

**Dr. P.B. Senthilkumar**DOB: 07<sup>th</sup> February, 1991

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**Objective**

To Work in an organization that develops my technical knowledge thereby enhancing my organization and myself.

**Education Qualification**

Degree	Branch	Institute	Board/ University	Year	Marks/ GPA
Schooling	10 <sup>th</sup>	S.S.M. Lakshmiammal Matriculation Hr. Sec. School	Matriculation	2007	77.09
Polytechnic	Diploma in Mechanical Engineering	Sakthi Polytechnic College	Directorate of Technical Education (DOTE)	2010	78.75
B.E.	Automobile Engineering	Dr. Mahalingam College of Engineering and Technology	Anna University	2010-2013	7.95
M. Tech	Automotive Mechatronics (Global Automotive Research Centre G-ARC, Chennai)	Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology	Vel Tech University	2013-2015	8.83
Ph.D.	Automobile Engineering	Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology	Vel Tech University	2023	-

**Work Experience**

Name & Address of the Institution / Organization	Designation	Period of service		Duration		
		From	To	Y	M	D
School of Mechanical and Construction Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology	Assistant Professor	29.06.2015	Till Date 02.04.2024	8	9	4

### Thesis / Project Work

- Ph.D. Thesis Title – Assessment of CI Engine characteristics operated by Nano additive biodiesel blends with various EGR ratio.
- A Study, Design and Analysis of Horizontal burn rate chamber.
- Fatigue and Mechanical Characteristics Analysis on Friction Stir Welded & TIG Welded in Aluminum Alloy A(2014-T6).
- Heat Dissipation Analysis on Disc (Rotor) using ANSYS.
- Design and Fatigue Analysis on Surface modification on Connecting rod in big end bearing.

### List of Journal Publications

S.No.	Title	Name of the Journal	Year
1	Influence of nano $Al_2O_3$ on compression ignition engine characteristics fuelled with Mahua biodiesel	Materials Today: Proceedings, 2023, 72, pp. 2238–2244 (Scopus)	2023
2	Vehicle Aerodynamics and Different Testing Methods	Handbook of Research on Aspects and Applications of Incompressible and Compressible Aerodynamics, 2022, pp. 388–406 (Scopus)	2022
3	Influence of Injection Pressure on the Dual-Fuel Mode in CI Engines Fueled with Blends of Ethanol and Tamanu Biodiesel	International Journal of Chemical Engineering, 2022, 6730963 (Scopus & SCI) Impact Factor – 2.56	2022
4	The effect of thermal degradation and thermogravimetric analysis on pyrolysis oil production from waste milk packet for CI engine application	Journal of Thermal Analysis and Calorimetry (Scopus & SCI) Impact Factor - 4.62	2022
5	The influence of exhaust gas recirculation on the characteristics of compression ignition engines powered by tamanu methyl ester	International Journal of Low-Carbon Technologies (Scopus & SCI) Impact Factor – 3.19	2022
6	Design and analysis of a rear diffuser in a sedan car	Materials Today: Proceedings, 2022, 59, pp. 1324–1339 (Scopus)	2022

7	Additive manufactured portable vertical axis windmill	International Journal of Ambient Energy, ISSN: 0143-0750 (Print) 2162-8246 (Online) <a href="https://doi.org/10.1080/01430750.2018.1484812">https://doi.org/10.1080/01430750.2018.1484812</a> ( <b>Scopus</b> )	2020
8	Experimental investigation on diesel engine using ethanol and ethanol blends with LHR	International Journal of Mechanical and Production Engineering Research and Development ISSN (P): 2249-6890; ISSN (E): 2249-8001 ( <b>Scopus</b> )	2018
9	Experimental investigation and mechanical characterization of carbon nano tubes/AA6063 Aluminium metal matrix composite using stir casting method	International Journal of Mechanical Engineering and Technology ISSN 0976-6359 Vol 8 issue 8 Pp 1383-1400. ( <b>Scopus</b> )	2017
10	Internet of things-based accident detection and prevention	International Journal of Mechanical Engineering and Technology ISSN 0976-6359 Vol 8 issue 9-page no.196-2014 ( <b>Scopus</b> )	2017
11	A review of recent trends on reinforcement of fiber metal laminates with nano clay and multi walled carbon nano tube	International journal of Chemtech research, vol 10, issue 3, page no.395-399, ISSN 0974-4290	2017
12	Multi zone Model to Predict a NOx and Soot Formation Single Cylinder LHR Diesel Engine running on Bio- diesel	International Journal of Applied Engineering Research, vol 10, Issue 84, ISSN 0973-4562	2015
13	Design And Analysis of Disc Brake and Its Structural Components	International Journal of Applied Engineering Research, vol 10, Issue 84, PP.226-232	2015
14	Design And Analysis of Spur Gear Using Finite Element Analysis	International Journal of Applied Engineering Research, vol 10, Issue 84, PP.233-237	2015

