

**VNR VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY
KNOWLEDGE ASSET 2021**



Name : T Raju
Designation : Assistant Professor
Department : Automobile Engineering
Mail I'd : raju_t@vnrvjiet.in

Experience (in years): 9 yrs 11 months
Research: Fuel cell Technology

Teaching: UG
Others:

1. Educational / Technical qualifications:

S.No.	Level (UG / PG / Ph.D)	Year of passing	Specialization
1	B.Tech	2010	Mechanical Engineering
2	M.Tech	2013	Automobile Engineering
3.	Ph.D	Pursuing	Mechanical Engineering

2. Teaching and Learning:

2.1. Teaching Interests:

- Automotive Chassis and Suspension
- Automobile Engineering Design
- Automotive Engines and Systems
- Alternate Fuels
- Automobile Pollution and Control
- Engineering Drawing
- Engineering Mechanics
- Fluid Mechanics
- Fuel Cell Technology
- Heat and Mass transfer
- Modern Automotive Technologies
- Principles of Automobile Engineering
- Strength of Materials
- Vehicle Dynamics

2.2. Novel Teaching & Learning Techniques adopted:

- Assignments
- Chalk and board
- Online teaching
- PPTs
- Videos
- WIT & WIL

2.3 Involvement in curriculum updating / Design:

Involvement in R18 and R19 curriculum (Co-coordinator) design and update

3. Co-curricular and Extra-Curricular Activities

3.1. Interests and Hobbies:

- Reading Journal papers
- Surfing web for recent development in automobile technologies
- Watching science fiction movies

3.2. CCA/ECA organized:

- Major Project coordinator
- Guest-lecture coordinator
- Industrial visits coordinator
- I year class coordinator

3.3. CCA/ECA participated:

- Participated in Convergence and Open house.

3.4. Counseling and mentoring Activity:

- I year mentor

3.5. Committees involved in:

- Department level:
1. Teaching
 2. Coordinator – Industrial visits/ tour
 3. Coordinator – IV B.Tech.
 4. Coordinator – Guest Lectures
 5. Coordinator – Centre of Excellence
 6. In-Charge – Theory of Machines Laboratory

4. Conference / Workshop / Seminar / Guest Lectures:

4.1 Conducted:

- Alternative Fuels and Powertrain Systems” to be held during 4th – 6th December 2014.
- Recent Trends and Research Opportunities in Manufacturing Processes (RTROMP-2016) 09-11 March 2016.
- Automobile & Vehicle dynamics” held on 11th – 15th August 2017 (AMZ Automotive)
- “Design and Development of ATV” held on 25th May to 08th June 2018 (AMZ Automotive)

Guest lectures

S. No.	Industry Expert	Designation	Organization	Topic	Venue	Date
1.	Mr. Srikanth Kethu	Head of Mechanical Engineering	ZF India private ltd, Hyderabad	Vehicle safety-current and future trends	APJ Abdul Kalam Auditorium	01/03/2019
2.	Mr. J V Madhavan	Sr. Manager Projects & Training	Adroitec, Secunderabad	Augmented Reality Technology	D 403	21/02/2019
3.	Mr. Nalla	Head-	Mahindra and	College to campus	D 405	22/09/2018

	Sekhar	Customer Quality Assurance	Mahindra Hyderabad			
4.	Dr. Sateesh Makkapati	Subject matter expert in power train performance	Ford-USA	Automotive propulsion-challenges and trends	APJ Abdul Kalam Auditorium	10/07/2018
5.	Mr. Swami Chandranath	Sr. Engineer	Hyundai Mobis R&D, Hyderabad	Placement readiness	D-404	14/10/2017
6.	Captain. Azad Hussain	Captain	Indian Army	Opportunities in Indian forces	D-403	13/10/2017
7.	Padma Shri. V. Gnana Gandhi	Sr. Vice President – Propulsion, Skyroot Aerospace	ISRO Trivandrum	Green fuels in transportation	D-403	18/08/2017
8.	Mr. Kusal Singh	Senior Research associate	AMZ Group, Jaipur	Scope for Automobile engineering students in Motor Sports	D-403 & D-405	03/08/2017
9.	Mr. Ramprasad LV	Lead Engineer	GE India Technology Center, Bengaluru	Basics of Refrigeration and air-conditioning	D-405	28/09/2016
10.	Commander V.K. Jaitley	Chairman	C_cube Consultants	We can! We can!	D-405	24/12/2016
11.	Padma Shri. V. Gnana Gandhi	Sr. Vice President – Propulsion, Skyroot Aerospace	ISRO Trivandrum	Advanced Green fuels in transportation	D-405	02/02/2017
12.	Mr. Lalith	Manager	Honda Motor cycle, Hyderabad	Road safety campaign	D-405	20/02/2017
13.	Mr. Bhaskar	Sr. Engineer	BHEL, Hyderabad	Modelling/CFD simulation Techniques	D-405	24/03/2017
14.	Mr. Krishna Prasad B S	Delivery Head for Engg. services	Tech Mahindra, Hyderabad	Discreting trends in Automotive	D-405	28/03/2017

4.2 Attended:

- 4th National Conference on “Advances in Mechanical Engineering” AIM 2013 7th and 8th November 2013
- Alternative Fuels and Powertrain Systems” to be held during 4th – 6th December 2014
- Recent Trends and Research Opportunities in Manufacturing Processes (RTROMP-2016) 09-11 March 2016
- Accompanied the students for the event Formula Bharat, Coimbatore during 25.01.21017 to 30.01.2017
- Work shop on “Advanced Numerical Modeling Techniques For Mechanical Engineering 27th -31st MARCH 2017

