



**Vel Tech**  
Rangarajan Dr. Sagunthala  
R&D Institute of Science and Technology  
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)



**School of Mechanical and Construction  
Department of Automobile Engineering**

**Annual Report  
2021-22**

# FOUNDERS

## Vel Tech Group of Institutions



**Col. Prof. Vel. Dr. R. Rangarajan**

**Founder & Chairman**

**B.E.(Elec.), B.E.(Mech.), M.S.(Auto.),D.Sc.**



**Dr. Mrs. Sagunthala Rangarajan**

**Foundress & Vice Chairman**

**M.B.B.S.**

# Foreward



The success of Vel Tech can be attributed to the intuition's unwavering dedication to the highest standards of professionalism, creativity, and innovation. Our analysis suggests that Vel Tech is truly committed to improving the academic and scientific communities.

We expect that the events, achievements, and recognitions of the Department will be documented in this annual report. The Department has made significant contributions through publications and participation in learning programs.

We're glad to see that the Department of Automobile Engineering is committed to helping students find work by offering workshops on how to succeed in their placements. Students graduating this year have our heartfelt congratulations, and we hope they will consider making a lasting contribution to their communities and the world. Congratulations to everyone in the Automobile Engineering Department who has contributed to the University's overall and departmental successes.

**Col.Prof.Dr.Vel.R.Rangarajan**

B.E. (Elec), B.E. (Mech), M.S. (Auto), D.Sc.,

**Founder President**

**Dr. Sagunthala Rangarajan**

M.B.B.S.,

**Foundress President**

**Vel Tech Group of Institutions**



# Foreward



I would want to take this opportunity to thank the Department of Automobile Engineering for all of the hard work that they put in to putting together the Annual Report for the years 2021-2022. It is with great pleasure that to convey my wishes to the students and faculty of the Department of Automobile Engineering for all of their hard work and dedication over the years.

The primary objective of this institutions is to help students realize their full potential by providing them with the proper guidance and support as they grow into competent engineers ready to take on any challenge.

After four years at Vel Tech, students will emerge with an engineering degree and a newfound confidence and self-assurance that will set them on the path to a successful career and a fulfilling life. Academic achievements by both teachers and students, as well as departmental innovations, have contributed to Vel Tech's achievement of this landmark.

