YMER DIGITAL:ISSN:0044-0477.
- 16. Dr. G. Sailaja, "Machine Learning Concept in Smart Water Purifier and Dispenser for Averting Spread of Infections". Computational Intelligence in Machine Learning. Lecture Notes in Electrical Engineering, vol 834. Springer, Singapore. <u>https://doi.org/10.1007/978-981-16-8484-5\_29</u>, March 2022.
- 17. Dr. G. Sailaja, "Smart Water Purifier and Dispenser for Averting Spread of COVID-19 Infection"—Machine Learning Approach. M. A. Chaurasia and S. Mozar (eds.), Contactless Healthcare Facilitation and Commodity Delivery Management During COVID 19 Pandemic, Advanced Technologies and Societal Change, https://doi.org/10.1007/978-981-16-5411-4\_8.
- Mr. Mohd Abdul Samad,"Assistant Professor, "Modified Cylinder Block IC Engine Experimentation," International Journal of Engineering and Advanced Technology. 10. 6-8. 10.35940/ijeat.B2095.0210321.
- Mrs. N.B.V. Lakshmi Kumari, "Evaluation of Heat Transfer Rate in Heat Sink Using FGM". Innovations in Mechanical Engineering. Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-16-7282-8\_29
- 20. Mrs. N.B.V. Lakshmi Kumari, "Design and Analysis of Vertical Axis Wind Turbine "(2021-2022)
- 21. Mrs. N.B.V. Lakshmi Kumari, "Evaluation of Heat Transfer Rate in Heat Sink Using FGM" (2021-2022)
- 22. Mrs. S. Shahar Banu Design of central air conditioning for building A case study. AIPConf.Proc.29 November 2022; 2648 (1): 020006. https://doi.org/10.1063/5.0115156
- Mrs. S. Shahar Banu Analysis of optimum stacking sequence of GFRP composite laminate under axial loading condition, Materials Today: Proceedings, Volume 62, Part 6,2022, Pages 2940-2945, ISSN 2214-7853, https://doi.org/10.1016/j.matpr.2022.02.510
- 24. Mr. S. Irfan Sadaq, "Analysis of NACA 0020 aerofoil profile rotor blade using CFD approach, Materials Today: Proceedings, Volume 64, Part 1, 2022, Pages 147-160, ISSN 2214-7853, https://doi.org/10.1016/j.matpr.2022.04.205.
- Mr. S. Irfan Sadaq, "Analysis of optimum stacking sequence of GFRP composite laminate under axial loading condition," Materials Today: Proceedings, Volume 62, Part 6,2022, Pages 2940-2945, ISSN 2214-7853, https://doi.org/10.1016/j.matpr.2022.02.510
- Mr. S. Irfan Sadaq. "Investigation of hybridized composite pressure vessel, E3S Web Conf.," 309 (2021) 01157, https://doi.org/10.1051/e3sconf/202130901157.

