

## *Curriculum Vitae*

**Dr.R.THANIGAIVELAN, M.Tech., Ph.D.,**

### **Professor and Head**

Department of Mechanical Engineering,  
Muthayammal Engineering College,  
Rasipuram - 637 408  
Namakkal District, Tamilnadu, India.



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Udayappa Colony  
Salem- 636007.TamilNadu  
Mobile No: 9443030935  
E-mail ID: tvelan10@gmail.com

*Date of Birth:* 10 March 1977

### **Education**

#### **Ph.D. Mechanical Engineering**

Anna University, Coimbatore, March 2012.

#### **M.Tech. Mechatronics**

Vellore Institute of Technology, Vellore, May 2004, First Class

#### **B.E. Mechanical Engineering**

Thangavelu Engineering College, Chennai, Madras University, April 1999, First Class

### **Research Guidance**

Guiding **11 Research Scholars** under Anna University, Chennai

Doctoral Committee Members for 4 Research Scholars

Guided **10 M.E** Projects and **37 B.E** Projects

Reviewed 3 projects in **Science and Engineering Research Board-IMPRINT-2**

### **Citation Index**

<u>Citation indices</u>	All	Since 2010
<u>Citations</u>	241	160
<u>h-index</u>	7	6

**NPTEL Certificates:**

- Introduction to Mechanical Micromachining-**Elite-May 2018-Elite**
- Introduction to Abrasive Machining and Finishing Processes- **Elite-Oct 2018**
- Medical Biomaterials-April 2019-Sucessfully completed
- TALE-April 2019- **Elite-May 2019**
- Stress management-**Elite-Dec 2019**
- Accreditation and Outcome based Learning-**Elite with Silver-Dec 2019**

**Coursera Certificates:**

- How to Write and Publish a Scientific Paper (Project-Centered Course)
- Mechanics of Materials I: Fundamentals of Stress & Strain and Axial Loading
- How to Write a Resume (Project-Centered Course)

**STP attended:**

- Participated in the Online AICTE Recognized Faculty Development Programme on Teaching and Learning for Accreditation in Technical Education from 27-04-20 to 01-05-20 (One Week) Organized by Electrical Engineering Department NITTTR Chd
- *Participated in the Online AICTE Recognized Faculty Development Programme on Academic Leadership Enhancement in Technical Institutions from 04-05-20 to 08-05-20 (One Week) Organized by Electronics and Communication Engineering Department NITTTR, Chandigarh.*
- *Participated in the Online AICTE Recognized Faculty Development Programme on NBA Accreditation of Engineering Programs from 11-05-20 to 15-05-20 (One Week) Organized by Mechanical Engineering Department NITTTR, Chandigarh*

**Sponsored seminars organized:**

- **TNSCST** sponsored National level Seminar on **Green fuel for future automobile (GF<sup>2</sup>A)** during 07.12.2018 – 08.12.2018.
- **CSIR** sponsored National level Seminar on **Bio-Compatible Materials and its Application in Medical Science** during 23.08.2017- 24.08.2017.Rs 30,000
- Organised **ICMR sponsored workshop** on Current Trend in surface Modification Process of Bio-Implants and FEA application in othropedics,4<sup>th</sup> -6<sup>th</sup> November 2019, letter No.3/1/3/Clinical Training/HRD/2019(83), Rs 50000

- Organised **CSIR sponsored seminar** On data Science and Analytics for Sustainable Development during Dec 16<sup>th</sup> -17<sup>th</sup> ,Ref No.SYM/10354/19-HRD,date 17.10.2019, Rs 15000
- Organized **SERB-DST Sponsored Symposium** on National Symposium on Challenges and Oppurtinuity in Future Automobile (SOFA), SSY/2019/000970 dated 20 November, 2019, Rs 75000
- Organised **IE(I) Salem local Chapter sponsored** workshop event on Surface Engineering and Micromachining,Tech S 15/1, Nov 22,2019.

## **Sponsored Research**

- IEI R&D Grant-in-aid Scheme- Design, Development and Testing of Natural Composite Helmet for Various Applications. Sanctioned Rs 23500,Ref: R.4/2/UG/2019-20/UG2020053, 7<sup>th</sup> Feb 2020.