**Mrs. R. Mahalakshmi**  
**Chairperson &**  
**Managing Trustee**

# Foreward

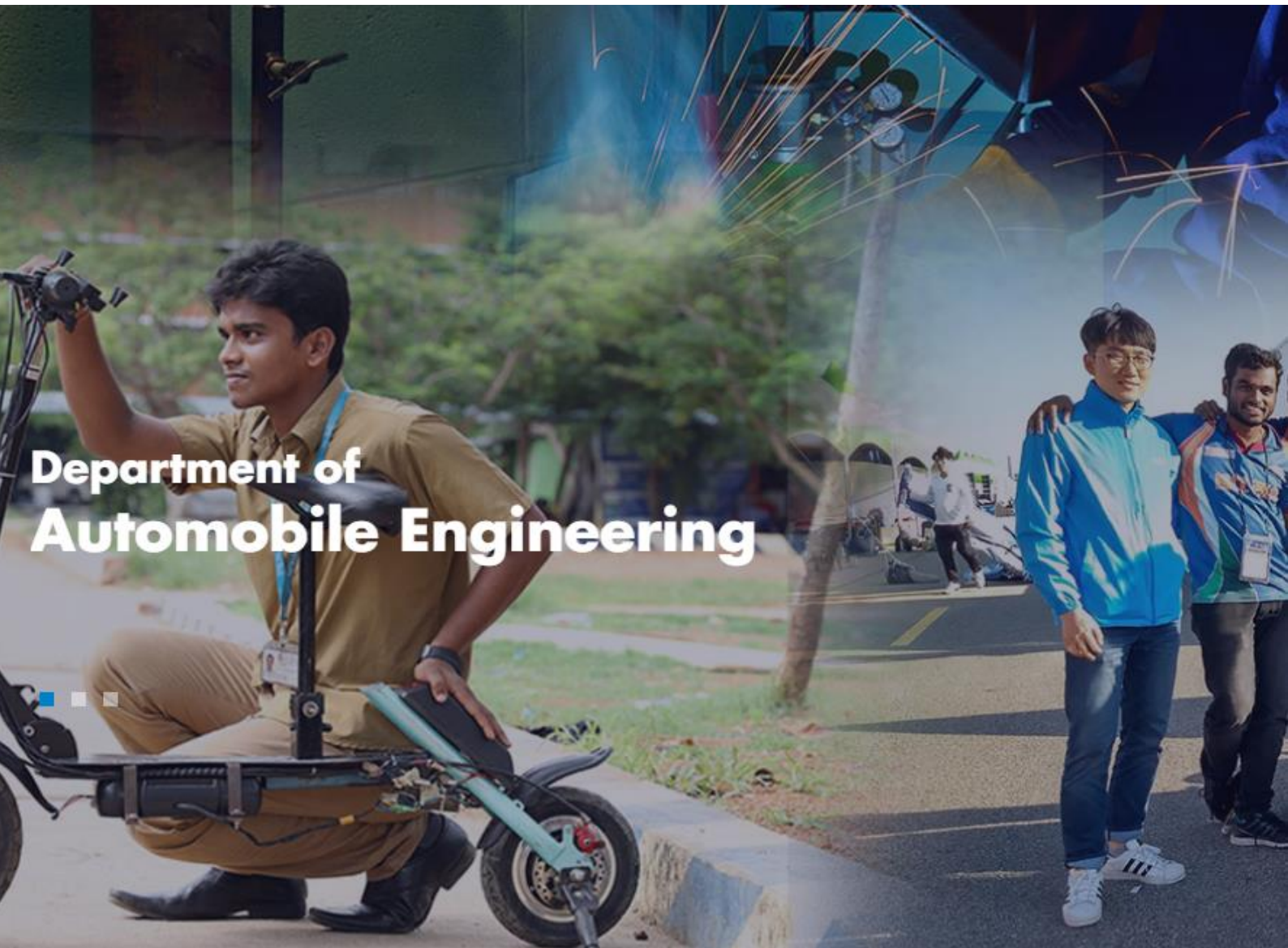


The Automobile Engineering Department has a long history of academic success and a friendly environment for students' overall personality development. In our technologically sophisticated era, annual reports have grown in importance and relevance. It will provide academics and students a platform to interact and share unique thoughts and innovative ideas. Both their overall development and personal growth will benefit from it.

It gives me tremendous joy to greet you at the Annual Report of the Department of Automobile Engineering. This Annual Report 2021 - 2022 provides a detailed description of the academic, research, co-curricular, and other activities of the department that constitute significant achievements throughout the course of a single academic year.

At this time, I am certain that the department is headed in the right direction. I wish to thank the faculty and staff for their unceasing efforts and steadfast dedication to making the department the go-to place for future engineers throughout the globe.

**Prof. Dr. S. Salivahanan**  
**Vice Chancellor**



# Department of Automobile Engineering

[Profile](#)

[Faculty](#)

[Students](#)

[Infrastructure](#)

[International & Industry](#)

[Research](#)

## VISION

To be a centre of excellence in the field of automobile engineering by imparting knowledge and skill, enhancing research and development activities with social, ethical and environmental responsibilities to meet domestic and global challenges.

## MISSION

- To produce effective and responsible automobile engineering graduates with respect to global requirements by imparting quality education.
- To constantly improve the pedagogical methods to deliver the academic programs with industry-oriented knowledge.
- To focus on learning through the state-of-the-art laboratories that possess a standard set-up to carry out research-based education.
- To motivate students to pursue higher education and successfully take-up competitive examinations to reach a better position in their professional career.





## PROGRAMS OFFERED



### B.TECH AUTOMOBILE ENGINEERING

NBA Accredited till 2022

### M.TECH AUTOMOBILE ENGINEERING

with specialization in Electric and Hybrid vehicles / Powertrain Engineering - First time in India in collaboration with ARAI, Pune



### DOCTORAL PROGRAMMES

Area of specialization:

- Internal Combustion engines
- Sustainable Energy
- Automotive Pollution and Control
- Automotive Transmission



## FACULTY - DESIGN DOMAIN



**Dr. M. Amala Justus Selvam**  
B.E. (Mech), M.E. (Thermal), Ph.D. (Mech)  
Professor & Head  
Experience: Academics - 24 Years  
40 national and international journals  
publication and 5 patent application.  
Reviewer for SCI and Scopus indexed  
international journals.  
Granted one International funded  
projects.



**Mr. N. Murugu Nachippan**  
B.E. (Auto), M.E. (Production)  
Assistant Professor  
Experience: Academics – 7 Years  
14 Scopus indexed journals publication  
6 International conference presentations.



**Mr. B. Gowthama Rajan**  
B.E. (Auto), M.E. (Engineering Design)  
Assistant Professor  
Experience: Academics – 7 Years  
8 Scopus indexed journals publication  
4 International conference presentations  
Familiar on modeling and analysis using CATIA V5



**Mr. S. Arisudhan**  
B.E. (Mech), M.E. (IC Engine)  
Assistant Professor

## FACULTY - IC ENGINE DOMAIN



**Dr. S. Jaichandar**  
**B.TECH(Auto), M.E.(Auto), Ph.D. (ICE)**  
**Professor**

**Experience: Academics - 25 Years**  
**39 international journals publication.**  
**Reviewer for SCI and Scopus indexed international journals.**  
**Syllabus Committee Member of Anna University, Chennai.**



**Dr. M. Parthasarathy**  
**B.E. (Mech), M.E.(Auto), Ph.D. (Auto)**  
**Assistant Professor**

**Experience: Academics - 7 Years**  
**Research-2 Years**  
**37 International journals publication.**  
**DC member for Research Scholar of Anna University**



