VOLUME XII-A & B 2019-2020

ODD SEMESTER

ALMANAC

MECHANICAL ENGINEERING DEPARTMENT – NEWS LETTER

FROM THE EDITOR'S DESK

Warm greetings! I take immense pleasure and privilege to pen a few words for our college Newsletter. A recap of all the activities and programmes that were conducted during the academic year 2018-2019 is presented in this edition. Eminent speakers from industries, premier institutions and professional academies were invited to share their valuable experience and knowledge with our anxious students. With razor sharp perfection, all these activities were unitedly conducted by a team of energetic, enthusiastic faculty of our department. We are highly indebted to the invaluable assistance and support extended by the Management, Principal, department staff, office staff and other for all our entire endeavors.

HOD/MECH
Department of Mechanical Engineering
Hindusthan College of Engineering and Technology
Valley Campus, Pollachi Highway
Coimbatore-32

DEPARTMENT VISION

To provide quality technical education in Mechanical Engineering and build holistic professionals who can excel in the engineering establishments and serve for the country with ethical values.

DEPARTMENT MISSION

M1: To prepare graduates with good technical skills and knowledge.

M2: To prepare graduates with life-long learning skills to meet the requirements in the higher education and in society.

M3: To prepare graduates as a successful entrepreneur with employment skills, ethics and human values.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

PEO1: Graduates able to apply technical expertise and skills to face the Industrial challenges.

PEO2: Graduates able to design create and innovate economically, environment-friendly and technically feasible products with social acceptance.

PEO3: Graduates able to exhibit professionalism in their profession with good communication, ethics and entrepreneurship skills to meet the social challenges.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO 1: To design, analyze and apply knowledge in complex engineering problems with time effective software solutions.

PSO 2: To understand the relevance of engineering practices with society and environment and become an ethical team oriented effectively communicating individual with managerial skills and sustained learning ability.

PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to

Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

NEW FACULTY JOINED

The department recruited several well qualified faculties in the academic year 2019 - 2020. The new teaching faculty who joined our department are,

Mr. A.PRABHU, M.E
Assistant Professor

Faculty achievements

Sl .No	Name of the Faculty	Achievement
1	Dr.K.Siva	Coimbatore division Leadership award by SAE INDIA Southern section
2	Dr.K.Siva	Appreciation Award for SAUR URJA VEHICLE CHALLENGE Event Hosted
3	Dr.Y.Rasmathew	Appreciation award for Best Volunteering by SAE INDIA Southern section
4	Dr.Y.Rasmathew	Guru Dronachariyar Award by RSTE society
5	Dr.Y.Rasmathew	Guru Dronachariyar Award by SAE

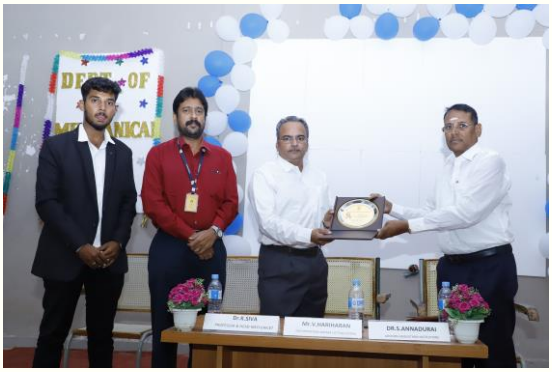
FUNDED PROJECTS & SEMINAR GRANTS

Project Title	Funding Agency	Amount sanctioned	Scheme
'Implementation of computer Integrated Manufacturing (CIM) in CAD/CAM lab'	AICTE	Rs. 9.40 Lakhs	MODROB Scheme.