## **Programs attended**

- Attended MHRD sponsored program on **LEAP 2020 at IISER Kolkata** during 13th Jan to 24th Jan 2020 and second phase at NTU Singapore.

## **Abroad University Visited**

Visited *Sultan Qaboos University* during Dec 6-8, 2016 for a International Conference and International Travel Support (ITS) was sponsored by DST.

## **Professional Experience:**

### **Academic**

**May 2019 to till date**

**Professor & Head, Department of Mechanical Engineering,  
Muthayammal Engineering College (Autonomous) Rasipuram – 637  
408. India**

**June 2016 to May 2019**

**Professor & Head, Department of Mechanical Engineering,  
Mahendra Engineering College (Autonomous), Mallasamudram-  
637503. India**

**June 2007 to June 2016**

**Professor & Head, Department of Mechanical Engineering,  
Muthayammal Engineering College (Autonomous) Rasipuram – 637  
408. India**

**June 2005 to May 2007**

**Lecturer, Department of Mechatronics Engineering, Sri Krishna  
College of Engineering and Technology, Coimbatore, India.**

**June 2004 to May 2005**

**Lecturer, Department of Mechatronics Engineering, Kongu  
Engineering College, Perundurai, Erode, India.**

## **Industry**

**July 2000 to Aug 2001**

**Graduate Engineer Trainee, Quality Control Department,  
Rubicon Handlings, Chennai**

**October 1999 to June 2000**

**Graduate Engineer Trainee, Industrial Enterprises, Chennai**

## **Chapter(s) in Book**

- Ramanathan Arunachalam, Rajasekaran Thanigaivelan, and Sivasrinivasu Devadula (2018) “**Advances and Applications of Nontraditional Machining Practices for Metals and Composite Materials**” in Manufacturing Techniques for Materials-Engineering and Engineered Edited by T. S. Srivatsan, T. S. Sudarshan, K. Manigandan, CRC press, Taylor and Francis, USA.

## **Publications in Journals**

### ***Science citation Indexed journals***

1. **R.Thanigaivelan** and RM.Arunachalam. Experimental study on the influence of tool electrode tip shape on electrochemical micromachining of 304 stainless steel. **Materials and Manufacturing processes**, Vol.25,No 10, pp 1181-1185,2010.(Impact factor:1.629).
2. **R.Thanigaivelan**, RM. Arunachalam and Pelden Drupka, Drilling of micro holes on copper using electrochemical micro machining. **The International Journal of Advanced**

