

## CURRICULUM VITAE



### **Dr. V. ARUL MOZHI SELVAN**

Associate Dean (Academic)  
Associate Professor  
Department of Mechanical Engineering,  
National Institute of Technology,  
(Government of INDIA)  
Tiruchirappalli - 620 015, Tamil Nadu, INDIA

Email : arulmozhi@nitt.edu  
Phone : +91 431 250 3417 (Direct)  
: +91 431 250 3400 (Office)  
: +91 431 250 3910 (Office)  
Mobile : +91 98949 20835  
Website : [www.nitt.edu](http://www.nitt.edu)

Date of Birth : 15.05.1972  
Gender : Male  
Nationality : Indian

#### **I. QUALIFICATIONS:**

- B.E. (Mechanical Engineering), Bharathiar University, Coimbatore, 1994.
- M.Tech. (Energy Engineering), National Institute of Technology, Tiruchirappalli, 1999.
- Ph.D. (Mechanical Engineering), National Institute of Technology, Tiruchirappalli, 2010.

#### **II. THESIS TITLE:**

- **M.Tech.** : Nucleate Pool Boiling Heat Transfer in Liquids and Their Mixtures at Sub-Atmospheric Pressures
  - Guide: Dr. (Mrs). S.K. Pandey, Professor, Dept. of Chemical Engg., NIT-T.
- **Ph.D.** : Performance and Emission Characteristics of a Variable Compression Ratio Engine using Diesel-Biodiesel-Ethanol-Nanoparticle Blends
  - Research Supervisors: Dr. M. Udayakumar, Professor, & Dr. R. B. Anand, Professor, Dept. of Mech.Engg., NIT-T.

**III. SPECIALIZATION:**

- Mechanical Engineering, Energy Engineering

**IV. AREA OF INTEREST:**

- Biofuels & Engine Research
- Waste to Energy
- Renewable Energy
- Nanoparticle Additives
- Automobile Engineering

**V. EXPERIENCE:**

- Teaching & Research : 23 Years

**VI. EMPLOYMENT DETAILS:**

1. Associate Professor (Pay Level/Index - 13A2/1, Pay Band – 4, as per VII<sup>th</sup> CPC), Department of Mechanical Engineering, National Institute of Technology, Trichy from 12.03.2018 to till date.
2. Assistant Professor (AGP 8000), Department of Mechanical Engineering, National Institute of Technology, Trichy from 01.07.2011 to 11.03.2018.
3. Assistant Professor (AGP 7000). Department of Mechanical Engineering, National Institute of Technology, Trichy from 01.07.2008 to 30.06.2011.
4. Assistant Professor (AGP 6000), Department of Mechanical Engineering, National Institute of Technology, Trichy from 29.03.2006 to 30.06.2008
5. Assistant Professor, Department of Mechanical Engineering, J.J. College of Engineering and Technology, Trichy from 01.07.2002 to 28.03.2006.
6. Lecturer, Department of Mechanical Engineering, J.J. College of Engg & Technology, Trichy from 01.07.1996 to 30.06.2002

**VII. PROFESSIONAL MEMBERSHIP:**

- Life Member of Indian Society for Technical Education (ISTE) – LM 37042
- Member, Society of Automotive Engineers (SAE), India

### VIII. REVIEWER IN INTERNATIONAL JOURNALS:

- Energy & Fuels, ACS (American Chemical Society)
- Energy, Elsevier
- Applied Energy, Elsevier
- Renewable Energy, Elsevier
- Renewable and Sustainable Energy Reviews, Elsevier
- Chemical Engineering Communications, Taylor and Francis
- Journal of Petroleum Technology and Alternative Fuels, Academic Journals
- Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, Taylor and Francis

### IX. PATENTS:

1. Waste Plastic Bottle Reinforced Concrete Bricks For Green Building, Patent Filed on 06.11.2017, Intellectual Property India, Government of India. Application No: 201741039392. Reference No: E-2/3283/2017-CHE
2. E-Waste Concrete Block, Patent Filed on 06.11.2017, Intellectual Property India, Government of India. Application No: 201741039393. Reference No: E-2/3284/2017-CHE
3. Waste Tire Infused Plastic Bottle Reinforced Concrete Bricks, Patent Filed on 06.11.2017, Intellectual Property India, Government of India. Application No: 201741039394. Reference No: E-2/3285/2017-CHE

### X. LIST OF PUBLICATIONS:

Sl. No.	Details of Papers Published in International / National Journals
1.	<b>C.N. Kowthaman</b> and <b>V. Arul Mozhi Selvan</b> (2019) Influence of surfactants on quaternary emulsion blend and experimental investigations on the influence of hydrogen enriched quaternary blend in DIC engine. <i>International Journal of Hydrogen Energy</i> , accepted on 29.07.2019
2.	H. Mohit and <b>V. Arul Mozhi Selvan</b> , “A novel physical and thermomechanical characteristics of aluminum silicon carbide reinforced polymer nanocomposites”, <i>Iranian Polymer Journal</i> , accepted on 15.07.2019.
3.	<b>C.N. Kowthaman</b> and <b>V. Arul Mozhi Selvan</b> (2019) Synthesis of biodiesel from Schizochytrium oil using renewable catalyst and study of its quaternary blend phase behaviour. <i>IOP Conf. Series: Earth and Environmental Science</i> 268 (2019) 012107, DOI:10.1088/1755-1315/268/1/012107. <a href="https://iopscience.iop.org/article/10.1088/1755-1315/268/1/012107">https://iopscience.iop.org/article/10.1088/1755-1315/268/1/012107</a>

4.	H. Mohit and <b>V. Arul Mozhi Selvan</b> , “Effect of a novel chemical treatment on nanocellulose fibers for enhancement of mechanical, electrochemical and tribological characteristics of epoxy bio-nanocomposites”, <i>Fibers and Polymers</i> , accepted on 19.04.2019.
5.	C. Pandi Selva Durai, <b>V. Arul Mozhi Selvan</b> , T.K. Singha, S.Kumaran (2019), Tensile and compression behaviour of nano-yttria dispersed W-Ni-Co heavy alloys processed by liquid phase sintering, <i>Transactions of the Indian Institute of Metals</i> , 2019, pp 1-4. <a href="https://doi.org/10.1007/s12666-019-01632-0">https://doi.org/10.1007/s12666-019-01632-0</a>
6.	H. Mohit, <b>V. Arul Mozhi Selvan</b> (2019), Influence of chemical surface modification on micro-wear characteristics of sugarcane nanocellulose epoxy nanocomposites, <i>MATTER: International Journal of Science and Technology</i> . <a href="https://grdspublishing.org/index.php/matter/article/view/1788">https://grdspublishing.org/index.php/matter/article/view/1788</a>
7.	C. Pandi Selva Durai, <b>V. Arul Mozhi Selvan</b> , T.K. Singha, S.Kumaran (2019), Effect of nano-yttria dispersion on the microstructure and mechanical properties of W-Ni-Co alloys, <i>International Journal of Materials and Product Technology, Special Issue on: Cambridge Summit 2018 Advances in Engineering Systems and Product Technology, Accepted on 28th January 2019, In Press</i> <a href="https://www.inderscience.com/info/ingeneral/forthcoming.php?jcode=ijmpt">https://www.inderscience.com/info/ingeneral/forthcoming.php?jcode=ijmpt</a>
8.	C.N. Kowthaman, <b>V. Arul Mozhi Selvan</b> (2019), Synthesis, characterization and optimization of schizochytrium biodiesel production using Na <sup>+</sup> doped nano hydroxyapatite, <i>International Journal of Energy Research</i> , 2019; 1-19. <a href="https://doi.org/10.1002/er.4387">https://doi.org/10.1002/er.4387</a>
9.	H. Mohit & <b>V. Arul Mozhi Selvan</b> (2018), Experimental and Statistical Analysis on Thermo-mechanical properties of Sodium Chloride and Alkaline Treated Sugarcane Bagasse Fiber, <i>Indian Journal of Fiber and Textile Research</i> , Accepted on 27th April 2018.
10.	H. Mohit & <b>V. Arul Mozhi Selvan</b> (2018), A comprehensive review on surface modification, structure interface and bonding mechanism of plant cellulose fiber reinforced polymer based composites, <i>Composite Interfaces</i> , 25:5-7, 629-667. <a href="https://doi.org/10.1080/09276440.2018.1444832">https://doi.org/10.1080/09276440.2018.1444832</a>
11.	P.Sethumadhavan, <b>V. Arul Mozhi selvan</b> (2018), Effect of Spent Mushroom Substrate and Waste Paper Briquette on Methane Production from Anaerobic Digestion, <i>Journal of Environmental Biology</i> , 39, 269-276. <a href="http://doi.org/10.22438/jeb/39/2/MRN-456">http://doi.org/10.22438/jeb/39/2/MRN-456</a>
12.	M. Kirubakaran, <b>V. Arul Mozhi Selvan</b> (2018), Eggshell as heterogeneous catalyst for synthesis of biodiesel from high free fatty acid chicken fat and its working characteristics on a CI engine, <i>Journal of Environmental Chemical Engineering</i> , Vol. 6 (4), 4490-4503. <a href="https://doi.org/10.1016/j.jece.2018.06.027">https://doi.org/10.1016/j.jece.2018.06.027</a>
13.	M. Kirubakaran, <b>V. Arul Mozhi Selvan</b> (2018) A Comprehensive Review of Low Cost Biodiesel Production from Waste Chicken Fat, <i>Renewable and Sustainable Energy Reviews</i> , 82 (2018) pp 390-401. <a href="http://dx.doi.org/10.1016/j.rser.2017.09.039">http://dx.doi.org/10.1016/j.rser.2017.09.039</a>

