

Name: Dr. T. SRINIVASA RAO  
Designation: Professor & Head  
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Experience (in years): Teaching: 28 Years    Research: 11 Years    Others: 1 Year  
Industry

### 1. Educational / Technical qualifications:

S. No	Level (UG / PG / Ph.D)	Year of passing	Specialization
1	B.Tech.	1991	Mechanical Engineering
2	M.Tech.	1994	Heat Power (R&AC)
3	Ph.D.	2016	Mechanical Engineering

### 2. Teaching and Learning:

- 2.1. Teaching Interests: Thermodynamics, Thermal Engineering, Fluid Mechanics, Hydraulic machinery, Heat Transfer, Power Plant Engineering, Refrigeration & Air Conditioning, Engineering Graphics.
- 2.2. Novel Teaching & Learning Techniques adopted: WIT&WIL, blended learning.
- 2.3. Involvement in curriculum updating / Design:
  - i. Chairman – BoS (Automobile Engineering)
  - ii. Supporting students to learn by practice: Automotive Engines, Design and Fabrication of Prototypes for various competitions organised by SAE.
  - iii. Guiding B.Tech. Projects and M.Tech./Ph.D.: Design and Development of Electric Microcar
  - iv. Projects that can be pursued in various domains:
    - \*Overall Research Objectives:
      - Broad Objective: Thermal Behavior of Composites, Analysis of Multi Phase Flows.
      - Scope of work: Effect of Imperfections on the Properties of Composites, Characterisation of Multi Phase Flows.
      - Methods: FEA, CFD.

### 3. Co-curricular and Extra-Curricular Activities

- 3.1. Interests and Hobbies: Mentoring of students, Net surfing for latest updates.
- 3.2. CCA/ECA Organized: SINTILLASHUNZ (A National Level Cultural Fest of VNR VJIET).
- 3.3. Counseling and Mentoring Activity: Advisor/Mentor for Automobile Engineering students.
- 3.4. Committees involved in:
  - Department level:
    - Chairman-BOS (Automobile Engineering)
    - Department Academic Committee
    - Department Development Committee
    - Department Project Review Committee

Institute Level:

- Chairman – ECA/CCA

- Member– Anti-ragging Committee
- Member – Grievance Redressal Committee
- Member – Disciplinary Committee
- Member– Institute Academic Committee

#### **4. Conference / Workshop / Seminar / Guest Lectures:**

##### **4.1 Conducted:**

- National Level Paper Contest (TECHNOFEST 2003), Conducted at VRSEC, Vijayawada on 18<sup>th</sup> Dec. 2003.
- One-day National Conference on “Recent Trends in Quality in Manufacturing and Service Organizations” in Mechanical Engineering Department, V R S E C, on 1<sup>st</sup> Nov. 1999.
- Two-day workshop on “Recent Trends in Foundry and Welding Technologies”, in Mechanical Engineering Department, V R S E C, during 30-31 October 1998.
- Technological Advancements in Mechanical Engineering (TAME-2005), A National conference organized by SNIST, during 2-3 December 2005.
- Short Term Course on Computational Fluid Dynamics Organized by the Department of Mechanical Engineering, VNR VJiet during November 27<sup>th</sup> - 29<sup>th</sup>, 2006.
- Three day National Conference on “Advances in Manufacturing & Industrial Engineering (NCOAIMAIE 2007) Organized by the Department of Mechanical Engineering, VNR VJiet, during 12-14 July 2007.
- Three day Workshop on “Alternative Fuels and Power Trains” Organized by the Department of Automobile Engineering, VNR VJiet, during 4-6 Dec 2014.
- Three day Workshop on “Recent Trends and Research Opportunities in Manufacturing Processes (RTROMP 16)” organized by the Department of Automobile Engineering, VNR VJiet, during 9-11 March 2016.
- TEQIP Sponsored three Day National Workshop on “Alternative Fuels and Power Train Systems”, during 4 – 6 December 2014, VNRVJiet, Hyderabad.
- TEQIP Sponsored National Workshop on “Recent Trends and Research Opportunities in Manufacturing Processes” (RTROMP-2016) 09-11 MARCH 2016, VNRVJiet, Hyderabad.
- Three Day National Workshop on “Simulation and Analysis of Automotive Systems using Hyper Mesh” (Hyper Works), 04-06 October 2016, VNRVJiet, Hyderabad.
- A Two Day National Workshop on “Electric Mobility and its Ecosystem” during 17 - 18 February 2020, VNRVJiet, Hyderabad.
- Five-day online Faculty Development Programme on Additive Manufacturing: Present and Future Trends, during 01 – 06 November 2021, VNRVJiet, Hyderabad.
- DRDO sponsored three-day Seminar on “Future vehicle technologies for green environment NSFVTGE’22” by the Department of Automobile Engineering, VNRVJiet, during 16-18 February 2022.

##### **4.2 Attended:**

- Attended ISTE Short term program on “New Trends in Refrigeration” held at IIT, Kanpur, during 16-30 June 1996.
- Attended ISTE Short term program on “Advanced Computational Methods in Thermal Engineering” held at NIT, Warangal, during 15-27 Jan 2004.
- Attended a National Seminar on “Restructuring of technical education system for better efficiency and effectiveness”, conducted by ISTE Chapter, V.R. Siddhartha Engineering College, Vijayawada during 5-6 Dec., 1997.