- Manufacturing Technology**. Vol. 61, No. 9-12, pp. 1185-1190, 2012.DOI: 10.1007/s00170-012-4093-4.2012. (Impact factor: 1.779).
3. **R.Thanigaivelan**, RM. Arunachalam, Optimization of Process Parameters on Machining Rate and Overcut in Electrochemical Micromachining using Grey Relational Analysis. **Journal of Scientific and Industrial Research**. Vol 72 pp.36-42, 2012. (Impact factor: 0.5).
  4. G.Pradeep Kumar, **R.Thanigaivelan**, RM.Arunachalam, P.Paramasivam, Experimental Investigation of EDM Processing Parameters on Machining Al6063-12%SiC-5%Gr Using Response Surface Methodology, **Journal of High Temperature Material Processes (An International Quarterly of High-Technology Plasma Processes)**, Vol.18 (1–2), pp.27–43 (2014) DOI: 10.1615/HighTempMatProc.2015014659. (Impact factor: 0.058).
  5. **R.Thanigaivelan**, D.Deepa, T.Mythili, RM.Arunachalam, Experimental Investigation of Natural Convective Heat Transfer around Micro-fin Arrays. **Journal of Scientific and Industrial Research**, Vol 76, pp.501-505, 2017.
  6. **R.Thanigaivelan**, RM.Arunachalam, Mukesh Kumar & Bhanu Prakash Dheeraj, Performance of Electrochemical Micromachining of Copper through Infra-Red Heated Electrolyte, **Materials and Manufacturing Processes**, <http://dx.doi.org/10.1080/10426914.2017.1279304>.(Impact factor:1.629).
  7. R.Thanigaivelan, R.Senthikumar, RM.Arunachalam, N.Natarajan. Impact of the shape of the electrode-tool on the radical overcut of micro-hole in electrochemical micromachining **Surface Engineering and Applied Electrochemistry**, Volume 53, issue 5(6), 2017. (Impact factor: 0.289).
  8. R.Thanigaivelan, D.Deepa, Heat Transfer Enhancement by Coated Fins in the Microscale Domain, **Thermal Science**, [doi.org/10.2298/TSCI160901089T](https://doi.org/10.2298/TSCI160901089T). (Impact factor: 0.939).
  9. R.Thanigaivelan, RM.Arunachalam ,C.Madhan , R.Ramesh Kumar , M.Muthuselvam. The Impact of Electrochemical Passivation on the burr Suppression of Ti- 4Al-6V Alloy during Machining, **Surface Engineering and Applied Electrochemistry**, Volume 55, issue 4, 2019. (Impact factor: 0.289).
  10. M.Soundarajan and R.Thanigaivelan, Investigation on Electrochemical Micromachining (ECMM) of copper Inorganic material using UV Heated Electrolyte, **Russian Journal of Applied Chemistry**, 2018, Vol. 91, No. 11, pp. 1803–1811.(impact factor:0.494).
  11. Maniraj S, Thanigaivelan R. Optimization of Electrochemical Micromachining Process Parameters for Machining of AMCs with Different% Compositions of GGBS Using Taguchi and TOPSIS Methods. **Transactions of the Indian Institute of Metals**, <https://doi.org/10.1007/s12666-019-01772-3>.
  12. Maniraj S, Thanigaivelan R., Effect of Electrode Heating on Performance of Electrochemical Micro-Machining, **Materials and Manufacturing Processes**, 34 (13), 1494-1501.

13. Thanigaivelan, R; Arunachalam, RM; Madhan, C; Kumar, R Ramesh; Muthuselvam, M, **Surface Engineering and Applied Electrochemistry**, 55 (4), 424-429,2019.
14. R. Thanigaivelan, R.M. Arunachalam, A. Nithish, S. Venkatesh, P. Naveenkumar, S. Selvaganapathy and A.R. Siranjeevi Aravind, Optimization of Laser and Electrochemical Process Parameters for Surface Modification of Hardness and Hydrophobicity on 316L Steel, **Laser in Engineering**, 45 (1-3), 85-108, 2020.
15. R Thiraviam, V Ravisankar, Pradeep Kumar, R Thanigaivelan, R Arunachalam, A novel approach for the production and characterisation of aluminium–alumina hybrid metal matrix composites, **Materials Research Express**, 7,4, 046512.
16. M. Soundarrajan & R. Thanigaivelan (2020) Effect of coated and geometrically modified tools on performance of electrochemical micromachining, **Materials and Manufacturing Processes**, 35:7, 775-782, DOI: 10.1080/10426914.2020.1740252
17. J.R. Vinod Kumar & R. Thanigaivelan (2020) Performance of magnetic field-assisted citric acid electrolyte on electrochemical micro-machining of SS 316L, **Materials and Manufacturing Processes**, DOI: 10.1080/10426914.2020.1750630.
18. Rakesh Kumar, R Thanigaivelan, GK Rajanikant, T Jagadeesha, J Das, Evaluation of hydroxyapatite-and zinc-coated Ti-6Al-4V surface for biomedical application using electrochemical process, **Journal of the Australian Ceramic Society**, 1-10.
19. EN Nampoothiri, J Bensam Raj, R Thanigaivelan, R Karuppasamy, Experimental Investigation on Mechanical and Biodegradation Properties of Indian Almond–Kenaf Fiber-Reinforced Hybrid Composites for Construction Applications, *Journal of Natural Fibers*, 1-11, 1,2020.