**Mr. M. Rajesh Kumar**  
**B.E. (Mech), M.E. (Auto)**  
**Assistant Professor**

**Experience: Academics - 8 Years**  
**7 Scopus indexed journals publication**  
**Lab In charge : Centre of Excellence "WABCO"**



**Mr. S. Govindan**  
**B.E. (Mech), M.E. (Auto)**  
**Assistant Professor**

**Experience: Academics - 3 Years**  
**Industry - 1 years**  
**6 Scopus indexed journals publication**

## FACULTY – ELECTRIC VEHICLE DOMAIN



**Dr. S. Padmanabhan**  
**M.E., M.B.A., Ph.D.,**  
**Associate Professor**

**Experience: Academics -18 Years,**  
**Industry - 2 years; Research - 4 years**  
**68 international journals publication.**  
**Two Design Patents.**

**Active Reviewer in Elsevier, Taylor and Francis**



**Mr. P.B.Senthilkumar**  
**B.E.(Auto), M.Tech.(Automotive Mechatronics)**  
**Assistant Professor**

**Experience: Academics – 6 Years**  
**6 Scopus indexed journals publication**  
**Student's Club coordinator**



**Mr. A. Backiyaraj**  
**B.E. (Mechatronics), M.E. (Auto)**  
**Assistant Professor**

**Experience: Academics – 6 Years**  
**5 Scopus indexed journals publication**



**Mr. Vikas Kumar**  
**B.Tech. (Mech) , M.Tech. (IC Engines)**  
**Assistant Professor**

**Experience: Academics – 4 Years**  
**4 Scopus indexed journals publication, 1 patent application**  
**Technical Investigator for Motorsports Events.**



## FACULTY – VEHICLE TECHNOLOGY DOMAIN



**Dr. V. Harish**  
**M.E., Ph.D.,**  
**Assistant Professor**  
Experience: Academics - 2 Years  
Research - 5 years  
50 international journals publication.  
Book Published on Tamarind seed biodiesel: Sustainable green fuel,  
Lambert Academic Publishing



**Mr. D.Samuel Raj**  
**B.E. (Production) M.E. (Auto)**  
**Assistant Professor & Lab HoD**  
Experience: Academics – 10 Years  
Industry – 3 years  
10 International journals publication  
Faculty advisor for Electric Bike competition

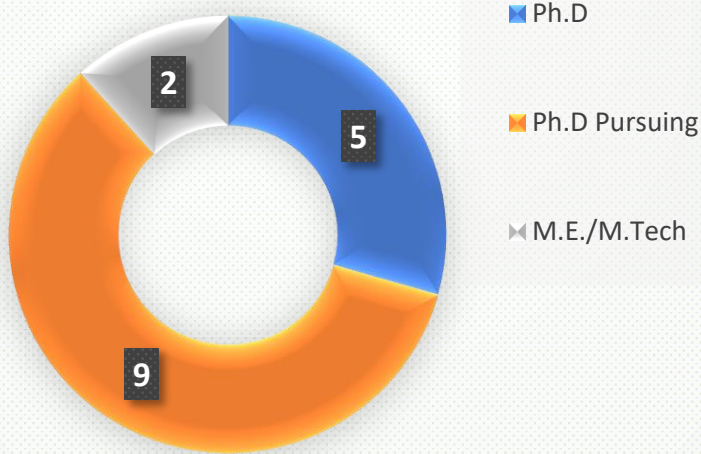


**Mr. A.P.Venkatesh**  
**B.E. (Mech), M.E. (Auto)**  
**Assistant Professor**  
Experience: Academics – 4 Years  
9 Scopus indexed journals publication

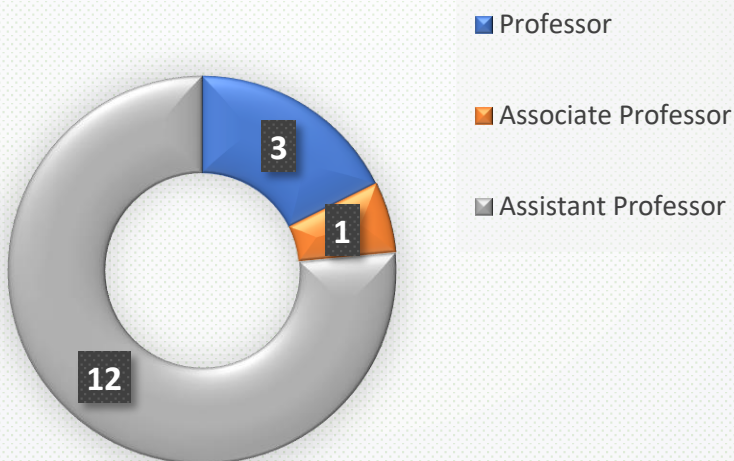


**Mr. T. Ravichandran**  
**B.E. (Auto), M.E. (Auto)**  
**Assistant Professor**  
Experience: Academics – 4 Years  
6 Scopus indexed journals publication