- Attended a one-day workshop on “ISO 9000 QUALITY SYSTEMS”, organized by Mechanical Engineering Department, V.R. Siddhartha Engineering College on 20<sup>th</sup> Feb, 1997.
- National Seminar on "Handling, Processing and Preservation of Fruits and Vegetables" conducted by Mechanical Engineering Department, V R Siddhartha Engineering College, January 1996.
- Short Course on FRP Composites organized by IIT Hyderabad during 10-11 July 2014

## 5. Academic Contribution and Research & Consultancy:

5.1. Invited Lectures:

5.2. Articles/Chapters published in Books:

5.3. Books published as single author or as editor:

5.4. Projects Guided:

a) UG: Guided thirty B.Tech. Projects. b) PG:

5.5. Research Interests: Thermal behaviour of composites, Multi Phase Flows, Hybrid electric vehicles

5.6. Ph.D. students:

a) Enrolled: one NDF scholar b) Submitted: c) Awarded:

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	Effect of Submergence and Air flow Rate On The Performance of Air Lift Pump- An Experimental Investigation	International Journal of Mechanical & Automobile Engineering.	ISSN 0974 –231X	0.321	International
2	Consistency of electrical analogy approach in the prediction of through thickness thermal conductivity of fiber reinforced plastic (FRP) composites with orientation of the square unit cell	International Journal of Physical Sciences	ISSN: 1992 – 1950 Volume: 10(6)	0.54	International
3	Development of Range Extended - Solar Power Assisted Electric Vehicle	SAE, 2015-26-0111, 2015	doi:10.4271/2015-26-0111	SJR H Index: 40	International
4	Enhancement of performance and emission characteristics of SI engine using Multi ground spark plug	SAE Technical Paper	2019-28-0154	SJR H Index: 40	International

	using alcohol fuel blends				
5	Design considerations and Analysis of Electric Microcar for cities	SAE Technical Paper	2019-28-0161	SJR H Index: 40	International
6	Development and Testing of Electric Microcar for Indian cities	SAE Technical Paper	2019-28-0008	SJR H Index: 40	International
7	Traverse thermal conductivity of hollow fiber composites.	International Journal of Engineering Technology Science and Research (IJETSR)	Vol 5, issue 5	2.120	International
8	Historic Review and recent progress in internal designs of solar stills	Environmental Science and Pollution Research	1614-7499	4.223	International
9	Experimental assessment of productivity and sustainability of nanoporous Cr-Mn-Fe oxide nanocoating in solar-powered desalination	Process Safety and Environmental Protection 162 (2022) 61–71	0957-5820	6.158	International
10	Performance analysis of a contactless nanostructure in solar-powered desalination system	Environmental Science and Pollution Research	0944-1344	5.190	International
11	Performance analysis of non-contact nanostructure solar desalination system by varying water depth at a constant air gap	Solar Energy 247 (2022) 485–498	0038-092X	7.188	International
12	Effect of air gap in novel fouling-free non-contact nanostructure solar still for potable water application from lake water	Journal of Cleaner Production 381 (2022) 135100	0959-6526	11.072	International

13	Effect of water depth in productivity enhancement of fouling-free non-contact nanostructure desalination system	Sustainable Energy Technologies and Assessments 54 (2022) 102848	2213-1388	7.632	International
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#### 5.8. Papers presented at National / International Conferences:

S. No	Title of the Paper	Names of the Conference/ Seminars	National/ International	Period
1	Characterization of two phase flow in horizontal pipe	National conference on technological advancements in mechanical engineering	National	03-12-2005
2	Design and experimental investigation of Air Lift Pump	51 <sup>st</sup> Congress of ISTAM (An International meet)	International	18-21 December 2006.
3	Micromechanical Prediction of Thermal Stresses at Fiber-Matrix Interface of Boron-Epoxy Composite	Team-Tech 2007	International	4 - 6 October 2007
4	Experimental Studies on Airlift Loop	The Indian Society of Theoretical and Applied Mechanics	International	27-30 December 2018
5	Finite Element Models for Prediction of Transverse Thermal Conductivity Based on Electrical Analogy	International Conference on Mechanics of Composites (MECHCOMP2014)	International	8-12 June 2014
6	Comparative Study of Different Approaches in the Prediction of Transverse Thermal Conductivity	3 <sup>rd</sup> International Conference on Materials Processing and Characterisation (ICMPC 2014).	International	8-9 March 2014
7	Development Of Range Extended-Solar Power Assisted Electric Vehicle	SAE Conference	SAE Conference	14 Jan 2015
8	Consistency in Electrical Analogy Approach With Respect to Thermal Conductivity Mismatch in FRP Composites	4 <sup>th</sup> International Conference on Materials Processing and Characterisation (ICMPC 2015).	International	14-15 March 2015

9	Enhancement of Lift-Drag characteristics of NACA 0012	7th International Conference on Materials Processing and Characterisation (ICMPC 2015).	International	2017
10	Nanostructures as high absorption energy materials-A review	Advances in Sustainable Technologies (ICAST - 2020)	International	2021

**5.9. Sponsored research Projects:**

<b>S. No</b>	<b>Title</b>	<b>Agency</b>	<b>Period</b>	<b>Grant amount</b>	<b>Ongoing / Completed</b>
1	Development of Low-cost Plug-in Microcar and Investigation on Potential of Solar Power Assistance and Optimization of Battery Pack	SERB-SURE (State University Research Excellence)	36 months	27,38,360/-	Ongoing

**5.10 Consultancy Projects:**

<b>S. No</b>	<b>Title</b>	<b>Agency</b>	<b>Period</b>	<b>Sanctioned Amount</b>	<b>Ongoing / Completed</b>

**6. Awards / Honors received:**

- 7. Motto:** Good placement to the students, Students to pursue higher studies in top ranked universities in the world, NBA accreditation to the department.