14.	<b>Arul Mozhi Selvan V</b> , Mohit H. (2016) Experimental Investigation on Mechanical Properties of Chicken Keratin Fiber Reinforced Isophthalic Polymer Matrix Composite. <i>Indian Journal of Engineering</i> , 2016, 13(33), pp 371-378. <a href="http://www.discoveryjournals.org/engineering/current_issue/2016/A27.pdf">http://www.discoveryjournals.org/engineering/current_issue/2016/A27.pdf</a>
15.	Naresh Kumar Gurusala, <b>V Arul Mozhi Selvan</b> (2015) Effects of Alumina Nanoparticles in Waste Chicken Fat Biodiesel on the Operating Characteristics of a Compression Ignition Engine, <i>Clean Technology and Environmental Policy</i> , 17(3) pp 681-692. <a href="https://doi.org/10.1007/s10098-014-0825-5">https://doi.org/10.1007/s10098-014-0825-5</a>
16.	Pushparaj.T., Ramabalan,S., <b>Arul Mozhi Selvan, V.</b> (2015) “Performance and Emission Characteristics of CI Engine Fuelled with Diesel and Oxygenated Fuel Blends” <i>International Journal of Global Warming</i> , 7(2) pp 173-183 <a href="https://doi.org/10.1504/IJGW.2015.067748">https://doi.org/10.1504/IJGW.2015.067748</a>
17.	Pushparaj.T., Ramabalan,S., <b>Arul Mozhi Selvan, V.</b> (2015) Performance Evaluation and Exhaust Emission of Diesel Engine Fuelled with CNSL Biodiesel. <i>Energy Sources, Part A: Recovery, Utilization, and Environmental Effects</i> , 37(18) pp 2013-2019 <a href="http://dx.doi.org/10.1080/15567036.2011.643343">http://dx.doi.org/10.1080/15567036.2011.643343</a>
18.	<b>V. Arul Mozhi Selvan</b> , R.B. Anand, M. Udayakumar (2014) Effect of Cerium Oxide Nanoparticles and Carbon Nanotubes as fuel-borne additives in Diesterol blends on the performance, combustion and emission characteristics of a variable compression ratio engine, <i>Fuel</i> 130, pp 160–167 <a href="https://doi.org/10.1016/j.fuel.2014.04.034">https://doi.org/10.1016/j.fuel.2014.04.034</a>
19.	Naresh Kumar Gurusala , Richu Zachariah, <b>V. Arul Mozhi Selvan</b> (2014) Effect of EGR on Combustion and Emissions Characteristics of a CI Engine Fuelled with Waste Chicken Fat Biodiesel, <i>Applied Mechanics and Materials</i> , Vol. 592 – 594, pp 1481-1486 <a href="https://www.scientific.net/AMM.592-594.1481">https://www.scientific.net/AMM.592-594.1481</a>
20.	P.Sethumadhavan, <b>V.Arul Mozhi selvan</b> (2014), Performance Evaluation of A Novel Low Cost Biogas System For Rural Application, <i>International Journal of Advanced Technology &amp; Engineering Research (IJATER)</i> , Vol 4, Spec.Issue 2, pp 98-102
21.	Naresh Kumar Gurasala, <b>Arul Mozhi Selvan,V.</b> , Ajay Balan, Shreyas Athreya (2013), Optimization of Waste Chicken Fat Pre-Treatment Process for Biodiesel Production, <i>Transactions of SAE</i> , Paper No. 2013-32-9131, DOI: 10.4271/2013-32-9131 <a href="http://papers.sae.org/2013-32-9131/">http://papers.sae.org/2013-32-9131/</a>
22.	<b>Arul Mozhi Selvan,V.</b> , Anand,R.B. and Udayakumar,M. (2009) Stability, Performance and Emission Characteristics of Diesel-Ethanol Blend with Castor Oil as Additive in Variable Compression Ratio Engine. <i>Transactions of JSAE/SAE International</i> , Paper No. 20097120/2009-32-0120. <a href="https://www.sae.org/publications/technical-papers/content/2009-32-0120/">https://www.sae.org/publications/technical-papers/content/2009-32-0120/</a>
23.	<b>Arul Mozhi Selvan,V.</b> , Anand,R.B. and Udayakumar,M. (2009) Stability of Diesohol using Biodiesel as Additive and its Performance and Emission Characteristics in a Compression Ignition Engine under Various Compression Ratios. <i>International Journal of Applied Engineering Research</i> , <b>4(9)</b> , 1723–1738.

	<a href="https://www.ripublication.com/Volume/ijaerv4n9.htm">https://www.ripublication.com/Volume/ijaerv4n9.htm</a>
24.	<b>Arul Mozhi Selvan,V.,</b> Anand,R.B. and Udayakumar,M. (2009) Combustion Characteristics of Diesohol using Biodiesel as additive in a Direct Injection Compression Ignition Engine under Various Compression Ratios. <i>Energy &amp; Fuels</i> , <b>23</b> , 5413–5422. (DOI:10.1021/ef900587h.) <a href="https://pubs.acs.org/doi/abs/10.1021/ef900587h">https://pubs.acs.org/doi/abs/10.1021/ef900587h</a>
25.	<b>Arul Mozhi Selvan,V.,</b> Anand,R.B. and Udayakumar,M. (2009) Effects of Cerium Oxide Nanoparticle Addition in Diesel and Diesel-Biodiesel-Ethanol Blends on the Performance and Emission Characteristics of a CI Engine. <i>Journal of Engineering and Applied Science</i> , <b>4(7)</b> , 01-06. <a href="http://envirox.pl/envirox_pdf/referencje/NITT.pdf">http://envirox.pl/envirox_pdf/referencje/NITT.pdf</a>
26.	<b>Arul Mozhi Selvan,V.,</b> Anand,R.B. and Udayakumar,M. (2009) Stability of Diesohol blend with castor oil as additive and its performance and emission Characteristics in a variable compression ratio engine. <i>International Journal of Power Engineering</i> , <b>1(2)</b> , 99-113.

Sl. No.	Details of Papers Published in International/National Conferences
1.	C.N. Kowthaman and <b>V. Arul Mozhi Selvan</b> (2018) Synthesis of biodiesel from Schizochytrium oil using renewable catalyst and study of its quaternary blend phase behaviour, <i>International Conference on Sustainable Energy and Green Technology</i> , Double Tree by Hilton Kuala Lumpur, Malaysia. 11-14 December 2018.
2.	H. Mohit, <b>V. Arul Mozhi Selvan</b> (2018), Influence of chemical surface modification on micro-wear characteristics of sugarcane nanocellulose epoxy nanocomposites, <i>International Conference on science and technology research</i> , National University of Singapore, Singapore, 16-17 November 2018.
3.	H. Mohit and <b>V. Arul Mozhi Selvan</b> (2017), Experimental Investigation on Corrosion, Dielectric, Thermal and Morphological Properties of Chicken Feather Fiber Reinforced Polyester Matrix Composite, <i>International Conference on Emerging Trends in Materials and Manufacturing Engineering</i> , National Institute of Technology, Tiruchirappalli, 10-12, March, 2017.
4.	C.N. Kowthaman and <b>V. Arul Mozhi Selvan</b> (2016), Evaluation of Biogas Production from Waste Microalgae, <i>International Conference on Waste Management, RECYCLE 2016</i> , Indian Institute of Technology Guwahati, Guwahati, 1-2, April, 2016.
5.	H. Mohit and <b>V. Arul Mozhi Selvan</b> (2016), Studies on Dry Leaves Fiber Reinforced Vinyl Ester Polymer Metal Matrix Nanocomposite, <i>4th International Conference on Nanoscience and Nanotechnology, COCHIN NANO 2016</i> , Cochin University of Science and Technology, Cochin, 20-23 February, 2016.
6.	H. Mohit and <b>V. Arul Mozhi Selvan</b> (2016), Experimental Investigation on Mechanical Properties of Chicken Keratin Fiber Reinforced Isophthalic Polymer Matrix Composites, <i>International conference on Trends in Industrial and Mechanical Engineering (ICTIME-2016)</i> , Maulana Azad National Institute of Technology, Bhopal, 4-16, February, 2016.