- 27. Mr. S. Irfan Sadaq, "Investigation the Flexural Characteristics of GFRP Composite Laminate with Artificial Delamination," Proceedings of the 2nd Indian International Conference on Industrial Engineering and Operations Management Warangal, Telangana, India, August 16-18, 2022, IEOM Society International.
- Mr. S. Irfan Sadaq, "Experimental characterization of unidirectional carbon Carbon composite laminate," Materials Today: Proceedings, 2023, ISSN 2214-7853, https://doi.org/10.1016/j.matpr.2023.07.079.
- 29. Mr. S. Irfan Sadaq, "Solar Charkha Retrofit, Trends in Machine Design," https://engineeringjournals.stmjournals.in/index.php/TMD/index.
- Mr. S. Irfan Sadaq, "Design and Analysis of Vertical Axis Wind Turbine," IOSR Journal of Mechanical and Civil Engineering (IOSR-IMCE), e-ISSN: 2278-1684, p-ISSN: 2320-334X, Vol. 19, Issue 1 Ser. III(Jan. – Feb. 2022), pp: 58-64
- Mr. S. Irfan Sadaq, "Experimental Analysis of Flexural Properties of E-Glass/Epoxy Laminate Composite with Artificial Delamination," IOSR Journal of Mechanical and Civil Engineering (IOSR-IMCE), e-ISSN: 2278-1684, p-ISSN: 2320-334X, Vol. 19, Issue 1 Ser. IV (Jan. – Feb. 2022), pp: 10-18.
- Dr. Syed Khader Basha, "A Modified Cylinder Block IC Engine Experimentation. International Journal of Engineering and Advanced Technology." Feb,2021, 6-8. 10.35940/ijeat.B2095.0210321.
- 33. Dr. Md. Abdul Raheem Junaidi, "Simulation of insufflation gas via an alternative Multifunctional Forceps with applications in Laparoscopic Surgeries." 2021, International Journal of Biomedical Engineering and Technology, article in press, DOI: 10.1504/IJBET.2021.10048204
- 34. Dr. Md. Abdul Raheem Junaidi, "Challenges in the Design of a Laparoscopic Surgical Forceps. Advances in Industrial Machines and Mechanisms." Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-16-1769-0\_40.
- 35. Dr. Md. Abdul Raheem Junaidi, "CFD Studies on the Modified Laparoscopic Instrument Used in Minimally Invasive Surgeries, Advances in Fluid and Thermal Engineering, Lecture Notes in Mechanical Engineering,", <u>https://doi.org/10.1007/978-981-16-0159-0\_56</u>
- 36. Dr. Md. Abdul Raheem Junaidi., "Advances in Laparoscopic Surgeries and CFD Perspective of Suction-Irrigation Devices," AIP Conference Proceedings 2317, 030025 2021;https://doi.org/10.1063/5.0036257.
- 37. Dr. Md. Abdul Raheem Junaidi ,"Optimization of HAWT Aerofoil Blade Material And Shape on Two Different NACA Profiles, Proceedings of 35th National Convention of Production Engineers" held on 30-31, October 5, 2021 at Durgapur under PRDB External
- Dr. Md. Abdul Raheem Junaidi, "Simulation of Non-Newtonian Flow of Blood in a Modified Laparoscopic Forceps used in Minimally Invasive Surgery. 2021," Computer methods in biomechanics and biomedical engineering, 24(16), pp. 1794-1806. https://doi.org/10.1080/10255842.2021.1919884.
- 39. Dr. Md. Abdul Raheem Junaidi Simulation of in sufflation gas via an alternative Multi-functional Forceps with applications in Laparoscopic Surgeries. 2021, International Journal of Biomedical Engineering and Technology, article in press, DOI: 10.1504/IJBET.2021.10048204.
- Mr. V. Dharam Singh- do 1. Dharam Singh V et al., Analysis of material properties and strain hardening behavior of brass at different temperature and quasi-static strain rate conditions. Advanced Materials and Process Technologies, Taylor & amp; Francis, (2021) 1–10. https://doi.org/10.1080/2374068X.2021.1945279.