#### *Scopus indexed Journals*

20. **R.Thanigaivelan** and RM. Arunachalam. Experimental Study of Overcut in Electrochemical Micromachining for 304 Stainless Steel. **Transactions of NAMRI/SME**, Vol.38, pp.253-260, 2010. (Scopus indexed).
21. **R.Thanigaivelan**, RM.Arunachalam, J.Jerald, T.Niranjana. Applications of Taguchi with Fuzzy Logic Technique to optimize an Electrochemical Micromachining process. **International Journal of Experimental design and process optimization**, Vol 2, No. 4, pp. 283-298, 2011.(Inderscience publication). (Scopus indexed).
22. N.Natarajan, RM.Arunachalam & **R.Thanigaivelan**, Experimental study and analysis of micro holes machining in EDM of SS 304. **International Journal of Machining and Machinability of Materials**, Vol. 13, No. 1, 2013. (Scopus indexed).
23. **R.Thanigaivelan**, RM.Arunachalam, B.Karthikeyan and P.Loganathan, Electrochemical Micromachining of Stainless Steel with Acidified Sodium Nitrate Electrolyte. **Procedia CIRP** 6, 352-356, 2013. (Scopus indexed).

24. N.Natarajan & **R.Thanigaivelan**, Influences of Process Parameters on machining Micro holes in EDM, **Recent Patents on Mechanical Engineering**, Vol. 7, No.3, pp. 264-272, 2014 .(Scopus indexed).
25. **R.Thanigaivelan**, RM.Arunachalam,& N.Natarajan, Study on Influence of Electrodes in Electric Discharge Machining, **Recent Patents on Mechanical Engineering**, Vol.8 No.2 pp.161-167, 2015.(Scopus indexed).
26. **R.Thanigaivelan**, E Susindran, S Shanmugaraj, E Ramachandran, Parameter Optimization Model in Electrochemical Micromachining Process, **International Journal of Innovative Research in Science, Engineering and Technology**, Vol. 4, Special Issue 6, pp.1602-1607,2015.
27. **R.Thanigaivelan**, S Praveen, T Ragul, M Selvamani, K Gunasekaran, Influence of EDM Parameters on Taper Angle Generation Using Different Electrodes, **International Journal of Innovative Research in Science, Engineering and Technology**, Vol. 4, Special Issue 6, pp.1608-1615,2015.
28. **R.Thanigaivelan**, M Ranjithkumar, L Rohinikarthick, A Shahjahan, Effect of Tool Electrode Tip Shape on Machining Rate and Overcut in Electrochemical Micromachining (EMM), **International Journal of Innovative Research in Science, Engineering and Technology**, Vol. 4, Special Issue 6, pp.1594-1601,2015.
29. **R.Thanigaivelan**, TMP Sathishkumar, A Tamizhazhagan, A Vigneshraj, Development of on Board Weighing System Using Sensor in Static Truck, **International Journal of Innovative Research in Science, Engineering and Technology**, Vol. 4, Special Issue 6, pp.581-589,2015.
30. **R.Thanigaivelan** and RM.Arunachalam. Study on influence of tool design on electrochemical micromachining **Manufacturing Technology Today**, Vol.10, No.6 pp.3-10. 2011.
31. **R.Thanigaivelan** and RM.Arunachalam. Study of Dominant Variables in Electrochemical Micromachining. **Manufacturing Technology Today**, Vol. 9, No. 1, pp. 22-28. 2010.
32. **R.Thanigaivelan**, N.Natarajan, RM.Arunachalam, Abdu Rahoof, Jishnu Sanjay, Manish Kumar, Study on effect of evaporative cooled turning tool with water soaked banana fiber for machining Ti-6Al-4V alloy, **Manufacturing Technology Today**, Vol.17, No.12 December. 2019.
33. S.Maniraj **R.Thanigaivelan** R.Viswanathan P.Elumalai, Experimental investigation of MRR and ROC in aluminium metal matrix composites, **Materials Today: Proceedings**, April 2020. <https://doi.org/10.1016/j.matpr.2020.03.190>
34. S Marichamy, S Maniraj, **R.Thanigaivelan**, ST Kumaravel, K Vinoth Babu, P Mallesham, Enhancement of material removal rate in EDM process using silicon carbide