7.	H. Mohit and <b>V. Arul Mozhi Selvan</b> (2015), Investigations on Chicken Feather Fiber Epoxy Polymer Metal Composite, <i>International Conference on Nanomaterials for Energy, Environment, Catalysis and Sensors, ICNEECS-15</i> , Madurai Kamraj University, Tamilnadu, India, 11 - 12 December 2015.
8.	H. Mohit and <b>V. Arul Mozhi Selvan</b> (2015) , Studies on Chicken Fiber Reinforcement in Isophthalic Polymer Metal Matrix Nanocomposite, <i>XXVII IUPAP Conference on Computational Physics: CCP2015</i> , Indian Institute of Technology Guwahati, Guwahati, 2-5, December, 2015.
9.	C.N. Kowthaman and <b>V. Arul Mozhi Selvan</b> (2015) Extraction and Characterization of Spirulina Platensis Oil for Bio-Diesel Production, <i>International Conference on Advances in Mechanical Engineering</i> , University College of Engineering, Anna University, Villupuram, 15-16 October 2015.
10.	H. Mohit and <b>V. Arul Mozhi Selvan</b> (2015) Studies on Structural Properties of Dry Leaves Fiber Reinforced Vinyl Ester Polymer Matrix Composites, <i>International Conference on Advances in Mechanical Engineering</i> , University College of Engineering, Anna University, Villupuram, 15-16 October 2015.
11.	H. Mohit and <b>V. Arul Mozhi Selvan</b> (2014) Mechanical Properties of Polymer and Metal Matrix Composites – A Review, <i>International Conference on Advance Design and Manufacturing</i> , National Institute of Technology, Tiruchirappalli, 5-7 December 2014.
12.	Naresh Kumar Gurusala, <b>V. Arul Mozhi selvan</b> (2014), Optimization of Biodiesel Production from Waste Chicken Fat Through Two-Step Catalyzed Process, <i>International Conference on Green Technologies For Environmental Pollution Prevention And Pollution Control (ICGTEPC 2014)</i> , National Institute of Technology, Tiruchirappalli, 27- 29 September 2014.
13.	C.N. Kowthaman, <b>V. Arul Mozhi selvan</b> (2014), Microalgae & its Characteristics as a Potential Biofuel - A Review, <i>International Conference on Green Technologies For Environmental Pollution Prevention And Pollution Control (ICGTEPC 2014)</i> , National Institute of Technology, Tiruchirappalli, 27- 29 September 2014.
14.	M. Kirubakaran, <b>V. Arul Mozhi selvan</b> (2014) Experimental Investigations On Algal Oil Production For A Sustainable Biofuel Feedstock, <i>International Conference on Green Technologies For Environmental Pollution Prevention And Pollution Control (ICGTEPC 2014)</i> , National Institute of Technology, Tiruchirappalli, 27- 29 September 2014.
15.	Mohit, <b>V. Arul Mozhi selvan</b> (2014) A Review On Natural Fiber Reinforced Composites For Green Environment, <i>International Conference on Green Technologies For Environmental Pollution Prevention And Pollution Control (ICGTEPC 2014)</i> , National Institute of Technology, Tiruchirappalli, 27- 29 September 2014.
16.	P.Sethumadhavan, <b>V. Arul Mozhi selvan</b> (2014) Experimental Investigations On Biomethanation As A Sustainable Waste Management Solution For Temples In India, <i>International Conference on Green Technologies For Environmental Pollution Prevention And Pollution Control (ICGTEPC 2014)</i> , National Institute of Technology, Tiruchirappalli, 27- 29 September 2014.
17.	Naresh Kumar Gurusala, <b>Arul Mozhi Selvan V</b> (2014) Effect of EGR on Combustion and Emission Characteristics of a CI Engine Fuelled with Waste

	Chicken Fat Biodiesel, <i>International Mechanical Engineering Congress (IMEC 2014)</i> , National Institute of Technology, Tiruchirappalli, 13-15 June 2014.
18.	Sethumadhavan P, <b>Arul Mozhi selvan V</b> (2014) Performance Evaluation of Biogas Energy for Rural Application, International Conference on Renewable Energy and Sustainable Developments (ICRES-2014), Trinity College of Engineering and Research, Pune, India, January 9-10, 2014
19.	Naresh Kumar Gurusala, <b>Arul Mozhi Selvan V</b> (2013) Effects of Alumina Nanoparticles in Waste Chicken Fat Biodiesel on the Operating Characteristics of a CI Engine, <i>4th International Conference on Advances in Energy Research (ICAER 2013)</i> , Indian Institute of Technology Bombay, Mumbai, 10-12, December 2013
20.	P.Sethumadhavan, <b>V.Arul Mozhi selvan</b> (2013) Waste Oil Moisture Evaporation Using Solar Energy, <i>3rd International Conference on Materials for the Future - Innovative Materials, Processes, Products and Applications</i> , Government Engineering College Trichur, Thrissur, 06-08 November 2013.
21.	Naresh Kumar Gurusala, <b>Arul Mozhi Selvan V</b> , Ajay Balan and Shreyas Athreya (2013) Optimization of Waste Chicken Fat Pre-Treatment Process for Biodiesel Production, Paper No: JSAE 20139131, <i>Small Engine Technology Conference</i> , Taipei, 8-10, October 2013.
22.	Naresh Kumar Gurusala, <b>Arul Mozhi Selvan V</b> (2013) Experimental investigation on the solubility of e-diesel as a fuel for automobiles, <i>International Conference on Advances in Mechanical Engineering</i> , College of Engineering, Pune, 29-31, May 2013.
23.	Yuyulsu Krishnan. K and <b>Arul Mozhi Selvan V</b> , “Experimental Investigation on the Vibration Exposure of Mini Truck Drivers”, <i>Advances in Mechanical Sciences AIMS-2013- CAE CONCEPTS</i> , Kumaraguru College of Technology, Coimbatore, 19 April, 2013.
24.	Krishna Chaitanya S and <b>Arul Mozhi Selvan V</b> , “Experimental investigation on heat transfer enhancement using nanofluids in automobile radiator”, <i>Advances in Mechanical Sciences AIMS-2013- CAE CONCEPTS</i> , Kumaraguru College of Technology, Coimbatore, 19 April, 2013.
25.	Naresh Kumar Gurusala and <b>Arul Mozhi Selvan V</b> , “Biodiesel production from waste chicken fat”, <i>Advances in Mechanical Sciences AIMS-2013- CAE CONCEPTS</i> , Kumaraguru College of Technology, Coimbatore, Accepted for Presentation, 19 April, 2013.
26.	T.Shivadhandayuthabani, M.Nachiappan, T.Thulasitharan, <b>V.Arul Mozhi Selvan</b> , “Effect of Muffler Design on Engine Noise” <i>National Conference on Advances in Mechanical Sciences</i> , Government College of Technology, Coimbatore, April 1st, 2011.
27.	<b>Arul Mozhi Selvan,V.</b> , Anand,R.B., Udayakumar,M. Stability of Diesohol blend with castor oil as additive and its performance and emission Characteristics in a variable compression ratio engine. <i>National conference on Energy Security for Rural Development (ESRD 2009)</i> , sponsored by Ministry of New and Renewable Energy (MNRE), Government of India and University Grants Commission (UGC), organized by Gandhigram Rural University, Gandhigram, March 26, 2009.
28.	<b>Arul Mozhi Selvan,V.</b> , Anand,R.B. and Udayakumar,M. Stability, Performance and Emission Characteristics of Diesel-Ethanol Blend with Castor Oil as Additive in



	Variable Compression Ratio Engine, <i>Small Engine Technology Conference (SETC 2009)</i> , Penang, Malaysia, November 2009. (This paper has also been published in the Transactions of JSAE/SAE International Paper No.20097120/ 2009-32-0120).
29.	Anand,R., Rajasekar Reddy,K., <b>Arul Mozhi Selvan,V.</b> , Velmathi, S. and Senthil Kumar,T. (2009) Study of performance, emission and combustion characteristics of a diesel engine using methyl ester of cottonseed oil. <i>8th International Oil and Gas Conference and Exhibition, PETROTECH – 2009</i> , organized by Indian Oil, New Delhi, under the aegis of Ministry of power and natural gas, Government of India, January 11-15, 2009.
30.	<b>Arul Mozhi Selvan,V.</b> , Anand,R.B., Udayakumar,M.(2008) Stability and Performance Characteristics of Diesohol Using Biodiesel as Additive in Compression Ignition Engine. <i>International conference on Fascinating Advances in Mechanical Engineering-FAME'08</i> , Mepco Schlenk Engineering College, Sivakasi, December 11-13, 2008.
31.	Premkumar,K., Sivakumar,K., <b>Arul Mozhi Selvan,V.</b> and Udayakumar,R. (2006) Performance Optimization of a single cylinder Two-Stroke Petrol Engine under Supercharging mode using Genetic Algorithm, <i>National conference on Contemporary Approaches in Design and Manufacturing (CADAM '06)</i> , A.C. Tech., Karaikudi, April 21-22, 2006.
32.	<b>Arul Mozhi Selvan,V.</b> and Udayakumar.R., (2005) Studies on Supercharging on a single cylinder Two-Stroke Petrol Engine. <i>19<sup>th</sup> National Conference on IC Engines and Combustion</i> , Annamalai University, Chidambaram, under the auspices of Combustion Institute (Indian Section), Dec 21-23, 2005.
33.	Pandey,S., <b>Arul Mozhi Selvan,V.</b> , and Pandey,S.K. (2000) Transient Heat Transfer and Nucleate Pool Boiling Studies of Liquids and their Mixtures at subatmospheric Pressures. <i>Indian Chemical Engineering Congress, 53rd Annual Session of Indian Institute of Chemical Engineers, Calcutta, Dec. 18 – 21, 2000.</i>