### List of International Conference

S.No	Title	Conference details	Year
1	Experimental Studies on Compression Ignition Engine Operated with Blends of Tamanu Biodiesel and Diesel	International Symposium on Energy Management and Sustainability (ISEMAS), 2022, Turkey	2022
2	An Assessment of CI Engine Characteristics Fuelled with Waste Plastic Pyrolysis Oil	International Conference on Advanced composite materials and manufacturing (ICAMM- 2K20)	2020
3	Assessment on performance, combustion and emission characteristics of C.I. engine powered by various biodiesel with EGR	International Conference on Advances in Renewable Energy and Green Technology ICARE 2019 at Vellore Institute of Technology	2019
4	Combined effect of injection pressure and EGR on CI engine fueled with tamanu ethyl ester	International Conference on Advances in Renewable Energy and Green Technology ICARE 2019 at Vellore Institute of Technology	2019
5	Fabrication and characterization of epoxy resin/nylon/ coconut coir reinforced hybrid composite material	Second International conference on Frontiers in automobile and mechanical engineering	2016

### List of National Conference

S.No	Title	Conference details	Year
1	Simulation on Single Cylinder CI Engine Fuelled with Tamanu Biodiesel	National Conference on Robotics and Automation Engineering at organized by Department of Mechatronics Engineering of Er. Perumal Manimekalai college of Engineering, Hosur	2021
2	Experimental Investigation of CI Engine Powered with Diethyl Ether and Biodiesel with Diesel Blend as Fuel	National conference on materials, Design and construction, NCDMC at Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Chennai	2016

3	Design And Analysis of Engine Exhaust Value with Heat Exchanger	National conference on materials, Design and construction, NCDMC at Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Chennai	2016
4	Performance and Emission characteristics of a Multi- cylinder Diesel Engine operated with Mango seed oil and Diesel blends	National Conference on Design, Materials & Constructions (NCDMC"16), pp.27-32, 2016, Vel Tech Dr. & Dr.SR Technical University, Chennai, Tamil Nadu, India	2016
5	Multi zone Model to Predict a NOx and Soot Formation Single Cylinder LHR Diesel Engine running on Bio- diesel	National conference on materials, Design and construction, NCDMC at Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Chennai	2015
6	Design And Analysis of Disc Brake and Its Structural Components	National conference on materials, Design and construction, NCDMC at Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Chennai	2015
7	Design And Analysis of Spur Gear Using Finite Element Analysis	National conference on materials, Design and construction, NCDMC at Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Chennai	2015

### List of Workshops Participated

S. No	Workshops Title	Organized /University	Institution	Date
1	Nanotechnology in I.C. Engines	VIT, Chennai		30 <sup>th</sup> September,2020
2	Transport Sector Fuel Efficiency-Behavioral and Technological	SCMS School Of Engineering & Technology, Ernakulam, Kerala		21 <sup>st</sup> September,2020
3	Advanced Product Design & Development Of Automotive Plastic Components	SAE -ISS ERODE DIVISION		1 <sup>st</sup> August,2020
4	Effect of Nanoadditives on Automotive Engine Performance & Emission Characteristics	B.S. Abdur Rahman Crescent Institute of Science And Technology, Chennai		8 <sup>th</sup> July,2020
5	Practical Aspects of Finite Element Analysis	Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Chennai		13 <sup>th</sup> December,2019
6	Lecture meeting on "Fundamentals of Brake System, Challenges in Design, Development and Testing of Automotive Brake Systems"	SAE India Southern section at AIEMA, Ambattur Industrial Estate Manufacturers Association, Chennai		2 <sup>nd</sup> March, 2019
7	Stepping Stones of Success	Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Chennai		8 <sup>th</sup> February,2019
8	Research Trends on Smart Waste Management system for Batteries	Kongu Engineering College, Erode.		11 <sup>th</sup> and 12 <sup>th</sup> January 2019

9	Two days Workshop on “FEA Simulation of Composite Structures-Impact and Vibration Analysis”	SSN College Of Engineering, Chennai	12 <sup>th</sup> & 13 <sup>th</sup> April 2018
10	Two days Workshop on “Engine Simulation using RICARDO”	Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Chennai	09 <sup>th</sup> & 10 <sup>th</sup> March 2018
11	One day Workshop on “Latest Trends in Automotive Technology”	IIT MADRAS	16 <sup>th</sup> September 2017
12	Two days International Workshop on “An Innovation Pipeline for alternative fuel and fuel cells- future of Mobility”	PSG College Of Technology, Coimbatore	7 <sup>th</sup> & 8 <sup>th</sup> September, 2017
13	Lecture meeting on “Model Based Systems Engineering and Simulation”	SAE India Southern section, Chennai	8 <sup>th</sup> July 2016, Friday
14	Lecture meeting on “Diesel Engine Emission Control”	SAE India Southern section, Chennai	18th June, 2016