- based strenx 900 steel. **Materials Today: Proceedings**, March 2020, <https://doi.org/10.1016/j.matpr.2020.02.806>.
35. Marichamy, S., Maniraj, S., Thanigaivelan, R., Kumaravel, S. T., Babu, K. V., & Mallesham, P. (2020). Enhancement of material removal rate in EDM process using silicon carbide based strenx 900 steel. *Materials Today: Proceedings*.
  36. Soundarrajan, M., Thanigaivelan, R., & Maniraj, S. Investigation on Electrochemical Micromachining (EMM) of AA-MMC Using Acidified Sodium Nitrate Electrolyte. In *Advances in Industrial Automation and Smart Manufacturing* (pp. 367-376). Springer, Singapore.
  37. Deepa, D., Thanigaivelan, R., & Venkateshwaran, M. (2020). Identifying a suitable micro-fin material for natural convective heat transfer using multi-criteria decision analysis methods. *Materials Today: Proceedings*.

### International Conferences

1. M.Soundarrajan, and R.Thanigaivelan, Investigation of electrochemical micromachining process using Ultrasonic heated electrolyte, 7<sup>th</sup> International & 28<sup>th</sup> All India Manufacturing Technology, Design and Research Conference (**AIMTDR-2018**), December 13-15, 2018 at College of Engineering.,Guindy, Chennai, INDIA.
2. J.R.Vinod Kumaar, R.Thanigaivelan and V.Dharmalingam. A Study on the Effect of Oxalic acid Electrolyte on Stainless Steel (316L) through Electro Chemical Micro-Machining, 7<sup>th</sup> International & 28<sup>th</sup> All India Manufacturing Technology, Design and Research Conference (**AIMTDR-2018**), December 13-15, 2018 at College of Engineering., Guindy, Chennai, INDIA
3. D.Deepa, R.Thanigaivelan, Influence of nano-Silicon Carbide reinforced aluminum fins for natural convective heat transfer, *Fourth International Conference on Computational Methods for Thermal Problems (THERMACOMP 2018)*., 27-30 December 2018, pp.241-244.
4. M.Soundarrajan, and R.Thanigaivelan, Intervening Variables in Electrochemical Micro Machining For Copper, **International Conference on Precision, Meso, Micro and Nano Engineering**, December 07 - 09, 2017,pp 263-266. ISBN:978-93-80689-28-9.
5. **R.Thanigaivelan**, G.PradeepKumar, RM.Arunachalam,P.Rajkumar Study On Effect Of Cryogenic Treated Tool On Metal Matrix Composite Through EDM, 6<sup>th</sup> International & 27<sup>th</sup> All India Manufacturing Technology, Design and Research Conference (AIMTDR-2016), December 16-18, 2016 at College of Engineering., Pune, Maharashtra, INDIA, pp173-177, ISBN:978-93-86256-27-0.
6. **R.Thanigaivelan**. RM.Arunachalam, N.Natarajan (2014) Investigation of Machining Characteristics of Electrochemical Micromachining Machine (EMM), **5<sup>th</sup> International**



**and 26<sup>th</sup> AIMTDR Conference**, Department of Mechanical Engineering, IIT Guwahati, Guwahati, India, December 12-14, pp. 97-(1-6) 2014.