- 41. Dharam Singh V et al., Deformation Behavior and Formability analysis of Thin Brass Sheet: Experiments and Modeling, Australian Journal of Mechanical Engineering, Taylor & Company, Francis (2022). https://doi.org/10.1080/14484846.2022.2087640.
- 42. Dharam Singh V et al., Study of Coefficient of Friction and Springback Analysis of Brass in Bending at Elevated Temperature Conditions, Indian Journal of Engineering & amp; Materials Sciences, Vol. 29, 2022, pp. 755-763, (2022). DOI: 10.560 42/ ijems.v29 i6.70295.
- 43. V Dharam Singh1, M Manzoor Hussain, and Swadesh Kumar Singh, Experimental Investigation and Optimization of Material Properties of Brass at Different Temperature Conditions Using Taguchi Technique, E3S Web of Conferences 309, 01088 (2021), ICMED 2021 901088, <u>https://doi.org/10.1051/e3sconf/202130</u>.
- 44. V Dharam Singh1 and M Manzoor Hussain, A comparison of formability on brass alloy at room and 773 K temperature, Materials today proceeding, https://doi.org/10.1016/j. matpr. 2022. 04. 888, Volume 62, Part 6, 2022, Pages 4397-4401.
- 45. Mr. H. Krishna Murthy Dora, "Enhancement of safety and productivity all the way through function of ergonomics principles A case study, Materials Today: Proceedings, Volume 64, 2022, Pages 212-219, ISSN 2214-7853, <u>https://doi.org/10.1016/j.matpr.2022.04.444</u>.
- 46. Mr. H. Krishna Murthy Dora, "Productivity and Safety Improvement in Industry Using Ergonomics—A Case Study. Recent Advances in Materials Processing and Characterization.", Lecture Notes in Mechanical Engineering. Springer, Singapore. 30<sup>th</sup> September 2022, <u>https://doi.org/10.1007/978-981-19-5347-7\_1</u>
- 47. Mr. H. Krishna Murthy Dora, "Enhancement in the production rate of a manufacturing industry A case study," Materials Today: Proceedings, Volume 64, Part 1, 2022, Pages 207-211, ISSN 2214-7853, <u>https://doi.org/10.1016/j.matpr.2022.04.442</u>.
- Mr. H. Krishna Murthy Dora Impact of Ergonomics on Productivity and Cost of Production to a Company – A Case Study, Journal of Emerging Technologies and Innovative Research (JETIR), ISSN: 2349-5162, Vo. 8, Issue 12, Dec 2021, pp: 590-596.
- 49. Mr. Hasham Ali "Comparative analysis of low velocity vertical axis wind turbine NACA blades at different attacking angles in CFD, Materials Today: Proceedings, Volume 80, Part 3, 2023, Pages 2091-2100, ISSN 2214-7853, https://doi.org/10.1016/j.matpr.2021.06.119.
- Mr. Syed Adil. Machining improvement on MDN 350 alloy with optimum machining parameters, International Conference on Advancements in Materials and Manufacturing, 2021, MLR Institute of Technology, Hyderabad, August 27-28, 2021.
- Mrs. Syeda Romana, Tribological characterization of stir-cast hybrid magnesium composite reinforced with Zirconium, Garnet and graphite particulates. AIP Conf. Proc. 29 November 2022; 2648 (1): 030019. <u>https://doi.org/10.1063/5.0114650</u>.
- Mr. Ahmed Abdul Muneem, Study of Rotating Arc Welding Process for Joining of Pipes: An In-Depth Review. Recent Advances in Materials Processing and Characterization. Lecture Notes in Mechanical Engineering. Springer, Singapore. <u>https://doi.org/10.1007/978-981-19-5347-7\_25</u>.
- 53. Mr. Khaja Azhar Ali Siddiqui7 do 1. Review paper on Effect of Refrigerants on Green House and their Implications in HVAC, International Journal of Engineering Reseach in Mechanical and Civil Engineering (IJERMCE), Vol 9, issue 11, Nov 2022, pp: 8-11.

## **ACHIEVEMENTS BY FACULTY MEMBERS:**

 Faculty details about NPTEL course achievements such asElite/ Gold/Silver medals

 S. No.
 Name of the Faculty

 Elite Gold / Elite

	member	Silver
1	Dr. Ishrat M.M	Elite
2	Dr. Ishrat M.M	Elite
3	Dr. G. Sailaja	Elite Silver
4	Dr. G. Sailaja	Elite
5	Mrs. S. ShaharBanu	Elite
6	Mr. S. IrfanSadaq	Elite
7	Mr. S. IrfanSadaq	Elite
8	Mrs. SyedaRomana	Successfully
		completed