#### **XI. SPONSORED PROJECTS:**

<b>Sl. No.</b>	<b>Title of the Project</b>	<b>Amount in Rs.</b>	<b>Funding Agency</b>	<b>Period</b>	<b>Remarks (Completed/ Ongoing)</b>
1.	Studies on Growth, Lipid Extraction, and Biodiesel Conversion Characteristics of Micro-Algae as a Potential Alternate Fuel for Compression Ignition Engines	38,42,880/-	MHRD	3 Years	Completed

## **XII. RESEARCH GUIDANCE:**

### **(i). List of Ph.D. Scholars:**

<b>Sl. No.</b>	<b>Name of the Ph.D. Research Scholar</b>	<b>Research Area</b>	<b>Batch/Year of Admission</b>	<b>Status</b>
1.	Naresh Kumar Gurusala, Roll No: 411110052	Experimental Investigation on the Performance, combustion and Emission Characteristics of Waste Chicken Fat Biodiesel on a CI Engine	January 2011 Full-Time	Completed Ph.D. Public Viva Voce on 27.02.2015
2.	P.Sethumathavan Roll No. 411911052	Experimental Investigation on Biowaste to Energy	January 2012 Part-Time External	Synopsis Submitted on 08.01.2019
3.	M. Kirubakaran Roll No. 411913003	Experimental Investigation on the Working Characteristics of a Biofuel Engine	July 2013 Part-Time On campus	First Seminar Talk Completed
4.	C.N. Kowthaman Roll No. 411114003	Studies on Algae as an Alternate Fuel for IC Engines	July 2014 Project Category	Synopsis Submitted on 09.08.2019
5.	H. Mohit Roll No. 411114002	Experimental Investigations on Sugar Cane Fiber Reinforced Polymer Metal Matrix Composites	July 2014 Full-Time	Thesis Submitted on 11.06.2019
6.	A. Sathiyaseelan Roll No. 411914054	Investigation on the Performance Characteristics of a Combat Aircraft Environmental Control System	Jan 2015 Part-Time External	Comprehensive Viva-Voce Completed
7.	T. Prabhu, Roll no. 411915002	Experimental Investigations on waste plastic reinforced composites	July 2015 Part Time External	Comprehensive Viva-Voce Completed
8.	C. Pandi Selva Durai Roll No. 411915007	Experimental Investigations on Ceramic Reinforced Metal Matrix Nanocomposites	July 2015 Part Time External	Synopsis Submission on 14.08.2019
9.	K. Jayakumar Roll No. 411915051	Experimental Investigation on the Performance and Emission Characteristics of a Waste Oil Fired Furnace	Jan 2016 Part Time External	Comprehensive Viva-Voce Completed

10.	Arumugam G, Roll No. 411916006	Experimental Investigation on Used Rubber Tyres to Energy Products	July 2016 Part Time External	Comprehensive Viva-Voce Completed
11.	Mr. P. Kanthasamy Roll No. 411916007	Experimental Investigation on the Performance and Emission Characteristics of a DIC I Engine Using Biodiesel From Leather Processing Wastes	July 2016 Part Time External	Comprehensive Viva-Voce Completed
12.	Mr. K. Ganapathy Roll No. 411116051	Experimental Investigation on the effect of Nanoadditives on the Performance, Combustion and Emission Characteristics of an IC Engine	Jan 2017 Full-Time	Comprehensive Viva-Voce Completed
13.	Mr. S. Palanisamy Roll No. 411916051	Experimental Investigation on Bio-waste to Energy	Jan 2017 Part –Time On campus	Comprehensive Viva-Voce Completed
14.	Mr. Bhavin K Bharath Roll No. 411117008	Experimental Investigations on the Performance and Emission Characteristics of Nano-catalyst Blended Biofuels on an SI Engine	Full-Time Q.I.P (Engg. Scheme)	Comprehensive Viva-Voce Completed
15.	Mr. Sriram Prasanth Roll No. 411918007	Experimental Investigations on the Performance and Emission Characteristics of Biomethanol on an SI Engine	July 2018 Part Time (On campus)	Course work Completed

**(ii). List of M.Tech. Scholars:**

Sl.No.	Name of the M.Tech. Scholar	Title of the Project	Year of Submission
1.	Kammaganti Lakshmi Vani (211217026)	Analysis of Smoke and Fire Gases Venting in Industrial Areas	2018-2019 Dec 2018
2.	Saranya V S (211212025)	Fuzzy Based Failure Mode Effects Analysis (FMEA) of Grid Connected Photovoltaic System	2018-2019 Dec 2018
3.	P Naveen Karun (211217024)	Safety Integrity Level to Electrical Equipments and Systems Using a Modified Risk Graph Method	2018-2019 Dec 2018

4.	Sachin Chandran M (211216021)	Effect of Compartment Fire on Firefighters and Fire Fighting Using Carbon Dioxide	2017-2018 May 2018
5.	Nived KV (211216011)	Musculoskeletal Discomfort Assessment of Workers in a Locomotive Workstation	2017-2018 May 2018
6.	Charis Xavier (211216008)	Simulation and Analysis on the Response Characteristics of Photoelectric Smoke Detectors below Grid Ceilings of Different Hollowing Rate	2017-2018 May 2018
7.	Delvin George (211216006)	Development of District Disaster Management Plan for Tiruchirappalli	2017-2018 May 2018
8.	Sachin Chandran M (211216021)	Fire Protection for LPG Tank and Design Deluge Water Fire Sprinkler	2017-2018 Dec 2017
9.	Nived KV (211216011)	Musculoskeletal Discomforts in Firefighters and the Effects of Personal Protection Equipment	2017-2018 Dec 2017
10.	Charis Xavier (211216008)	Experimental Study on Heavy Metal Removal from Industrial Waste Water Using Biomass Derived Adsorbent	2017-2018 Dec 2017
11.	Delvin George (211216006)	Development of District Disaster Management Plan for Tiruchirappalli	2017-2018 Dec 2017
12.	S. Sravan Kumar (211314031)	Investigation on Performance and Emission characteristics of Homogeneous Charge Compression Ignition Engine	2015-16 May 2016
13.	Jay Prakash (211314018)	Effects of Al <sub>2</sub> O <sub>3</sub> Nanoparticles addition in Lubrication oil on Performance and Emission characteristics of a CI Engine	2015-16 May 2016
14.	S. Sravan Kumar (211314031)	Experimental Investigation on Homogeneous Charge Compression Ignition Engine For Reduction of Emissions	2015-16 Dec 2015
15.	Jay Prakash (211314018)	Experimental Investigation on Role of Nano Additives in Lubrication Oil	2015-16 Dec 2015
16.	Unmesh Shukla (211313016)	Experimental Investigation of Performance Characteristics and Emission of Gasoline Alcohol Blends in SI Engine	2015-16 May 2015
17.	Hari Om (211313028)	Effect of Nanolubricants on the Performance and Emission Characteristics of a CI Engine	2015-16 May 2015

18.	Unmesh Shukla (211313016)	Cold Flow Simulation of an Ethanol Fuelled SI Engine	2015-16 Dec 2014
19.	Aghil M (211213018)	Evaluation of Whole Body Vibration in Backhoe Loaders	2014-15 Dec 2014
20.	Hari Om (211313028)	Effect of Nanolubricants on the Performance and Emission Characteristics of a CI Engine	2015-16 Dec 2014
21.	Kisana M. Narnaware (211312013)	Production of Chicken oil from Waste Chicken Fat using Solvent Extraction Method	2013-14 May 2014
22.	Richu Zachariah (202312008)	Effects of Combustion Geometries on the Performance of a CI Engine Fuelled with Waste Chicken Fat Biodiesel	2013-14 May 2014
23.	Richu Zachariah (202312008)	Effect of EGR & Catalytic Converter on NOx Emissions of a CI Engine Fuelled with Waste Chicken Fat Biodiesel	2013-14 Dec 2013
24.	Kisana M. Narnaware (211312013)	Impact of Diesel Particulate Matter on Exhaust Gas Recirculation on a Diesel Engine	2013-14 Dec 2013
25.	Nithin Mathew George (202312023)	Production of Fuel From Used Railway Engine Oil Using Distillation and fuel Characterization	2013-14 Dec 2013
26.	Rajesh Kant Chand Mishra (211212025)	Analysis of Hand Transmitted Vibration During Tile Cutting Operation	2013-14 Dec 2013
27.	S Krishna Chaitanya (211311003)	Numerical Analysis & Heat Transfer studies on the Performance of Flat Tube Radiator Using Nanofluids	2012-13 May 2013
28.	Yuyulsu Krishnan K (211211009)	Experimental Investigation and Mathematical Modeling of Transmissibility variation on Mini Truck Drivers	2012-13 May 2013
29.	S Krishna Chaitanya (211311003)	Experimental Study on Heat Transfer Enhancement Using Nanofluid in Automobile Radiator	2012-13 Dec 2012
30.	Yuyulsu Krishnan K (211211009)	Experimental Investigation of Vibration Exposure for Mini Truck Drivers	2012-13 Dec 2012
31.	Reni David (211310015)	Optimization of Biodiesel Production from High Free Fatty Acid	2011-12 May 2012
32.	Reni David (211310015)	Fuel Spray Characteristics of Gasoline-Ethanol Blends of a MPFI System	2011-12 Dec 2011