7. N.Natarajan,. S.Bharathidasan, **R. Thanigaivelan**, P. Suresh (2014), Sisal Fiber / Glass Fiber Hybrid Nano Composite: The Tensile and Compressive Properties, **5<sup>th</sup> International and 26<sup>th</sup> AIMTDR Conference**, Department of Mechanical Engineering, IIT Guwahati,. Guwahati, India, December 12-14, pp.103-(1-6) 2014.
8. N.Natarajan and P.Suresh, **R.Thanigaivelan**, Experimental Investigation of Effects of Process Parameters in the Micro-EDM Process. **7<sup>th</sup> COPEN**, Dec 2013, NIT Calicut.
9. **R.Thanigaivelan**, RM.Arunachalam, B.Karthikeyan and P.Loganathan, Electrochemical Micromachining of Stainless Steel with Acidified Sodium Nitrate Electrolyte. **17<sup>th</sup> International Symposium on Electromachining (ISEM)**, April 9-12th, 2013, Leuven, Belgium.
10. V.Subburam, S.Ramesh, **R. Thanigaivelan**, Effect of Acidified Electrolyte on the Performance of Electrochemical Micromachining”, **2<sup>nd</sup> International Conference on Advances in Material Processing and Characterization**. Feb.6-8, 2013, Anna University, Chennai.
11. **R.Thanigaivelan**, RM. Arunachalam, Generating Micro-Holes on 304 Stainless Steel through Electrochemical Micromachining, **4<sup>th</sup> International and 25<sup>th</sup> AIMTDR Conference**, Dec 14-16, 2012, Jadavpur University.
12. N. Natarajan, **R.Thanigaivelan**, RM Arunachalam and AR Arunprasath, Optimization of micro EDM machining parameters on 304 stainless steel using Grey relational analysis, **7<sup>th</sup> COPEN**, Dec 2011,Pune.
13. **R.Thanigaivelan**, RM. Arunachalam and Pelden Drupka, Drilling of micro holes on copper using electrochemical micro machining. **3<sup>rd</sup> International and 24<sup>th</sup> AIMTDR Conference**, Dec 13-15, 2010, Andhra University, pp 355-360.
14. **R.Thanigaivelan**, RM.Arunachalam and V.Subburam. Design and Development of a Table top Electrochemical Micromachining Tool. **16<sup>th</sup> International Symposium on Electromachining (ISEM)**, April 19-23, 2010, Shanghai, China, pp. 633-636.
15. **R.Thanigaivelan**, R.Srivatsavan and A.R.Arun Prasath. Precision Positioning system using PZT Actuator. **22<sup>nd</sup> International Conference on CAD/CAM Robotics and Factories of the Future**, July 19-22, 2006, VIT, Vellore, pp.770-778.
16. P.Suresh, R.Kesavan, K.Gunasekaran and **R.Thanigaivelan**, Design of On-Board Weighing System for Effective Supply Chain Management “**Proceedings of the 2010 International Conference on Industrial Engineering and Operations Management**, Dhaka, Bangladesh, January 9 – 10, 2010.

## National Conference

1. D.Deepa and R.Thanigaivelan, Analysis of Thermoelectric Refrigeration System, National Conference on Emerging Trends in Mechanical Engineering (NCETME 2017) on 7<sup>th</sup> April 2017.
2. **Thanigaivelan R**, Natarajan N, and Suresh P ‘Electro Discharge Machining Process in Micro domain’, National Conference on **Innovative Technologies in Mechanical Engineering (ITME-2011)**, 25th March 2011, Department of Mechanical Engineering, Muthayammal Engineering College, Rasipuram, pp.39-42.
3. P.Suresh, R.Kesavan, E.Palaniswamy and **R.Thanigaivelan**, Design of automated weighing system for optimal transportation system. Proceedings of the national conference on **Innovative Technologies in Mechanical Engineering (ITME 2010)**, Muthayammal Engineering College, Rasipuram, 12th March, 2010.
4. Natarajan N **Thanigaivelan R** & Suresh P, “Current Research Trends in Electrical Discharge Machining A Review”, National Conference on Innovative Technologies in Mechanical Engineering (ITME-2011), 25th March 2011, Department of Mechanical Engineering, Muthayammal Engineering College, Rasipuram, pp.22-38.

## PROGRAMMES ORGANISED

### Industry readiness programs for students

- **Logistics Management** by Shri. D. Eregamani, Assistant General Manager & Head – TQM, Carborundam Universal Ltd. (Murugappa Group), Hosur
- **Six Sigma** by Shri. D. Eregamani, Assistant General Manager & Head – TQM, Carborundam Universal Ltd. (Murugappa Group), Hosur.
- **Autodesk certification Program** in **AUTOCAD** for 100 students in association with ICT Academy
- **ANSYS certification Program in FEA and CFD** for 100 students in association with ANSYS center of excellence.

### Seminars:

- Seminar on “Product Development Methodology of Engine Piston Rings” on 17<sup>th</sup> Feb 2017 by **Mr.S.Ramprakash**, Sr. Engineer, IP Rings Chennai.
- Guest lecture on Micro and Nano machining by Dr J.Jerald, AP/NITT, on 10<sup>th</sup> Jan 2017.
- Guest lecture on Recent Trends in Automobile Industry by Shri Babu Ramachandran, Group Head, Power Train, Hyundai Motors, Chennai on 14<sup>th</sup> Sep 2016.
- Guest lecture presented by Mr.M.S, Manivannan, Jayem Automotives Pvt Ltd on Topic **Etiquette of Mechanical Engineers** on 14.07.2016.