List of faculty members who have completed ATAL FDP or ARPIT Refresher Course

S.	Name of the Faculty member	Course Title	
No.			
1			
1	Dr. Mohammed Viquar Mohiuddin	Mechatronics and MEMS	
		Functional Materials for Energy Environment and	
		Health Care	
		Green Technology in Manufacturing: Forecasting	
	Dr. Ishrat M.M	the future of Mankind and Industry Green	
2		Technology & Sustainability Engineering	
		Engineering	
		Novel Materials for Next-Generation Applications	
		Sustainable Green Composites: Design,	
		Manufacturing and Characterization	
		Advances of Artificial Intelligence and Machine	
		Learning in Societal Development AI & Machine	
	Dr. K. Hema Latha	Learning	
3			
		Industry Oriented FDP on Artificial Intelligence	
		Design, Synthesis and Characterization of Novel	
		Materials	
		Novel Materials	
		3D Printing and Design for Academicians &	
4		Entrepreneur	
	Mrs. N.B.V. Lakshmi Kumari		
		Redemption from Plastic Pollution: Indian	
		Kallways.	
		Advances of Artificial Intelligence and Machine	
		Learning in Societal Development.	

CLAR	ION		2021-22
			Novel Materials
	5	Mrs. SyedaRomana	FDP on Robotics and Artifical Intelligence

## a.Faculty Achievements:

S.	Name of faculty member	Award/Recognition/Achievement details		
No.				
		AMP's 5th National Award for Educational Excellence 2021		
		India PRIME Professors Award 2021		
		Ambition Awards for Education Excellence 2022		
		Guest of Honour at Institution of Engineers, Telangana for		
		International womens day celebration		
		IGEN Volunteer Recognition certificate		
		TOYCATHON Evaluator Certificate		
I	Dr. Isbrat M.M.	Utility patents Granted		
	DI. ISHI at WI.WI	Design Patent Granted		
		Innovation Patent Granted(AUS)		
		coordinator for AICTE-ISTE Sponsored Refresher Programme		
		RGNIIPM IPR workshop Resource person		
		MNGRCE Covid Challenge Coordinator		
		Reviewed 2 Web of Science papers		
		Resource person at AICTE-ISTE Refresher programme at		
		Resource person at AICTE-ISTE Refresher programme at		
		MJCET college of Engineering		
		Partticipation in Guiness world record for "Most users to take online aeronomy lesson in 24hrs"		
2	Md. Abdul RaheemJunaidi	Certificate for exceptional contribution as primary evaluator from AICTE Ministry of Education for evaluating projects for Toyacthon		
3	Syeda Romana	Certificate for exceptional contribution as primary evaluator from AICTE Ministry of Education for		
		evaluating projects for Toyacthon		

## SAE (SOCIETY OF AUTOMOTIVE ENGINEERS):

#### About SAE:

SAE stands for Society of Automotive Engineers, is a one-stop resource for standards development, events, technical information and expertise used in designing, building, maintaining, and operating self-propelled vehicles for use on land or sea, in air or space. SAE International has a diverse membership of engineers, business executives, educators, and students from across the globe, who share information and exchange ideas for advancing the engineering of mobility systems.

#### **Objectives of SAE:**

SAE demonstrates commitment to society through local, national, and international public awareness programs that promote vehicle safety and maintenance and energy resource conservation. The SAE Foundation, is deeply involved in the engineering-related education of children, teachers, college students, and faculty by conducting seminars, webinars, symposia, conferences and competitions like Baja SAE Series, SAE Aero Design, Clean Snowmobile, Formula SAE Series & Super mileage. For more information, refer to Baja Website www.bajasaeindia.org.

- SAE "Society of Automotive Engineers" is one of the largest student organizations in automotive Industry. SAE INDIA is an affiliate society of SAE International registered in India as an Indian nonprofit engineering and scientific society dedicated to the advancement of mobility industry in India.
- SAE INDIA MJCET *chapter* was started in the year 2005. Since its inception the students of the club are consistently participating in all the events organized by the SAE INDIA.