#### Area of Interest

- Sustainable Energy
- Pyrolysis
- I.C.Engines
- Materials

#### Value added courses

S.No	Course name	Conducted/Organized by
1	AI For Everyone	Stanford University through Coursera
2	Digital Manufacturing and Design	University at Buffalo, The State University of New York through Coursera.
3	Introduction of IoT	NPTEL

#### Skill Sets

**Software: Auto CAD, Pro-E, Solid works, ANSYS, RICARDO.**

- Undergone Internship program in **Care soft Global Company.**
- Automotive Training on “ Newer Technologies in Diesel Fuel Injection System, Gasoline system And Vehicle Diagnosis” at BOSCH Training Centre, Bangalore.

#### Member in Professional Bodies

- Society of Automotive Engineers (SAE)

#### Additional Responsibilities Undertaken

- Alumni coordinator
- Hostel Manager
- VelTech Motor Sports coordinator

- As a faculty advisor, guided student to participate the below list of motorsports events.

Event Name and Date	Organized by	No. of Students participated	Venue	Awards / Secured Position
SAE-Supra India, 2017 (Category Formula Racing) 26.06.2017 to 01.07.2017	SAE India	18	Buddh International Circuit, Greater Noida	50th Position out of 126 teams
SAE-Supra India, 2017 (Category Formula Racing) 11.06.2018 to 16.06.2018	SAE India	16	Buddh International Circuit, Greater Noida	59th Position out of 126 teams
International Student Car Competition (ISCC), 2018 (Category: Hybrid) 18.05.2018 & 19.05.2018	The Korea Automobile Testing & Research Institute, South Korea	15	The Korea Automobile Testing & Research Institute, South Korea	<b>“Best Of Creative Technology Award”</b> <b>Cash Prize: 1,00,000KW</b>
FFS, 2018 (Category Formula Racing) 28.09.2018 to 03.10.2018	Fraternity of Mechanical and Automotive Engineers (FMAE)	20	KARI Motor Speedway, Coimbatore	18th Position out of 38 teams
BAJA, 2019 (Category: All-Terrain Vehicle - Electric) 22.01.2019 to 29.01.2019	SAE India	22	Pithampur, Madhya Pradesh	1st attempt cleared the Mechanical & Electrical Technical Inspection. <b>Cash Prize: Rs.1,00,000</b>
ISIE-COC, 2019 (Category: All-Terrain Vehicle - Electric) 22.02.2019 to 25.02.2019	Andhra Pradesh State Skill Development Corporation-Govt.of AP & ISIE India	19	KL University, Andhra Pradesh	<b>“Best Suspension and Traction Award”</b> Overall 2nd Runner up with <b>Cash Prize of Rs.20,000</b>
FMAE BAJA- 2019 (Category : All-Terrain Vehicle - Electric) 23.08.2019 to 27.08.2019	FMAE (Fraternity of Mechanical and Automotive Engineers)	19	FMAE Moto Park, Keesara, Hyderabad	<b>1.Design and CAE–Runner</b> <b>2.Suspension and Traction- Winner</b> <b>3. Maneurability – Winner</b> <b>4. Endurance – Runner</b> <b>5.Overall Champion – Runner</b>
International Student Car Competition (ISCC), 2019 (Category: Electric) 06.09.2019 & 07.09.2019	The Korea Automobile Testing & Research Institute, South Korea	15	The Korea Automobile Testing & Research Institute, South Korea	<b>Creative Technology category-2nd Position.</b> Overall 14th Position out of 54 teams

## **Extra-Curricular Activities**

### **National Cadet Corps (NCC)**

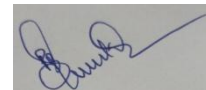
- **Completed 'B' & 'C' Certificate Examinations.**
- Attended Cader camp held at Chikkaiah Naicker Arts College, Erode District.
- Attended Combined Annual Training Camp/ RD Selection at Kandhaswamy Kandar College, Paramathi Velur, from 09-08-2008 to 18-8-2008.

## **Declaration**

I hereby declare that the information furnished above is true to the best of my knowledge and belief.

Date: 28.02.2024

Place: Chennai



**(P.B.SENTHILKUMAR)**