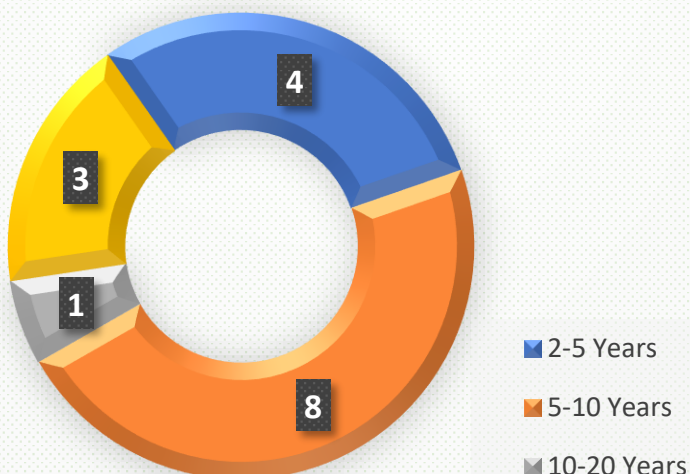
## FACULTY QUALIFICATION



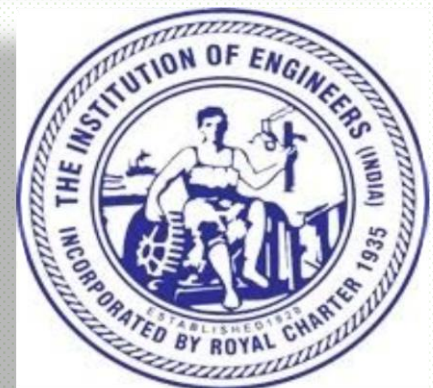
## FACULTY GRADE



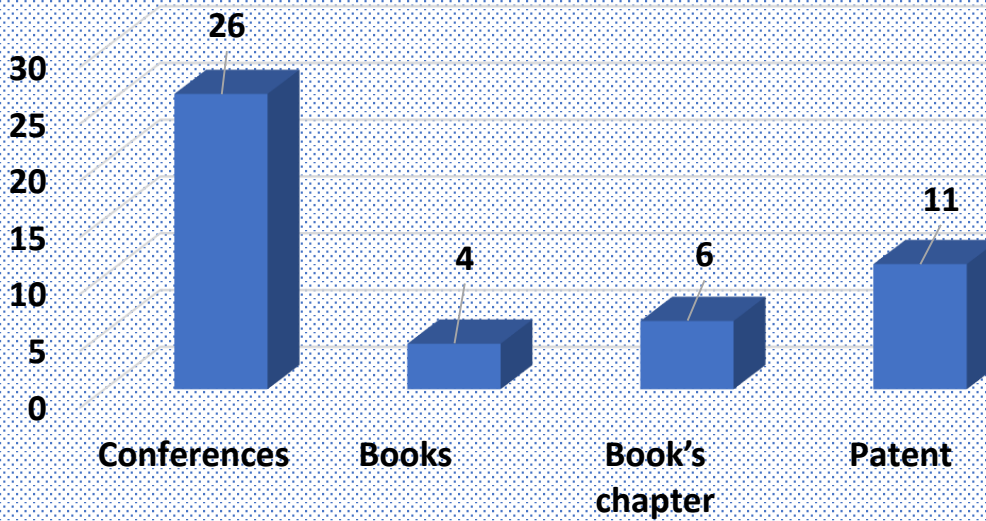
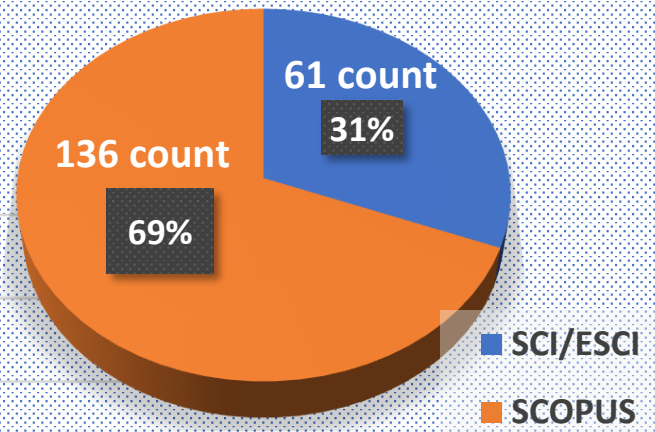
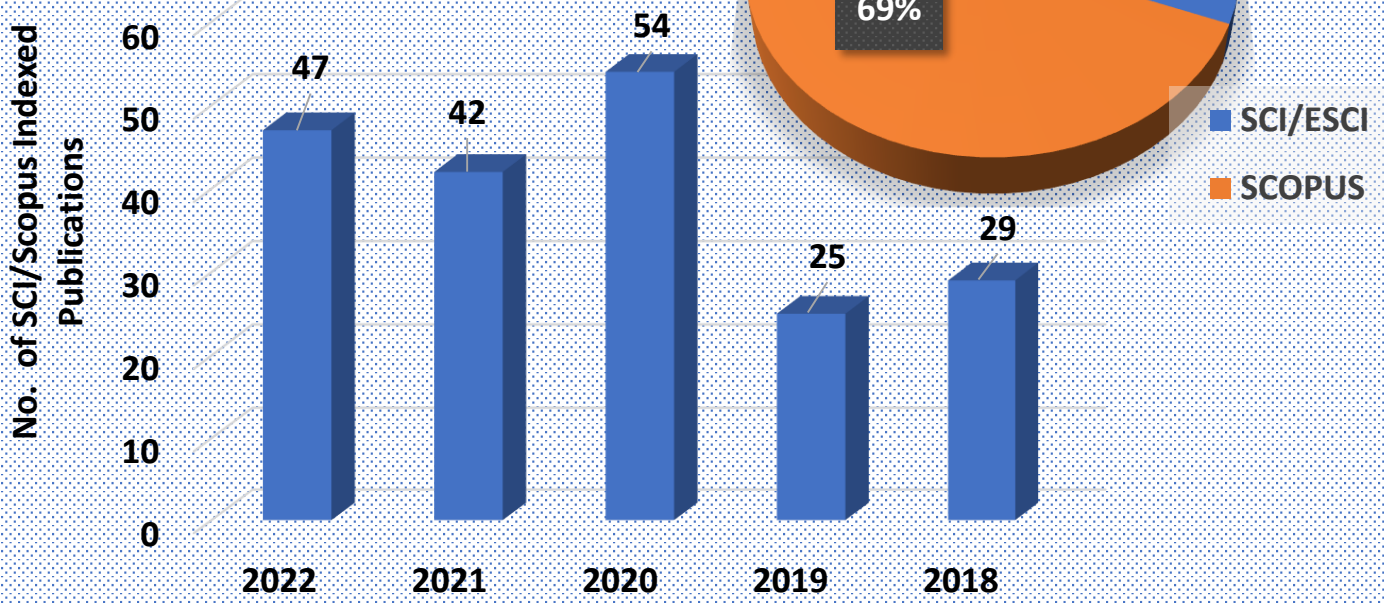
## FACULTY EXPERIENCE