33.	Sanoj Varghese (211309010)	Experimental Investigation on the Fuel Spray Behaviour of an SI Engine	2010-11 May 2011
34.	Madhavarao Bitragunta (211209014 )	Experimental Study of Emission Level Distribution from Light Duty Vehicles and Its Effects	2010-11 May 2011
35.	D. Vijaykumar (211309023)	Performance Analysis of Catalytic Converter	2010-11 May 2011
36.	Sanoj Varghese (211309010)	In –Cylinder Flow Analysis of an SI Engine	2010-11 Dec 2010
37.	Madhavarao Bitragunta (211209014 )	Testing and Analysis of Firework Emissions	2010-11 Dec 2010
38.	D. Vijaykumar (211309023)	Performance Analysis of Catalytic Converter	2010-11 Dec 2010
39.	Raghu (211308012)	Numerical Analysis of Flow-Induced Vibration in an Elastically Mounted Circular Cylinder	2009-10 Dec 2009
40.	Durga Mallik CH (MEA0601)	Design of Combustion Chamber for SI Engine to Enhance Turbulence Using CFD	2007-08 May 2008
41.	G.Raghuraman (MEA0514)	Analysis on fuel-Air Mixing Process of a semi-direct injected spark ignition engine.	2006-07 May 2007
42.	B.Hariprasanna (ENA0510)	Solar Heat Sheet for Air Heaters	2006-07 Dec 2006
43.	G.Raghuraman (MEA0514)	Analysis on fuel-Air Mixing Process of a manifold injected spark ignition engine	2006-07 Dec 2006

**(iii). List of B.Tech. Scholars:**

Sl.No.	Name of the B.Tech. Scholar	Title of the Project	Year of Submission
1.	Anand Mahesh (111114015) Rahul Jhade (111114073)	Production, Characterization and Kinetic Study of Pongamia Pinnatta Biodiesel	2018
2.	Prashanth K (111114053) Sai Vinayak (111114083) Thayappan S (111114104)	Development of In-Wheel Planetary Gear Reduction System for BAJA ATV	2018
3.	A Aravinda De Chinnu (114113001) C. Chakkaravarthy	Aerodynamic Analysis of On-Road and Racing Cars Using CFD	2017

	(114113022)		
4.	Aqeel Mohammed (111111014) V. Srinivasan (111111097) Vishnu (111111102)	Biodiesel Production From Waste Chicken Fat & Its Operating Characteristics on a CI Engine	2015
5.	Aswin Kumar (111111025) I. Eswanth (11111039) K.Rishi (111111042)	Desalination of Sea Water	2015
6.	Alok Kumar Choudhary (111111008) Bijendra Kumar (111111027) Rishi Kapoor (111111078)	Investigation of Materials for IC Engine Exhaust Gas Recirculation Environment	2015
7.	Prasanna Srinivasan (111110061) Tony (111110100)	Design and Fabrication of Mechanical Mosquito Control Device	2014
8.	Sanjay Jay Menon (111109088) Saranyan A Sakthivel (111109089) T. Shriram (111109098)	Effect of Spark and Fuel Injection Timing on Performance and Emission Characteristics of an Engine Using Microcontroller	2013
9.	Naveen Tandon (111109064) Pradeep Shejule (111109094) V. Srinivas Ayer (111109097)	Optimization of Biodiesel Production Using Microwave Radiation	2013
10.	M. Gowtham Shankar (111108027) Saurav Banerjee (111108057) Jayaram Pillai	Synthesis and Analysis of Biodiesel from Waste Cooking Oil	2012

	(111108078)		
11.	Ajay Balan (114108008) Shreyas S (114108109)	Evaluation of Performance and Emission Characteristics of Biodiesel Extracted from Waste-Chicken Fat	2012
12.	Akash Selvaraj (111108035) Anantha Padmanabhan (111108002) Kashveen (111108081)	Feasibility of Using Nanofluids as Coolant in an Automobile Radiator	2012
13.	Debarun Saha (111107048) Nitish Vinay Gadgil (111107050) Jithendar Singh Thakur (111107085)	Effect of Piston Crown Shapes on In-Cylinder Cold Flow of an SI Engine	2011
14.	M. Nachiappan (111107023) T. Sivadhandayuthabani (111107025) T. Thulasitharan (111107065)	Investigation of Active Noise Control Muffler on Engine Noise	2011
15.	J. Srinivas (111106060) S. Selvamuthu Kumaran (111106053) Ashwini Rajkumar (111106007)	Effects of Nanoparticle Additive in a Biodiesel Fuelled CI Engine	2010
16.	Vikas Kumar (ME10569) Mahendra Kumar Meena (ME10528) M. Amit Singh (ME10532)	Experimental Investigation on Biodiesel Production and Its Performance and Emission Characteristics	2009
17.	Kunal Kishore Sinha (PR10527) Rakesh Kumar (PR10543) Simarjit Singh	Emission Control Biodiesel Fuelled CI Engine Using Nanoparticle Additives	2009



	(PR10551)		
18.	Harish Sekar (ME10517) Shakti Singh Rathore (ME10559)	Performance and Emission Studies on Nanoparticle Addition in Biodiesel and Diesel Fuelled Engine	2009
19.	M. Pradeep (ME10432) P. Prasanna (ME10439) Sandeep C (ME10452)	Experimental Study on Stability, Performance and Emission Characteristics of Ethanol-Biodiesel-Diesel Blends	2008
20.	B. Shankar (ME10411) Gregory Koshy George (ME10420) Asish Vishwanath (ME10409)	Simulation of In-Cylinder Flow of Air-Fuel Mixture in a GDI Engine	2008
21.	Nivas P (PR10433) Pugazhenth P.M. (PR10438)	Study on Ethanol Production from Sugarcane Molasses	2008
22.	Hijam Kumarjit Singh (ME10316) Hemant Bedi (ME10315) Shashank Shukla (ME10345)	Performance Evaluation of Kerosene Stove Using Porous Burner Technology	2007
23.	Kapil Siwariya (ME10317) Sharad Chandra (ME10344)	Performance Evaluation of LP Gas Burner Using Porous Burner Technology	2007
24.	Rahul Sasi (ME10333) Sujith S (ME10350)	Prototype Biodiesel Plant	2007
25.	Arivadivan (80702114002) Chandran S (80702114008) Govindaraj G	Experimental Investigations for Optimum Performance in Two-Stroke Petrol Engine	2006

	(80702114015) Santhosh Kumar P (80702114042)		
26.	M. Prakash (80701114037) S. Sakthivel (80701114049) K. Venkatasubramanian (80701114065)	Development of Computer Simulation for Compression Ignition Engine Design	2005
27.	H.M. Munavar Pasha (E721459) S. Natarajan (E721464) S. Shenthiel Kumar (E721484) K. Vinothbabu (E721501)	Implementation of Super Charger for Two-Stroke Bikes	2001

### **XIII. ADMINISTRATIVE EXPERIENCE:**

<b>Sl. No.</b>	<b>Post Held</b>	<b>Function</b>	<b>Duration</b>
1.	Chief Invigilator	UPSC & TNPSC Examinations 2019	2019
2.	Secretary, Medals and Certificates, Convocation 2018	Medals and Degree Certificates preparation for Convocation 2018	July 2018
3.	Associate Dean (Academic)	Academic Administration for Post Graduate Programmes	2017 to till date
4.	Staff Advisor, Festember 2017	Organizing inter- collegiate cultural festival	Sep 2017
5.	Member, eGov-NITT	Implementation of Management Information System	2017 to till date
6.	Coordinator, Community Radio Station, NITT Radio FM 90.8 MHz	Content Creation, Studio Recording, Editing, Mastering and Broadcasting	2016 to till date
7.	Member, NITT Transport Committee	Vehicle Inspection and Maintenance	2016 to 2018
8.	Warden, NITT Hostels	Jasper, Ruby, Pearl, Emerald, MM – II (North)	2016 to 2018