- Work shop on “Automobile & Vehicle dynamics” to be held on 11th – 15th August 2017 (AMZ group)
- Deputed as a judge for Technical presentations 6th March in Convergence 2018
- Work shop on “Design and Development of ATV” to be held on 25th May – 08th June 2018 (AMZ group)
- FDP on “Strategies and ICT tools for hybrid Vehicles-NIT Warangal” on 7th to 12th February 2019
- MATLAB “Application in Mechanical Engineering” - JNTU Hyderabad
- FDP on "Learning by Doing on Python" 18th – 23rd November 2019
- FDP on “Motor sports vehicle Teams” 08th – 14th April 2020

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8.	Mr. Kusal Singh	Senior Research associate	AMZ Group, Jaipur	Scope for Automobile engineering students in Motor Sports	D-403 & D-405	03/08/2017
9.	Mr. Ramprasad LV	Lead Engineer	GE India Technology Center, Bengaluru	Basics of Refrigeration and air-conditioning	D-405	28/09/2016
10.	Commander V.K. Jaitley	Chairman	C_cube Consultants	We can! We can!	D-405	24/12/2016
11.	Padma Shri. V. Gnana Gandhi	Sr. Vice President – Propulsion, Skyroot	ISRO Trivandrum	Advanced Green fuels in transportation	D-405	02/02/2017

		Aerospace				
12.	Mr. Lalith	Manager	Honda Motor cycle, Hyderabad	Road safety campaign	D-405	20/02/2017
13.	Mr. Bhaskar	Sr. Engineer	BHEL, Hyderabad	Modelling/CFD simulation Techniques	D-405	24/03/2017
14.	Mr. Krishna Prasad B S	Delivery Head for Engg. services	Tech Mahindra, Hyderabad	Discreting trends in Automotive	D-405	28/03/2017

5. Academic Contribution and Research & Consultancy:

5.1. Invited Lectures: NIL

5.2. Articles / Chapters published in Books: NIL

5.3. Books published as single author or as editor: NIL

5.4. Projects Guided :

a) UG : 13

- 1) Effect Of Injection Pressure On 4-Stroke Single Cylinder Diesel Enging Using Different Fuel Blends
- 2) Impact Of Different Spark Plugs On A Two Stroke Si Engine Using Various Fuel Blends.
- 3) Development And Fabrication Of Micro Car Chassis
- 4) Development Of Steering System And Accessories For A Micro-Car
- 5) Development Of Braking And Suspension System Of Braking And Suspension System Of A Micro Car
- 6) Effects Of Cerium Oxide Nano Particles In Palm Sludge Biodiesel Blends Of 4-Stroke Single Cylinder Diesel Engine
- 7) Performance And Emission Characteristics Of 4 Stroke Petrol Engine Using Butanol, Iso-Butanol And Gasoline Fuel Blends
- 8) Enhancing performance and emission characteristics of diesel engine using biodiesel and additives
- 9) Implementation and analysis of magneto rheological dampers in front bumper spoilers.
- 10) Enhancing the performance and emission characteristics using alternative fuel blends with Nano particles.
- 11) Conversion of banned vehicle to electric vehicle.
- 12) Development of direct ethanol fuel cell.
- 13) Optimizing the performance of fuel cells

b) pg : nil

5.5. Research Interests :

- Fuel cell technology
- IC Engines
- Alternate fuels
- Electrical and hybrid vehicles
- Vehicle Dynamics

5.6. Ph.D students : Pursuing

5.7. Papers published in reviewed journals :

S.No.	Title of the Paper	Journal Name Vol.No. PP	ISBN/ISSN No.	Impact Factor/ Citation Index	National/ International
1.	Experimental investigation of animal fat biodiesel blends on diesel engine	Poll Res. 35 (4) : 733-738 (2016)	0257-8050	20	International
2.	Enhancement of performance and emission characteristics of SI engine using multi ground spark plug with alcohol fuel blends	SAE International 2019-28-0154	0148-7191	0.51/104	International
3.	Development and Testing of Electric Microcar for Indian Cities	SAE International 2019-28-0008	0148-7191	0.51/104	International
4.	Design Considerations and Analysis of Electric Microcar for Cities	SAE International 2019-28-0161	0148-7191	0.51/104	International

5.8. Papers presented at National / International Journals :

S.No	Title of the Paper	Names of the Conference/ Seminars	National/ International	Period
1	Experimental Studies On The Effect Of MultiGap Spark Plug And Ignition Timing On SI Engine Fueled With Methanol And Gasoline Blends	4th National Conference on “Advances in Mechanical Engineering” AIM 2013	National	7th and 8th November 2013

5.9. Sponsored research Projects: nil

S.No	Title	Agency	Period	Grant amount	Ongoing / Completed
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5.10 Consultancy Projects: nil

S.No	Title	Agency	Period	Sanctioned Amount	Ongoing / Completed

6. Awards / Honors received:

1) **Patent Title :** An experimental study to determine the COP of the domestic refrigerator when the propane butane combination added to LPG

Applied/Published/Granted: Published

Application No.: 202041038048 A

Patent Journal Details: Indian Patent Advanced Research System

Application Date: 03/09/2020

Publication Date: 11/09/2020

2) **Patent Title :** Design and modelling of diesel particulate filter to reduce the emissions from CI engine

Applied/Published/Granted: Published

Application No.: 202141006707 A

Patent Journal Details: Indian Patent Advanced Research System

Application Date: 17/02/2021

Publication Date: 26/02/2021

Inventor :

7.Motto:

- Scopus index and peer reviewed journal publications
- NBA Department
- High Impact factor journal publications
- Research on new automotive technologies