BEST STUDENTS U.G PROJECT OF 2019

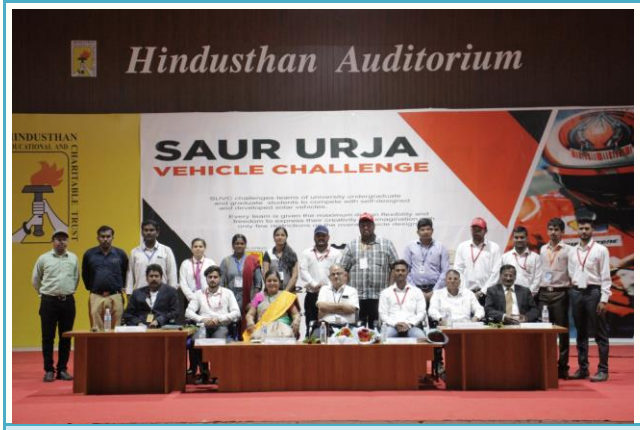
	Tittle of Project	Name of Student	Guided by
1	Design & Fabrication of Automatic Fire sprinkler Using Shape Memory Alloys(NiTinol)	Dheepan.S , Dhinesh.S , Divyakumar. & Jeeva.K	Mr. Y. Ras Mathew
2	Finite Element Analysis Of Shape Memory Alloy Wire (NiTinol) At Constant Stress And Strain	Ram Kumar. S., Soundarraj. B, Thirumurugan. P & Velmurugan. P	Mr. Y. Ras Mathew
3	Design and Fabrication of wind powered air compressor	Gobinath.V.P, Gokularasu.D, Joel.R& Kabilan.M	Dr.K.Siva
4	Solid Particle Erosion Behavior Of Epoxy/MWCNTs Nano composites	Subramanian. B, Sasi Kumar. P Shankar. R & Vasanth. A	Mr. S.Alagar
5	Finite Element Method Analysis Of Panel Lug Assembly For Super Critical Boilers	Selvaprakash. M., Venkateshwaran. S Sabaresh Kumar. A & Suganthan. S	Dr.K.Siva
6	Design and Fabrication of Carbon-Ceramic Disc brake In Two Wheelers	Manoj.s Meganathan.k Navin kumar.c Peer mohamed	Mr. P.N.Karthikeyan
7	Design, Analysis and Implementation of Clamping Fixture in CNC Machine	Balaji.M Mahenthiran.S Mohamed anis.M.S Prem kumar .N	Mr. N.Prasana Venkatesan
8	Design And Fabrication Of Coconut Tree Climbing Machine	Sasikumar. A. Supratheeban. R Sakthivel.M Santhosh. K.	Mr. N.Prasana Venkatesan
9	Design and Fabrication of Disc pump for Inviscid liquids	Gokulprasad.S Kishorekumar .R Logesh kumar.A Raj kumar.R	Mr. S.Sivakumar
10	Design & Fabrication Of Lever Operated Cycle Rickshaw	Sasikumar. G Ramkumar. G Saravanakumar. M	Mr. A.Nazeer Ahamed

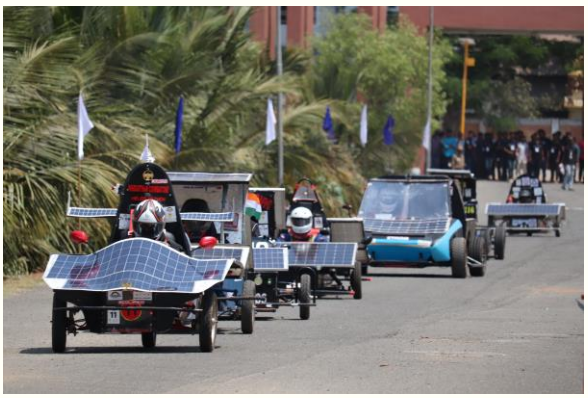
PROGRAMMES CONDUCTED



Organized one day National level Technical Symposium " YAANTRIKA 2020" on 29th Feb 2020
Chief Guest : Mr.V.HARIHARAN, GM-Operations, Messer cutting systems india (P) ltd, cbe

One day seminar on Intellectual propert rights innovations & Entrepreneurship
Chief Guest : Mr.A.JOTHI MURUGAN, Properietor,Intellectual Property firm, Invenire





- **Mechanical Engineering department in collaboration with RSTE organized 5 days National level 'SOLAR VECHILE DESIGN COMPETITION' in the college campus.**