9.	Member, MS/Ph.D. Admission Committee	Centralized MS/Ph.D. Admission	2013 to 2018
10.	Member, Department Administrative Council (DAC)	Department Activities	2012 to till date
11.	Staff Advisor, SAE INDIA Collegiate Club (BAJA & SUPRA)	Motivating and accompanying the students for co-curricular activities	2012 to till date
12.	Member, NIT Driving School	Planning and Maintenance	June 2014 to till date
13.	Time Table In-charge, Mech. Engg. Dept.	Time Table Preparation	2006 to till date
14.	Thermal Lab In-charge (JCET, NITT)	Maintenance of Lab for smooth functioning of the Lab & Classes	1996 to 2016
15.	Automobile Lab in-charge	Maintenance of Lab for smooth functioning of the Lab & Classes	2016 to till date
16.	Member, Obsolete Removal Committee	Removal of Obsolete from Laboratories	2017 till date
17.	Coordinator, Board of Studies, Mech. Engg. Dept.	Up gradation of Syllabus	2006 to till date
18.	Member, NBA Committee	BoS Documentation, Modernization of Thermal and Automobile Laboratory	2006 to till date
19.	Member, DPEC	Project Evaluation	2012 to till date
20.	Member, Department Purchase Committee	Purchase of Lab Equipments	2006 to till date
21.	Member, Curriculum Development Committee	Up gradation of Syllabus	2011 to till date
22.	PAC Chairman, Mech. Engg. Dept.	Class Committee Meeting and publication of result	July-Dec 2011- (III <sup>rd</sup> Semester) Jan-Apr 2012 (VIII <sup>th</sup> Semester)
23.	Stock Verification Officer, NITT	Stock Verification	2009-10, 2010-11, 2013-14
24.	AIEEE Central Counselling	B.Tech. Admission	2008-2011
25.	PG Counselling	M.Tech. Admission	2008-2011
26.	Member, Convocation Committee	Smooth conduct of Convocation	2008 to till date
27.	Member, Institute Day Committee	Distribution of Medals/Certificates	2008 to till date
28.	Member, Hospital Infrastructure Development Committee	Purchase of Medical equipments	2009 to 2010

29.	Staff Advisor, Fine Arts (Music Club), NITT	Motivating and accompanying the students for extra-curricular activities	2007 to 2018
30.	Faculty Advisor, Fine Arts Society, JJCET	Motivating and accompanying the students for extra-curricular activities	1996 to 2006
31.	Coordinator, JIG JAZZ	Organizing inter- collegiate cultural festival	1998-2006
32.	Staff Advisor, Purchase of Musical Instruments	Purchase of Musical instruments at JJCET & NITT	1996 to 2018

#### **XIV. INVITED / GUEST LECTURES DELIVERED:**

<b>Sl. No.</b>	<b>Details of Guest Lectures Delivered</b>
1.	Delivered a Guest Lecture on “Automobile Emission Control” at National Institute of Technology, Tiruchirappalli on 12 <sup>th</sup> June, 2019.
2.	Delivered a Lecture on “Recent Trends on SI and CI Engines and Emission Regulations” at Seshasayee Institute of Technology, Tiruchirappalli on 11 <sup>th</sup> March, 2019.
3.	Delivered a Lecture on “Advanced IC Engines” at Department of Mechanical Engineering, CARE Group of Institutions Tiruchirappalli on 27 <sup>th</sup> February, 2019.
4.	Delivered a guest Lecture at the Faculty Development Training Programme on ME8493 Thermal Engineering I at University College of Engineering, Anna University, Villupuram on 11 <sup>th</sup> December, 2018.
5.	Delivered a Lecture on “CFD Analysis on the In-cylinder Flow of an SI Engine” at Government Polytechnic College, Gandharvakottai, on 4 <sup>th</sup> October, 2018.
6.	Delivered a Lecture on “Effect of Nano-additives in Liquid Fuel on the performance and emissions characteristics of a CI engine” for the AICTE sponsored Faculty Development Program on "Smart Materials & Fuel Efficient Technologies for Automotives", Annamalai University, Chidambaram, 12 <sup>th</sup> December, 2017.
7.	Delivered a Lecture on “Renewable Energy” for Institution of Engineers sponsored one day seminar on Role of Automation in Integrating Renewable Energy at Mahendra Engineering College, Namakkal, October 11 <sup>th</sup> , 2017.
8.	Delivered a Lecture on “Heat Transfer and Its Applications” at Kalasalingam University, Krishnanakoil on 19 <sup>th</sup> March 2017.
9.	Delivered a Lecture on “Bio-Diesel as Alternative and Emission Characteristics” at M.Kumarasamy College of Engineering, Karur on 7 <sup>th</sup> March, 2017.
10.	Delivered a Lecture on “Thermal Engineering” for Anna University Sponsored Faculty Development Program at Ankalaiammal Mahalingam Engineering College, Kovilvenni on 29 <sup>th</sup> November, 2016.

11.	Delivered a Lecture on “Engine Emission Control using Nanoparticle Additives” in the workshop on Nano materials for Energy & Environment, Department of Chemical Engineering, National Institute of Technology, Tiruchirappalli, 15 <sup>th</sup> June 2016.
12.	Delivered a Lecture on “Combustion Chemistry of SI Engine” at the Faculty Development Program, Anna University of Technology, Tiruchirappalli, 2 <sup>nd</sup> June 2016.
13.	Delivered a Lecture on “Psychrometry” for Anna University Sponsored Faculty Development Program on ME6301 Engineering Thermodynamics at P.S.N.A College of Engineering & Technology, Dindigul on 29.05.2016.
14.	Delivered a Keynote Lecture on “Biofuels for Sustainable Energy” at the International Conference on Mechanical Engineering Research & Intelligence Technologies (ICONMERIT 2K16), Nehru Institute of Engineering and Technology, Coimbatore, March 30-31, 2016.
15.	Delivered a Keynote Lecture on “Present and Future of Biofuels”, during Research Week 2016 Event at Gujarat Technological University, Ahmedabad, 21 <sup>st</sup> March, 2016.
16.	Delivered a Lecture on “Combustion In SI and CI Engines” at Bannariamman Institute of Technology, Sathiyamangalam, February, 2016.
17.	Delivered a Lecture on “Automotive Fuels and Emission” at Kumaraguru College of Technology, Coimbatore, February, 2016.
18.	Delivered a Lecture on “Waste Chicken Fat Biodiesel and Optimization of Production Process” at Pondicherry Engineering College, Pondicherry on 17 <sup>th</sup> December, 2015.
19.	Delivered a Keynote Lecture on “Biofuels for Sustainable Energy” at the 3 <sup>rd</sup> National Conference on Systems, Energy and Environment, organized by Government College of Engineering, Kannur, Kerala, 10-11 September, 2015.
20.	Delivered a Lecture on “Simulation of IC Engines” for the Short Term Course on Engine Research, organized by National Institute of Technology, Tiruchirappalli, during 07-08, October, 2014.
21.	Delivered a Lecture on “Sustainable Energy Developments: Concept and Design” for the Faculty Development Program on Renewable Energy Technologies, organized by National Institute of Technology, Tiruchirappalli, during 26-27, September, 2014.
22.	Delivered a Lecture on “Production and Effective Use of Biofuels in Energy Sector” for the CSIR Sponsored Seminar on Biofuels for Automotive Use-Benefits and Application, organized by Shree Venkateswara Hi-Tech Engineering College, Gobichettipalayam, Erode on 20 <sup>th</sup> September, 2014.
23.	Delivered a Keynote Lecture on “Biofuels for Green Energy” on the Inauguration of Mechanical Engineering Association, organized by K.Ramakrishnan College of Technology, Tiruchirappalli on 22 <sup>nd</sup> August, 2014.
24.	Delivered a Lecture on “Energy Scenario and Biofuels Research for Sustainable Future” for the TEQIP-II Sponsored Faculty Development Program (FDP) on Powering the Engineering College Campus with Renewable Energy, organized by PSG College of Technology, Coimbatore on 18 <sup>th</sup> March, 2014.
25.	Delivered a Lecture on “Creating Awareness and Enhancing Rural Development” for the National Seminar on Renewable Energy Technologies, organized by Karpagam College of Engineering, Coimbatore on 18 <sup>th</sup> March, 2014.
26.	Delivered a Lecture on “Alternate Fuel for Green Vehicles” for the workshop on Green Vehicle Technologies – First Gear ’13, organized by Kumaraguru College of Technology, Coimbatore during 16-17, August, 2013.