#### > Centre for Vehicle Design and Fabrication

Centre for Vehicle Design and Fabrication is established to provide platform and facilities to the students having interest in automotive sector. Centre provides facilities to the students taking projects in design and fabrication of vehicles or the student teams participating in inter state or National level competitions of vehicle building. The centre was inaugurated by Janab Khan Mohammed Lateef Khan Saheb, Hon. Chairman, Janab Waliullah Saheb, Vice Chairman, Janab Zafar Javeed Saheb, Hon. Secretary, and board members of S.U.E.S. on 21st September, 2018. All SAE-MJCET club activities are also carried out from this centre. Till date our students fabricated All terrain vehicles, Formula racing vehicle, Go-carting vehicles, electric vehicles, solar vehicles and All terrain bike and participated in many national level competitions or events like SAE Baja, SAE Supra, Quad Torq, Go-karting championships, etc. Dr. Mohd. Viquar Mohiuddin, Professor and Head, MED and Dr. D. Srinivas Rao, Professor, MED look over all the activities associated with the centre. Two National Events: (1) SAE BAJA and (2) SAE SUPRA.



Student Formula Racing Vehicle - SAEINDIA SUPRA 2022

SAEINDIA SUPRA 2022 is India's biggest and most prestigious Formula Student event where universities and colleges from across the country participate in a battle of innovation and mechanical engineering strength via

#### CLARION

various static and dynamic events organized. This event prepares its participants for the outside industry via its static events such as Business Presentation, Cost Report Presentation etc. and its meticulous Technical Inspection while the dynamic events give the attendees a glimpse of automotive testing, all these experiences cumulate into an unparalleled hands-on experience for the would-be engineers participating in the event.

#### **EWB** (Engineers Without Borders):

EWB-MJCET Chapter was started in the year 2005 as the first student chapter of EWB-India and has been the most active student chapter in the country. It currently has 150 members. The mission is driven by an urge and concern for accelerating sustainable rural development, assisting in capacity building in backward rural and urban communities of India, protecting the country's natural resource base and working across national boundaries for social and economic justice and responsible use of technology.

#### **FACULTY ADVISORS**

- Dr. (Mrs.) Ishrat Meera Mirzana, Professor & Associate Head, Mechanical Engineering Department, MJCET.
- ✤ Ms. N.B.V. Lakshmi Kumari, Assistant Professor, Mechanical Engineering Department, MJCET.
  EVENTS CONDUCTED BY EWB-MJCET

On the occasion of World Environment Day-2022, EWB-MJCET in association with Mahatma Gandhi National Council of Rural Education has conducted a programme "Only One Earth!" on 5th June, 2022. The students and the faculty have actively took part in the event. Plantation drive was carried out in the college premises. On the occasion of World Water Day -2022, EWB-MJCET has conducted a webinar on "Waste Water Treatment" on 22nd March, 2022. A talk was delivered by Dr. Ishrat Meera Mirzana, Faculty Advisor, EWB-MJCET. More than 50 members participated in the event.



Plantation drive at MJCET campus on the occasion of World Environment Day – 2022 World Environment Day Awareness Webinar on 5th of April, 2022 was conducted to enrich the thought process of Engineers and it focused on the various problems faced. On the 11th of April, 2022, The event was conducted Government High School at Erramnzil the objective of the event was to emphasis the school kids about plantation of trees and to reduce the Global Warming. A total of 25 members have participated in the event.

Medical Camp at Adopted Villages by EWB-MJCET and Unnat Bharat Abhiyaan,Engineers without Borders MJCET Students Chapter organized Medical Camp on the occasion of Gandhi Jayanthi 2<sup>nd</sup> October 2022 in association with Lenus Diagnostics Private Limited, Hyderabad with the support of UBA Cell at the two adopted villages namely Gudi Thanda and Tunikila Thanda, Sangareddy, Telangana state.