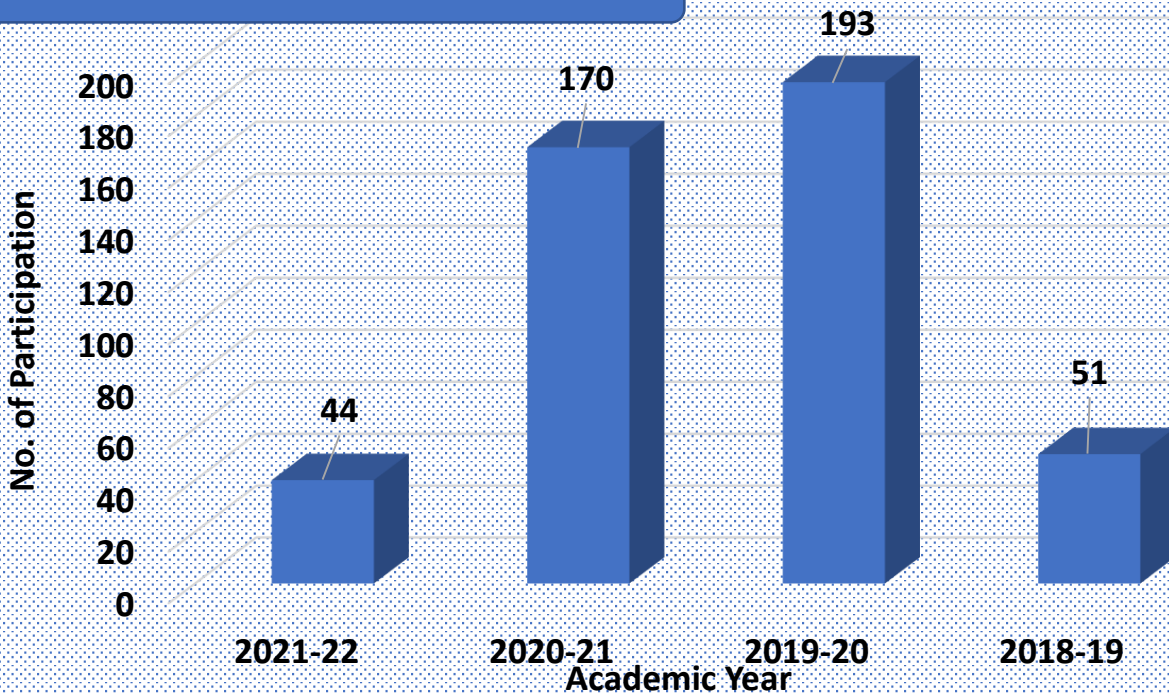
## FACULTY PROFESSIONAL MEMBERSHIP



## FACULTY PUBLICATIONS



## FACULTY FDP PARTICIPATION





## STUDENTS & CAMPUS LIFE



Foldable Electric Scooter –  
Complete In-House Project

Engine Testing & Calibration –  
Research Laboratory Practices



Electric Vehicle – Event  
Vehicle for competition





For Research & Testing on Engine

A photograph of a large industrial engine mounted on a test bench in a laboratory. The engine is black and complex, with various pipes and hoses. To the right, there is a large white cylindrical component, possibly a dynamometer. The background shows a green wall and a window.