27.	Delivered a Lecture on “Resources, Benefits & Future of Biofuels” for the TEQIP-II Sponsored Short Term Course on Automotive Fuels and Emission, organized by National Institute of Technology, Tiruchirappalli, during 12-14, June, 2013.
28.	Delivered a Lecture on “Biodiesel – Modern Era in CI Engines”, CSIR Sponsored National Seminar on Alternate Fuels – Sustainable Sources and Utilization Techniques, Kongu Engineering College, Erode, 31.08.2012.
29.	Delivered a guest lecture on “Alternate Fuels Present and Future”, National Level Technical Symposium, organized by Shivani Engineering College, Tiruchirappalli, 2012
30.	Delivered a Lecture on “Recent Trends on Biofuels”, A Southern Regional Railway seminar on “Green Energy, organized by Southern Railway, Tiruchirappalli, 25.11.2011
31.	Delivered a Lecture on “Nanotechnology for Internal Combustion Engines”, AICTE Sponsored Staff Development Programme on "Recent Advances in Nano-Technology and its Applications" - RAINTA- 2011, organized by Pondicherry Engineering College, Pondicherry, 21.10.2011.
32.	Delivered a Lecture on “Evaluation and Introduction of Nanotechnology”, CSIR Sponsored seminar on Emerging Applications of Nanofluids in Mechanical Engineering, K.S.Rangasamy College of Technology, Erode, 15.03.2011.
33.	Delivered Keynote address on “Recent Trends in IC Engine” at National Level Students Technical Symposium, Technothrist-11, A.V.C. College of Engineering, Mayiladuthurai, 25.02.2011.
34.	Delivered a Lecture on “Flexible fuel vehicles”, DST Sponsored seminar on Flexible Fuel Vehicle, Kongu Engineering College, Perundurai, Erode, 29.10.2010.
35.	Delivered a Lecture on “Renewable Energy” at National Power Training Institute, Neyveli, 28.06.2010.

**XV. LIST OF SHORT TERM COURSES ORGANIZED:**

<b>Sl. No.</b>	<b>Details of Short Term Courses/Faculty Development Program Organized</b>
1.	Coordinator for a workshop on Biofuels and Combustion Research, sponsored by Technical Education Quality Improvement Program -II, Government of India, conducted at National Institute of Technology, Tiruchirappalli, during 26 <sup>th</sup> Sep – 01 <sup>st</sup> Oct, 2016.
2.	Coordinator for a Short Term Course on Engine Research, under Self-Financed Category, conducted at National Institute of Technology, Tiruchirappalli, during 07-08, October, 2014
3.	Coordinator for a Faculty Development Program on Renewable Energy Technologies, under Self-Financed Category, conducted at National Institute of Technology, Tiruchirappalli, during 26-27, September, 2014
4.	Coordinator for a Short Term Course on Automotive Fuels and Emission, under Technical Education Quality Improvement Program -II, Government of India, conducted at National Institute of Technology, Tiruchirappalli, during 12-14, June, 2013

5.	Coordinator for a Work shop on “Recent trends in Alternative fuels and Emission Control Technologies in Internal Combustion Engines”, under Technical Education Quality Improvement Program, Government of India, conducted at National Institute of Technology, Tiruchirappalli from 19-20, December, 2007
6.	Coordinator for a Q.I.P. - Short term course on “Energy Conservation Measures for Manufacturing and Process Industries”, under Quality Improvement Program, Government of India, conducted at National Institute of Technology, Tiruchirappalli from 10-14, December, 2007
7.	Coordinator for a Q.I.P. - Short term training program on “Recent trends in IC Engine Testing and Analysis” under Quality Improvement Program, Government of India, conducted at National Institute of Technology, Tiruchirappalli from 9-14, February, 2007

**XVI. LIST OF SHORT TERM COURSES ATTENDED:**

<b>Sl. No.</b>	<b>Details of Short Term Courses/Faculty Development Program Attended</b>
1.	Proficiency Improvement Program on “Automotive Fuels and Emission” organized by The Automotive Research Association of India (ARAI), Pune, 04.03.2013 to 08.03.2013.
2.	Outbound Experiential Learning for Team building & Effective Group Dynamics, Adventure Zone, Madhurandhagam, 11.02.2013 to 12.02.2013.
3.	ISTE Workshop on Aakash for Education, Under the Mission on Education through ICT, Conducted by Indian Institute of Technology, Bombay from 10.11.2012 to 11.11.2012.
4.	MHRD Sponsored ISTE Workshop on “Thermodynamics in Mechanical Engineering” Under the Mission on Education through ICT, Conducted by Indian Institute of Technology, Bombay from 11.12.2012 to 21.12.2012.
5.	MHRD Sponsored ISTE workshop on “Heat Transfer”, Under the Mission on Education through ICT, Conducted by Indian Institute of Technology, Bombay from 29.11.2011 to 10.12.2011.
6.	MHRD Sponsored ISTE Workshop on “Thermodynamics in Mechanical Engineering” Under the Mission on Education through ICT, Conducted by Indian Institute of Technology, Bombay from 14.06.2011 to 24.06.2011.
7.	AICTE-MHRD Sponsored Staff Development Program on “Quantitative Research techniques for Engineers and Researchers”, Organized by Department of Mechanical Engineering, National Institute of Technology, Tiruchirappalli from 21.12. 2009 to 02.01. 2010.
8.	AICTE-MHRD Sponsored faculty Development Program on “Applied Mechanical Measurements” organized by Department of Mechanical Engineering, National Institute of Technology, Tiruchirappalli from 29.06.2009 to 11.07.2009.
9.	AICTE-MHRD Sponsored Faculty Development Program on “Recent Advances in Modelling and Simulation of Joining Materials”, Organized by Department of

	Mechanical Engineering, National Institute of Technology, Tiruchirappalli From 29.12.2008 to 10.01.2009.
10.	MHRD Sponsored Quality Improvement Program (QIP) on “Instructional Design and Delivery System”, Organised by National Institute of Technical Teachers Training & Research, Chennai from 21.08.2008 to 27.08.2008.
11.	Low carbon Technologies for Decentralized Power Production, Indian Institute of Technology, Madras, Chennai, 17.03.2008 to 18.03.2008.
12.	Advanced Tools and Techniques for Research in Engineering Problems, AICTE-QIP sponsored. Department of Production Engineering, National Institute of Technology, Tiruchirappalli, 25.02.2008 to 29.02.2008.
13.	Instrumentation and Control Engineering – Pre-conference tutorial on SCILAB, National Institute of Technology, Tiruchirappalli, 27.12.2007.
14.	Burner Design for Clean and Efficient Combustion-BDCEC’07, Institute of Technology, Madras, Chennai, under the auspices of The Combustion Institute, Indian Section, 16.11.2007 to 17.11.2007.
15.	Recent Trends in Energy Management, The Institution of Engineers(India), Tiruchirappalli Local Centre, 12.10.2007 to 13.10.2007.
16.	Faculty Development Program on ANSYS, ACTIVE, ANSYS certified Training in Value Engineering, held at National Institute of Technology, Tiruchirappalli, 04.07.2007 to 13.07.2007.
17.	Trends in Industrial Measurements and Automation – Pre-conference tutorial on Nano, Neuro, Bio & info Technologies, Mems, Nems and Neuro surgery, National Institute of Technology, Tiruchirappalli, 04.01.2007.
18.	Introductory FLUENT” and “GAMBIT Training, FLUENT (India), Pune, 19.06.2006 to 23.06.2006.
19.	Energy Week Program, Energy Centre of Vellore Institute of Technology (VIT), Vellore and University of Applied Science, Aachen, Germany, 11.03.2004 to 13.03.2004.
20.	Computational Fluid Dynamics – The New Technology for the Future, Mahendra Engineering College, Namakkal with sponsorship from All India Council for Technical Education, New Delhi, 25.03.2004 to 26.03.2004.
21.	Solar Energy & other Renewable for Educational Institutions, TEDA, Chennai, 08.03.2003.
22.	Faculty Development Program on “Automobile Engineering”, Arulmigu Kalasalingam College of Engineering, KrishnanKoil with Joint venture of Centre for Faculty Development, Anna University, Chennai, 24.11.2003 to 29.11.2003.
23.	Instructional Design and Delivery, Technical Teachers Training Institute (TTTI),Taramani, Chennai in association with J.J.College of Engineering and Technology, Tiruchirappalli, 11.11.2002 to 15.11.2002
24.	Renewable energy and Energy Conservation- Awareness and Strategies, Kumaraguru College of Technology, Coimbatore, Jointly with Anna University, Chennai, TEDA, Chennai, CII Coimbatore & CODISSA, 15.12.2001 to 17.12.2001.



25.	Sustainable Customerization for Sustainable Energy, Intermediate Technology Consultants(ITC) Rugby, UK Jointly with CEESAT, Regional Engineering College, Tiruchirappalli, 03.12.1998 to 05.12.1998.
26.	Solar Cooling and Heating Technology, Indian Institute of Technology (IIT,Madras), Chennai, 09.06.1997 to 13.06.1997
27.	Popularization of Music, Fine Arts and performing arts among Youth, Bharathidasan University, Tiruchirappalli, 23.09.1997.
28.	Inter-University Special Camping Program for Culturals, Tamilnadu NSS cell, NSS Regional Centre, Dept. of Youth affairs & Sports, Government of India along with Bharathidasan University, Tiruchirappalli, 14.08.1997 to 15.08.1997.