The main purpose of the camp is to create health awareness among the villagers to improve their living standards. The medical camp was conducted by the coordinator of Engineers without Borders MJCET Students Chapter along with the coordinator and members of Unnat Bharat Abhiyaan (UBA) as mentioned in the list given below. With the support of Gram Panchayat members and villagers, the medical camp was successfully completed.

#### **UBA (UnnatBharathAbhiyan):**

Training-cum-Workshop on Approaches to Village Out-reach Programmes for HEIs under UBA 2.0.



India is a country of villages; therefore, rural development is the fundamental need of its progress. This program describes the various dimensions of rural life and its development in India. It advocates the importance of community development through self-help groups and it also emphasizes on the health and well-being of villagers. In addition to this, the concepts of literacy and employment have been elaborated in the context of rural culture and multi-dimensional development of rural India. This program highlights the contribution of social networking as a bridge between the various government schemes and the people of India. Sensitivity towards the environment and education, safety and energy, enthusiasm towards physical, mental and spiritual health along with simple living and high thinking have been explained for better understanding of the students.

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The program also outlines the benefits of community engagement through research and innovation. Students will be able to understand the various problems of any community and the possible ways to address the same. Since communities in India have their own knowledge derived from their ancestors and lived experiences, the students need to respect and learn from them so that they can further contribute for the betterment of other communities. In a nut shell, this program will help the students to connect with the true spirit of the nation.



Donation and Distribution of Note Books for Govt. Schools

#### **Donation and Distribution of Note Books for Govt. Schools**

UBA has distributed note books viz. square ruled, single ruled, double ruled, four ruled and plain books to the government school students of the adopted villages viz. Gudi Thanda, Hanuman Nagar, Tunikila Thanda and Koyyagundu Thanda. A total of 990 note books were distributed.

#### CLUB OPTIMUS

Club Optimus is one of the largest student bodies of Muffakham Jah College of Engineering and Technology. The club deals with the research, development and application of robotics and artificial intelligence. The vision is Make bots which are suitable to participate in competitions like Robowars, hosted by NIT, IIT, and BITS etc. Educate ourselves and our juniors about Robotics as it is the phenomenon which will eventually take over, every aspect of the world. Raise the banner of MJCET, both in our city as well as every district we go to for any competitions like Robowars, hosted by NIT, IIT, and BITS etc. Educate ourselves and our juniors about Robotics as it is the club include building of bots which are suitable to participate in competitions like Robowars, hosted by NIT, IIT, and BITS etc. Educate ourselves and our juniors about Robotics as it is the phenomenon which will eventually take over, every aspect of the world. Raise the banner of MJCET.

#### WORKSHOPS

During the month of November-2021, the Club conducted a series of robotics-based workshops for the purpose of familiarizing students with the basics of robotics. The club arranged kits for the students and walked them through the absolute basics of building their own robots. The main objective of the workshops is to impart knowledge about the components, the electrical connections, the software and the assembly of the robots. The 5 workshops the club conducted were;

- Obstacle avoiding 12th November, 2021
- Bluetooth control 16th November, 2021
- Line following 18th November, 2021
- ➤ Maze solving 20th November, 2021
- Robotic arm- 23rd November, 2021

## **COMPETITIONS AND ACHIEVEMENTS**

The students have participated in inter-college competition Roboveda at Sreenidhi Institute of Science and Technology, Hyderabad. The team MJCET has participated in three events viz. Ranveera, Gola and Lakshman Rekha. The team MJCET has won second prize in the event "Ranveera".

#### YEAR WISE MOUS WITH INDUSTRIES AND ACADEMIC INSTITUTIONS

• Mechanical Engineering Department has signed MOU with Skill Dzire Corporation, Pantech, Rapidue Technologies Private Limited, Vector India Private Limited, Idea 2ipr, HBL Power Systems Limited, in the year 2022.