- Seminar on “Advanced Materials and Manufacturing Processes” on 05th March 2016. **Dr.T.Ram Prabhu**, Assistant Director / Scientist (Materials and Manufacturing Processes), DRDO, Bangalore.
- Organised SAEISS Students & KRT trek on 27<sup>th</sup> & 28<sup>th</sup> February 2016.
- Seminar on “Field and Service Robotics – Overview and Applications” on 13th February 2016. **Dr. S. SaravanaKumar**, Manager - Powertrain Division (R & D), Mahindra & Mahindra Ltd (MRV), Chengalpattu.
- Expert Lecture on “Thermodynamics – Principles and Practices” on 13<sup>th</sup> August 2015. **Shri. R. Surendran**, Assistant Professor, Department of Mechanical Engineering, Government College of Technology.
- Expert Lecture on “Strength of Materials – Principles and Practices” on 17<sup>th</sup> Oct 2015. **Shri. R. Surendran**, Assistant Professor, Department of Mechanical Engineering, Government College of Technology.
- SAEINDIA Collegiate Club Sponsored seminar on Breakthrough Innovations & Alternate Fuels & Advanced Technologies for Sustainable Mobility Solution in February 2014.
- EDC Seminar on Inspiring Dream to be an Entrepreneur.
- AICTE Sponsored seminar on Bio-CAD modeling and its application on Bio mechanics during 08.03.2012 & 09.03.2012.

#### **Workshops:**

- Conducted Two Days National Workshop on “**Research Problem Formulation, Analysis & Technical Paper Writing**” during 22.02.2019 to 23.02.2019.
- Conducted One Day Workshop on ‘**Research Issues in Advanced Manufacturing Process, IC Engines & Energy Systems-2017**’ (AMPE<sup>2</sup>S) on 15.12.2017
- 3 Days Workshop on Fundamentals and Applications of Engineering Thermodynamics during 3<sup>rd</sup> to 5<sup>th</sup> August 2016 handled by Prof Dr E Natarajan, Anna University.
- A workshop on “Campus to Corporate – Industry Expectation from Budding Engineers” on 14<sup>th</sup> August 2015. **Shri. D. Eregamani**, Assistant General Manager & Head – TQM, Carborundam Universal Ltd. (Murugappa Group), Hosur.
- A workshop on “SAP for Mechanical Engineers” on 31.08.2015. **Shri. Blesso Joshua Arulraj**, Technical Consultant SAP, Nelcast limited, Chennai.
- A workshop on “**Stepping stones for a Rewarding Career - Competitive Exams**” on 03.09.2015. Dr. T. Periasamy., M.Tech., Ph.D (IIT Madras), Director, Triumphant Institute of Management Education Pvt. Ltd., Salem.
- A workshop on “**Winning Professional Skills**” on 11.09.2015. Shri M.S.Manivannan, Senior Executive, Jayem Automotive Ltd., Coimbatore.
- Workshop on Sixth Sense Using MATLAB in 2014.

#### **Faculty Development Program:**

- FDP on Mechatronics sponsored by Anna University, Chennai in Summer 2019
- FDP on Mechatronics sponsored by Anna University, Chennai in Summer 2018
- FDP on Manufacturing Technology- I sponsored by Anna University in Summer 2017
- FDP on Strength of Materials sponsored by Anna University in 2014.
- AICTE Sponsored SDP on Multi-Objective optimization Techniques for Manufacturing Processes during 16.04.12 & 28.04.12.

#### Conferences:

- National Conference on Emerging Trends in Mechanical Engineering (NCETME 2017) on 7<sup>th</sup> March 2018
- National Conference on Emerging Trends in Mechanical Engineering (NCETME 2017) on 7<sup>th</sup> April 2017
- 3<sup>rd</sup> International Conference on Engineering Technology and science (ICETS'16) on 18<sup>th</sup> and 19<sup>th</sup> March 2016.
- International Conference on Automation & Robotics (ICAR'15)
- International Conference on Automation & Robotics (ICAR'12)
- National conference on Innovative Technologies in Mechanical Engineering-ITME in 2013.