### **XVII. INNOVATIVE TEACHING LEARNING:**

1. Prepared animation and videos to understand the complex mechanism such as Gear Box, Clutch, Differential, Anti-lock Brake systems, MPFI, GDI and CRDI Engine, Cooling and Lubrication systems, Airbag Safety systems, etc.
2. Simulation of IC Engine using Fluent.
3. Automobile engineering theory course is enriched with laboratory sessions.
4. Prepared power points presentations for Renewable Energy Systems such as Solar, Wind and Biomass.
5. Development of thermal engineering laboratory using modern Data Acquisition System.

### **XVIII. INVOLVEMENT IN LABORATORY DEVELOPMENT:**

1. In-charge of the Automobile Engineering Laboratory from 2017 to till date.
2. In-charge of the Thermal Engineering Laboratory from 2006 to 2017.
3. Purchase Initiator for the following major equipments for Thermal Engineering Lab and Automobile Engineering Lab.
  - Computerized Variable Compression Ratio Multi-Fuel Engine Test Rig. For IC Engine Research Lab.
  - Multi-cylinder Petrol Engine with eddy current dynamometer
  - Multi-cylinder Diesel Engine with eddy current dynamometer
  - Twin cylinder diesel engine with electrical dynamometer
  - Two Stroke Petrol Engine with eddy current dynamometer
  - Single Cylinder Diesel Engine with eddy current dynamometer
  - AVL Five Gas Emission Analyzer

- AVL Smoke Meter
  - Fuel property testing equipments
  - Noise Analyser
  - Computerized Wheel Alignment and Balancing Machine
  - BMW twin-power turbo inline 4 cylinder 2.0 litre diesel engine with 8 speed steptronic automatic transmission system
  - Hyundai iRDE 4 cylinder 1.1 litre petrol engine powered car with automatic transmission system
  - Computerized Single Cylinder CI Engine Test rig with National Instruments Data Acquisition System
  - Automotive Emission Test Facility
4. Modernization of Thermal Engineering Laboratory and Automobile Engineering Laboratory by removal of obsolete items and development with modern equipment and layout from 2006 to till date.

**XIX. DEVELOPMENT OF LABORATORY EXPERIMENTS:**

Sl. No.	Name of the Experiment	Utilization
1.	Morse Test in Multi-cylinder Petrol Engine	Regular Lab class for B.Tech. Mechanical, Chemical & ICE. This can also be used for UG and PG Project Work.
2.	Performance and Heat Balance Test on Twin Cylinder Diesel Engine	Regular Lab class for B.Tech. Mechanical, Chemical & ICE. This can also be used for Ph.D Research Work, UG and PG Project Work.
3.	Emission Analysis using AVL Five Gas Analyser and Smoke Meter	Regular Lab class for B.Tech. Mechanical, Chemical & ICE. This can also be used for Ph.D Research Work, UG and PG Project Work.
4.	Measurement of Engine Smoke	Regular Lab class for B.Tech. Mechanical, Chemical & ICE. This can also be used for Ph.D Research Work, UG and PG Project Work.
5.	Study on Computerized Multi-fuel Variable Compression Ratio Engine with Data Acquisition System	Demonstration in Regular Lab class for B.Tech. Mechanical, Chemical & ICE.

		This can also be used for Ph.D Research Work, UG and PG Project Work.
6.	Viscosity Measurement using Saybolt and Redwood Viscometer.	Regular Lab class for B.Tech. Mechanical, Chemical & ICE. This can also be used for Ph.D Research Work, UG and PG Project Work.
7.	Calorific Value Measurement using Bomb Calorimeter	Regular Lab class for B.Tech. Mechanical, Chemical & ICE. This can also be used for Ph.D Research Work, UG and PG Project Work.
8.	Flash and Fire Point Tests	Regular Lab class for B.Tech. Mechanical, Chemical & ICE. This can also be used for Ph.D Research Work, UG and PG Project Work.
9.	Performance, combustion characteristics of a VCR Engine	Regular Lab class for B.Tech. Mechanical, Chemical & ICE. This can also be used for Ph.D Research Work, UG and PG Project Work.
10.	Automotive Emission Measurement	Regular Lab class for B.Tech. Mechanical
11.	Performance and Emission Characteristics of Automobile / Agricultural Engines	Regular Lab class for B.Tech. This can also be used for Ph.D Research Work, UG and PG Project Work.
12.	Engine Noise Measurement	Regular Lab class for B.Tech. This can also be used for Ph.D Research Work, UG and PG Project Work.
13.	Computerized Wheel Alignment and Balancing Machine	Regular Lab class for B.Tech. This can also be used for Ph.D Research Work, UG and PG Project Work.

**XX. VISIT TO THE INDUSTRIES:**

<b>Sl. No.</b>	<b>Details of Industrial Visit</b>
1.	Factory Visits to Heavy Alloy Penetrator Project (HAPP), Tiruchirappalli, 2017
2.	Factory Visits to Railway Workshop, Ponmalai, Tiruchirappalli, 2014
3.	Factory Visit to Ordnance Factory (OFT), Tiruchirappalli, 2013
4.	Factory Visits to Bharat Heavy Electrical Limited (BHEL), Tiruchirappalli, 2012

5.	Factory Visit, Mahindra & Mahindra Two Wheeler Division, Indore, 2017, organized by SAE INDIA BAJA
6.	Factory Visit, Mahindra & Mahindra. Farm Equipment Division, Nagpur, 2014, organized by SAE INDIA BAJA
7.	Factory Visit, Continental Automotive Malaysia and Motosikal dan Enjin Nasional Sdn. Bhd (MODENAS), Malaysia Sdn Bhd, 2 <sup>nd</sup> November, 2009
8.	Attended “Mission to Nokia” at Chennai on 15 <sup>th</sup> February, 2007, organized by Confederation of Indian Industry (CII), Trichy Zone.
9.	Attended “Mission to Grundfos Pumps” at Chennai on 15 <sup>th</sup> February, 2007, organized by Confederation of Indian Industry (CII), Trichy Zone.
10.	Laboratory visit to “Centre for Energy Studies”, Indian Institute of Technology, Delhi on 21 <sup>st</sup> and 22 <sup>nd</sup> December 2007.
11.	Attended “Mission on Best Manufacturing Practices at Hyundai Motors, Sriperumpudur, on 24 <sup>th</sup> November, 2006, organized by Confederation of Indian Industry (CII), Trichy Zone.
12.	Attended “Mission on Best Manufacturing Practices at Visteon Automotive systems” at Chennai on 24 <sup>th</sup> November, 2006, organized by Confederation of Indian Industry (CII), Trichy Zone.
13.	Attended “Industrial Mission to SRF & Rane TRW Steering systems Limited”, at Viralimalai on 21 <sup>st</sup> April, 2006, organized by Confederation of Indian Industry (CII), Trichy Zone.
14.	Factory Visits to Thermal and Hydro Power Plants, Mettur, 1993
15.	Undergone inplant training at Cheran Transport Corporation Ltd., Coimbatore (10.06.1992 to 27.06.1992).
16.	Undergone vocational Training at The General Electric Company of India Ltd (GEC), Coimbatore (03.06.1991 to 13.06.1991)

## **XXI. EXTRA-CURRICULAR ACTIVITIES:**

- Music Composer / Jingles for NIT-T Community Radio FM 90.8 MHz from 2016.
- Staff Advisor, Festember 2017, National Institute of Technology, Tiruchirappalli
- Coordinator for the State level Inter-collegiate cultural competitions “JIG JAZZ 98” held at J.J. College of Engineering and Technology, Tiruchirappalli (MARCH 1998)
- Coordinator for the State level Inter-collegiate cultural competitions “JIG JAZZ 01” held at J.J. College of Engineering and Technology, Tiruchirappalli (MARCH 2001)

- Coordinator for the State level Inter-collegiate cultural competitions “JIG JAZZ 02” held at J.J. College of Engineering and Technology, Tiruchirappalli (MARCH 2002)
- Coordinator for the State level Inter-collegiate cultural competitions “JIG JAZZ 03” held at J.J. College of Engineering and Technology, Tiruchirappalli (FEB 2003)
- Entertainment Program organized on New Year Eve at Kailasapuram Club, BHEL Township, Tiruchirappalli (31.12.2003)
- Coordinator for the State level Inter-collegiate cultural competitions “JIG JAZZ 04” held at J.J. College of Engineering and Technology, Tiruchirappalli (JAN 2004)
- Entertainment Program organized on New Year Eve at Kailasapuram Club, BHEL Township, Tiruchirappalli (31.12.2004)
- Playing Keyboard and Guitar, Rhythm Pad and Conducted various Orchestra from 1996 to 2006
- Worked for the production of an audio cassette on Lord Ayyappa, 1999
- Won “Best Singer Award” in the event Pattukku Pattu organized by SUN TV, 1997.

**XXII. AWARDS, HONOURS:**

- Distinguished Alumni Award 2017, Sri Krishna College of Technology, Coimbatore
- Biography Included in Marquis Who's Who in the World 2011 (28th Edition)
- “Green Environment Award”, National Institute of Technology, Tiruchirappalli, 2013.

**Dr. V. ARUL MOZHI SELVAN**