## STUDENT PLACEMENT INFORMATION

S.No.	Student Name	Enrollment No.	Employee Name	
1	Mohammed Tahami Mundewadi	160418736040	Deloitte	
2	Mohammed Shoeb Aqther	160418736092	Enewate - Interns	
3	Mohammad Sharjeeluddin	160418736008	Enewate –Interns- Nlkm -India	
4	Syed Muzammil Ali	160418736079	Enewate –Interns- Nlkm -India	
5	Mohammed Fawaaz Moin	160418736021	Enewate -Interns Nlkm -India	
6	Md Kaleemulla	160418736010	Enewate –Interns- Infosys	
7	Ahmed Sharief	160418736050	Enewate -Interns	
8	Abdul Nadeem	160418736004	Enewate -Interns	
9	Mohammed Fouz ul Azeem	160418736025	Enewate -Interns	
10	Ahmed Sharief	160418736050	Enewate -Interns	
12	Akshay Kolli	160418736064	Wipro	
13	Mohammed Parvez	160418736054	Qspiders	
14	Rehan Yafai	160418736023	Qspiders- Nlkm -India	
15	Mir Munnavar ali	160418736080	Qspiders	
17	Niloufer Sarah	160418736001	Blue Sea Heavy Engineering Works- Deraz Engineers	
18	Syed Mustafa Ali Quadry	160418736037	Blue Sea Heavy Engineering Works Deraz Engineers	
19	Syed Mubin Ali	160418736038	Blue Sea Heavy Engineering Works Deraz Engineers	
20	Abubakar Siddique	160418736106	Blue Sea Heavy Engineering Works Deraz Engineers	
21	Mirza Rizwan Ali Baig	160418736065	Blue Sea Heavy Engineering Works Deraz Engineers	
22	Mohd. Aqueel	160418736046	Blue Sea Heavy Engineering Works Deraz Engineers	
23	Mohd Sami Qureshi	160418736005	Nlkm -India	
25	Induru Ravi Teja	160418736066	Nlkm -India	
28	Qazi Khaja Amaanuddin	160418736028	Nlkm–India-Aliant Group	
31	Mubeen Ashraf	160418736033	Deraz Engineers	

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32	Md Saifuddin	160418738020	Deraz Engineers	
33	Ajmal Ahmed Khan	160418738058	Deraz Engineers	
34	Mohd Tayyabul Badar	160418736013	Deraz Engineers	
35	Mohd Fayazuddin	160418736308	Deraz Engineers	
36	Sheik Arif	160418736301	Deraz Engineers	
38	Mohd Kalimur Rehman Sherief	160418736069	Aliant Group	

# MERIT LIST - UNIVERSITY RANKS

List of University Ranks obtained by the students of Mechanical Engineering for the batch 2018-22

S.No	Roll Number	Name of the Student	Percentage Secured	OU-Rank
1	1604-18-736-305	Mohammad Rizwana	87.89	I
2	1604-18-736-010	Md. Kaleemulla	84.39	III
3	1604-18-736-302	Syed Khaja Nizam Uddin	84.04	IV
4	1604-18-736-081	Mohd Sami Qureshi	83.93	VI
5	1604-18-736-013	Mohammed Abdullah	83.64	VIII
6	1604-18-736-004	Yellapragada Venkata Sai Sphoort	83.64	IX

## List of **University Ranks** obtained by the students of Production Engineering for the batch 2018-22

S.No	Roll Number	Name of the Student	Percentage Secured	OU-Rank
1	1604-18-738-034	Wajahatullah Zakria Ahmed	77.78	Ι
2	1604-18-738-305	MD .Shoaib	75.62	III
3	1604-18-738-015	Adnan Ahmed	74.99	IV
4	1604-18-738-302	Mohd Arfath Aziz	74.88	V
5	1604-18-738-033	Mohammed Yousuf	74.41	VI
6	1604-18-738-007	Syed Affan Ali	73.74	VII
7	1604-18-738-017	Mohd Abdul Basith	73.50	VIII
8	1604-18-738-032	Atif Ayub	71.26	IX
9	1604-18-738-005	Syed Tauqeer Ali	70.94	X