Automotive Engine Testing Laboratory established with the support of ARAI, TAFE, Ashok Leyland and Greaves Cotton

INDUSTRY COLLABORATION LABORATORY

For Research on Braking

A photograph of a laboratory setup for an air brake system. A yellow vehicle chassis is in the foreground. In the background, a control panel with a glowing diagram of an air brake system is visible. Several people are gathered around the equipment, looking at the display.

WABCO Centre of Excellence in Automotive Brake System





## ENGINE COMPONENTS LAB

To learn about the working of each component in an engine. Students can know how to dismantle, assembling of all type of engine components & study of all basic operations of an engine and types of engine with cycles.

## MAINTENANCE LAB

Students can able to know the complete vehicle maintenance and evaluation. Also learn about the forms, check list, maintenance procedures. Includes the vehicle as well as chassis components.



## FUEL TESTING LAB

Students can learn about the various types of fuels and its properties. Also learn the test procedures to find the properties of any fuel, lubricants & coolants used in automobile.







## AUTOMOBILE CHASSIS LAB

Complete learning about all types of chassis, its frames, components, mechanism, working, principle theories. Chassis components - Steering, Clutch, Braking, Suspension, Gearbox, Differential and all its types.







## AUTO ELECTRICAL LAB

To learn the automobile electrical system which includes ignition system, distributor, batteries, alternators, starter motor, lighting & warning systems. And their testing of batteries, alternators.

## ENGINE SIMULATION LAB

Practicing the design software for design, testing, analysis of engines, components, thermal, load analysis, simulation on engine and vehicle frames.



## RECONDITIONING LAB

To learn about the Complete issues and overhauling of engine components to make them reconditioned to drive the vehicle again.





## ENGINE TESTING LAB

Students can learn about the types of analysis and their basics. Also can gain knowledge about how to test a new engine and new fuel and observing the performances of it.

## TWO & THREE WHEELER LAB

Objective of the lab is to study and learn about the two and three wheeler frames, arrangements, working, transmission, drives, alignments, construction and servicing also.

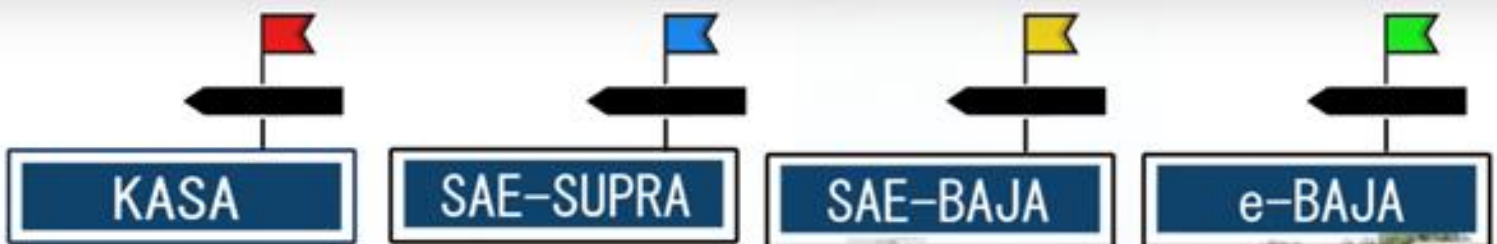


## AUTO WORKSPACE

Manufacturing of all types of vehicle especially for events. E-Bikes, E-Cars, Conventional engine vehicles also



# VTU Motorsports Club Achievements



# VTU Motorsports Club Achievements



The VT motorsports club Team "MUDTRAILERZ" competed in the all-terrain vehicle (ATV) competition Champions of Champions, which was hosted at KL University in Andhra Pradesh from February 27th to March 1st, 2020 by the Imperial Society of Innovative Engineers. The ISIE Future Award was taken won by our group.



Go-kart Indian kart racing was held at RPM Circuit in Bhopal from the 21st to the 26th of January 2020, and our team, "AUTOMOPHILES," competed in the event. The event was organized by the Imperial Society of Innovative Engineers (ISIE INDIA ). Our group came in fifth place overall and took first place for "Best Business and Cost strategy."