3rd March 2020 to 8th March 2020

PAPERS PUBLISHED BY FACULTY

Name of the Faculty	Title of Paper	Date of Publication	Name of Journal
Dr.K.Siva	Investigation of Multivariable Controllers for Fluid Catalytic Cracking Unit	2019	Carribean Journal of Science
Dr. M.Mohanraj	Thermodynamic analysis of forced convection solar air heater using pin-fin absorber plate	2019	Journal of Thermal Analysis and Calorimetry
	Thermodynamic performance of automobile air conditioners working with R430A as drop-in substitute to R134a	2019	Journal of Thermal Analysis and Calorimetry
	Experimental investigation and analysis of drilling parameters of metal matrix (Ti-TiB) composites	2019	Journal of Brazilian Society of Mechanical Sciences and Engineering.
	Thermal performance simulation of a heat pump asssited solar desalination system for Kazakhstan conditions.	2019	Heat Transfer Engineering Taylor and Francis Publishers
	Thermodynamic analysis of a heat pump assisted active solar still	2019	Desalination and Water Treatment
	Numerical simulation of a heat pump assisted solar dryer for continental climates.	2019	Renewable Energy Elsevier Publishers
	Experimental investigations on R430A as drop-in substitute to R134a in domestic refrigerators.	2019	Journal of Processes Mechanical Engineering
	Effect of TiB addition on corrosion behaviour of titanium composites under neutral chloride solution.	2019	Transactions of the Indian Ceramic Society
Dr.C.Nithyanandam	Flight Landing Sequence is Optimized Using Ant Colony Algorithms	2019	World Journal of Engineering and Technology, Scientific Research Publishing

	Elephant Herding Algorithm to Confine the Discipline Cost of Aircraft Landing Schedule	2019	International Journal of Industrial Engineering Computations
Dr.V.Senthil Murgan	Performance, emission, energy and exergy analyses of gasoline fumigated DI diesel engine.	2019	Journal of thermal analysis & calorimetry
Dr.P.N.Karthikeyan	Investigations on Multi Wall Carbon Nanotubes - Alumina Reinforced Epoxy Hybrid Nano composites	2019	International Journal Of Research
Dr.K.Siva	Optimization of process parameters in friction stir welding of aluminium matrix SiC-Al2O3 composites by genetic algorithm	2020	Journal Of Ceramic Processing Research
Dr. M.Mohanraj	Numerical simulation on solar collector and cascade heat pump combi water heating systems in Kazakhstan Climates	2020	Renewable Energy Elsevier Publishers
	Drying of untreated Musa nendra and Momordica Charantia in a forced convection solar cabinet dryer with thermal storage.	2020	Elsevier Publishers
	Thermal analysis of photovoltaic-thermal collectors	2020	Journal of Thermal Analysis and Calorimetry
	Experimental investigations of reciprocating wear behaviour of metal matrix (Ti/TiB) composites	2020	Archives of Civil and Mechanical Engineering
	Impact of 3rd grade nano fluid flow across a convective surface in the presence of inclined Lorentz force- An approach to entropy optimization.	2020	Journal of Thermal Analysis and Calorimetry
	Energy, Economic and Enviro-economical (4E) analysis of a coarse aggregate sensible heat storage assisted single slope	2020	Journal of Thermal Analysis and Calorimetry

	solar still.		
	Experimental investigations on jet impingement solar air heaters using pin-fin absorber plate.	2020	Journal of Processes Mechanical Engineering
	Experimental investigations on electrical and thermal characterization of cast nano Ag-containing Al6061 alloy	2020	Journal of Thermal Analysis and Calorimetry
	Photovoltaic-thermal collector assisted heat pumps using environment-friendly refrigerants.	2020	Journal of Processes Mechanical Engineering
	Environment friendly alternative options for automobile air conditioners - A review	2020	Journal of Thermal Analysis and Calorimetry
Dr.Y.Ras Mathew	Shape modification of automatic actuated fire Sprinkler (AAFS) made up of NiTinol spring	2020	Journal of the Balkan Tribological Association
Mr. K. R. Sakthivel	Investigations on LM6 Aluminum Alloy CO2- Sand Moulds	2020	Journal of the Balkan Tribological Association

ACHIEVEMENT OF STUDENTS

PRIZES WON IN PRESTIGIOUS COMPETITIONS		
NAME OF THE CONTEST	**EVENT**	**PRIZE**
SAE Efficycle	Acceleration event Endurance,	FIRST
RCDC	Acceleration, Endurance, Maneuverability events. Overall Dynamic Champion	FIRST
SOLAR	RSTE VISIONARY AWARD	

MOU's Signed with Companies

Company	Date	Description
Roots Industries India ltd	05-10-2019	Industry Attachment Training Programme