# VTU Motorsports Club Achievements



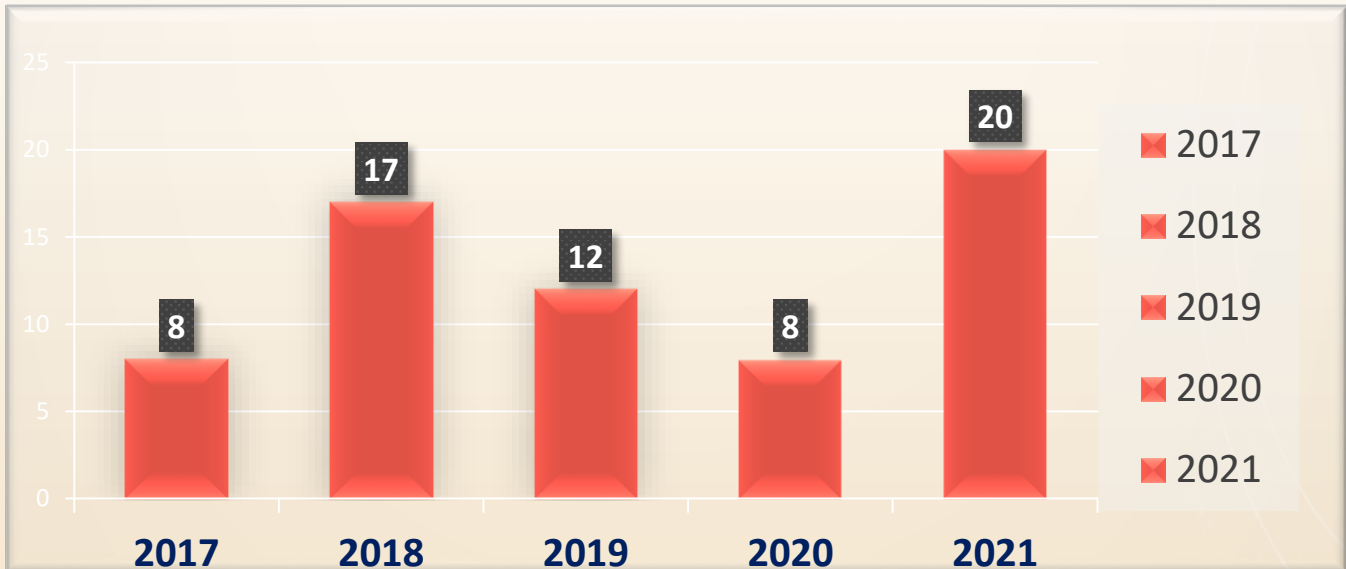
Vel Tech Motorsports Team "AUTOMOPHILES" was able to earn the position of "Second in Skid Padd & Endurance Overall Runner" in the Gokart Indian Karting Championship (Nexus motorsports), which took place from March 5th to March 10th, 2020 at Mohite Racing Academy in Kolhapur. This competition was organized by Nexus motorsports.



In the All Terrain Vehicle category, our team "MUDTRAILERZ" competed in the ATV event ATVC, (Infileague motorsports), 2020 held in Vadodara, Gujarat and organized by Infileague motorsports from the 15th to the 18th of February 2020. Our team came in **SECOND PLACE** overall, won **FIRST PLACE** for the **BEST SLEDGE PULL**, and came in second place for **MANUREABILITY**.



## PLACEMENT



SL.N o.	VTU NO.	STUDENT NAME	INDUSTRY NAME
1	9398	C.NITHISH	Seon E-HWA Summit Automotive Anantapur Private limited
2	9242	BHARATH KUMAR RAO.G	Ola Electric TE chnologies Private Limited
3	8823	DILIP SEENIVASAN S	India pistons limited
4	9910	MANDALA ESWAR REDDY	Infosys
5	8996	NUKALA VIKRAM	Infosys
6	9133	PEDAPATI VEERENDRA	Valeo India Private Limited
7	8638	ALLA VENKATA MANIKANTA	TCS
8	8801	SHAIK SHARUK	DXC Technology
9	9720	GALLA SURESH BABU	CTS
10	10032	T.MUTHU PRABHAKAR	Cyent technologies
11	9951	MOHAMED RAZEEN.M	Robert Bosch
12	9341	ARUN SHERWIN.K	JM engineering enterprises LLP
13	9304	BUCHI MANINDRA REDDY	TCS
14	10385	KAVURI MANI CHANDANA	ACCENTURE SOLUTIONS PVT LTD
15	9909	JANNU VINAY	SUMTOTAL
16	10527	NIKESH CHETTRI	Urbanpiper
17	8736	DUVVURU VISHNU VARDHAN	Aisan Auto Parts India Pvt.Ltd
18	9624	HANUMANTHU SAIRAM	HIRIM POLYMER INFUSTRIES,MALAYSIA
19	9268	SACHIN.S	BFG International Private Limited
20	9810	KUNAL KUMAR	STAFF CHASE



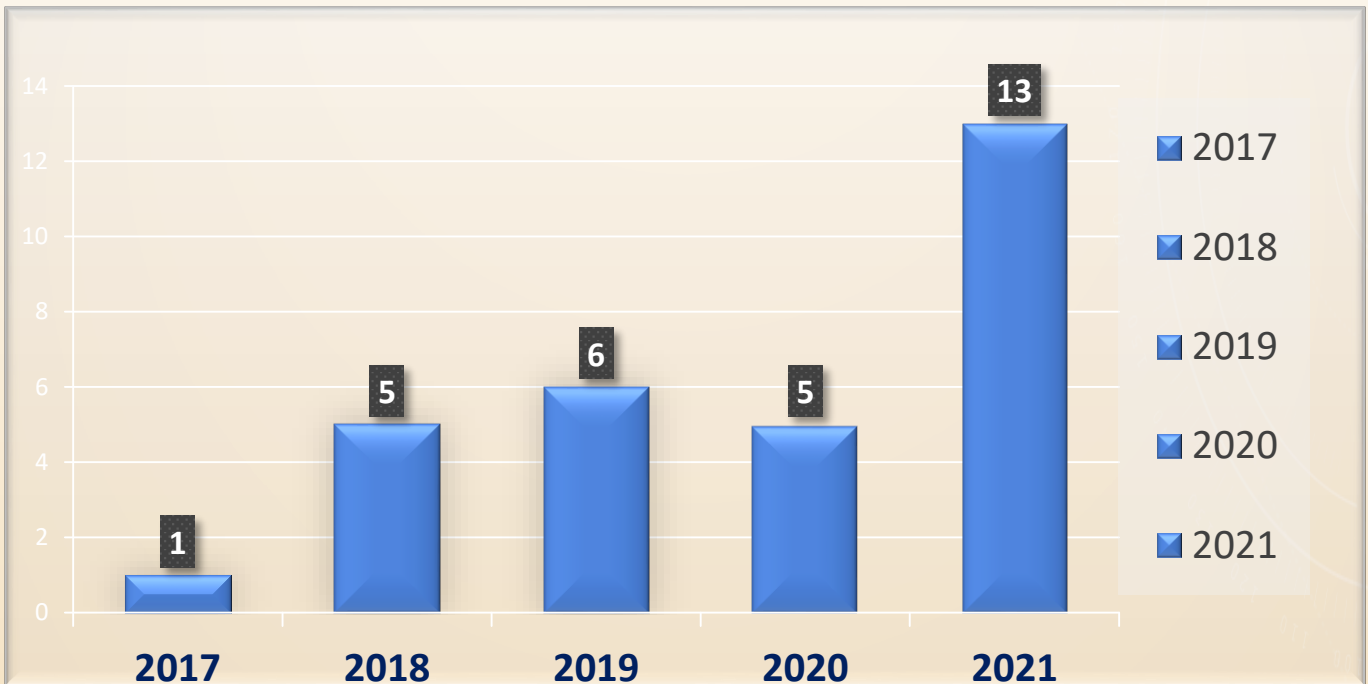
**BOSCH**



**OLA ELECTRIC**



## HIGHER EDUCATION



VTU No	STUDENT NAME	INSTITUTION NAME
9054	YALUGURI ANIL REDDY	University of windsor
8632	SUARNAGIRI VENKATA RAMA KRISHNA PAVAN	Arizona state university
10823	ABHISHEK DUBEY	IIT MADRAS
10329	KUNAL DUDHRAJ BISWAKARMA	IIT MADRAS
8643	GOKAVARAPU VARSHIT	Wichita State University
9919	SHAIK ABDUL RAWOOF	University of cassino and southern lazio
9269	DARAPANANI DEVIGNESH	Conventry university
10438	JETTINGU SAHARSHA	Cleveland state university
9537	NUTHALAPATI EMERALD RAY	Cleveland state university
9469	ENUGU LAVANYA	Wright State University
10343	SHAIK SOHAIL SIDDIQ	SRH Berlin University Of Applied Sciences

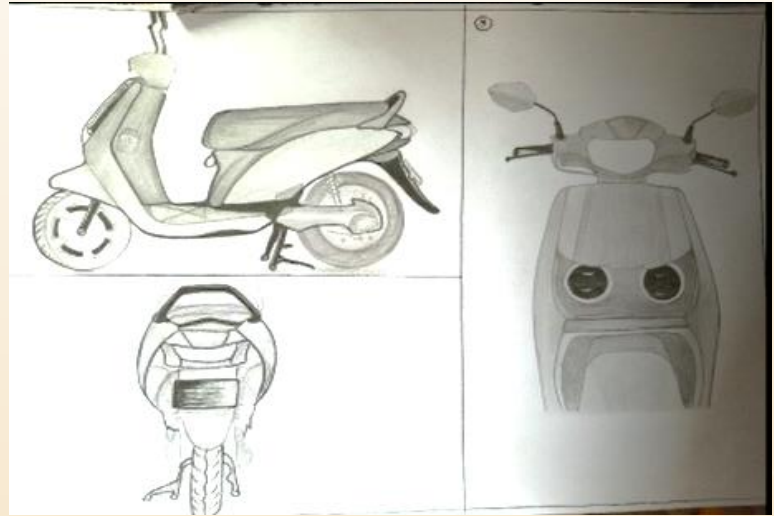


**G.Pavansai and Harikrishna from Batch 2019-2023 have been selected for the 3+2 Master Program at Ming Chi University of Technology, Taiwan**



# Students' Project @ 2021-22

## Electric Bike





## Students' In-plant Training @ 2021-22



II Year students of Automobile Engineering experienced **In-plant Training at Paramount Auto Bay services, Secunderabad, Telangana in 2021-22.**





**Department of Automobile Engineering  
School of Mechanical and Construction**



# Vel Tech

**Rangarajan Dr. Sagunthala  
R&D Institute of Science and Technology  
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)**