#### PROGRAMMES ATTENDED

#### Conferences:

- **International Conference on Applied Mechanics and Industrial Systems (ICAMIS-2016)** at Sultan Qaboos University, Muscat during 6<sup>th</sup> – 8<sup>th</sup> Dec 2016.
- **1<sup>st</sup> Int. Conf. on Modeling, Simulation and Control** held at Karpagam College of Engineering, Coimbatore on 15<sup>th</sup> and 16<sup>th</sup> Oct 2015.
- **5<sup>th</sup> International and 26<sup>th</sup> AIMTDR Conference**, Department of Mechanical Engineering, IIT Guwahati, Guwahati, India, December 12-14, pp. 97-(1-6) 2014.
- **4<sup>th</sup> International and 25<sup>th</sup> AIMTDR Conference**, Dec 14-16, 2012, Jadavpur University.
- International Conference on *1st World Summit on Accreditation* held at Hotel Ashok, New Delhi, 26<sup>th</sup> -29<sup>th</sup> March 2012.
- **3<sup>rd</sup> International and 24<sup>th</sup> AIMTDR Conference**, Dec 13-15, 2010, Andhra University, pp 355-360.
- **22<sup>nd</sup> International Conference on CAD/CAM Robotics and Factories of the Future**, July 19-22, 2006, VIT, Vellore, pp.770-778.
- National Conference on “**MEMS AND NANOTECHNOLOGY**” held at VIT on 28<sup>th</sup> February and 1<sup>st</sup> March 2003.

### Workshops:

- Certification Course on **Intellectual Property Rights Procedures and Best Practices-2017** during 03.05.2017 to 06.05.2017 conducted by CIPR, Anna University, Chennai collaboration with CII.
- Workshop on *Recent Advances in Bio-fuels Production and Applications* at Karpagam College of Engineering, Coimbatore during 04<sup>th</sup> and 05<sup>th</sup> April 2017.
- Workshop on *Manufacturing Processes and Applications of Advanced Composites Materials* at Karpagam College of Engineering, Coimbatore during 14<sup>th</sup> and 15<sup>th</sup> Feb 2017.
- Workshop on *Environmental Pollution and control*, held at Karpagam College of Engineering, Coimbatore on 21<sup>st</sup> November 2015.
- Workshop on *Robotics in Industrial Automation*, held at Karpagam College of Engineering, Coimbatore on 20<sup>th</sup> November 2015.
- Workshop on *Intelligent Product Design and Manufacturing* held at Karpagam College of Engineering, Coimbatore on 24<sup>th</sup> August 2015.
- Workshop on *Composite Materials and its Technology Innovation* held at Karpagam College of Engineering, Coimbatore on 22<sup>nd</sup> July 2015.
- HR Summit on *Workforce Innovation: New way of working vs old way of Thinking* held at Grand Chola, Chennai, 23<sup>rd</sup> -24<sup>th</sup> July 2013.
- TNSCST Sponsored one day workshop on “*Nano and Micromachining*” held on Sona College of Technology, 21<sup>st</sup> May 2010.
- Workshop on *Statistical Tools and strategies for research scholars* held at Sona College of Technology, 26<sup>th</sup> June 2009.
- Workshop on *Virtual Instrumentation using Labview* held at St Peters Engg College, Chennai, 16- 17<sup>th</sup> July 2007.
- Workshop on *Mechatronics and Automation* held at SASTRA University, 25-27<sup>th</sup> Oct 2006.
- Workshop on *Low Cost Automation* held at VIT University, 29-30<sup>th</sup> Nov 2005.
- Workshop on *Product Design and manufacturing* held at KCT Coimbatore, 2<sup>nd</sup> – 3<sup>rd</sup> Sep 2005.
- Attended 3 days Training Programme on *Dimensional Metrology* conducted by Accurate Engineering Co Pvt Ltd, Pune from 25<sup>th</sup> to 27<sup>th</sup> May 2000.

### FDTP/STTP:

- Faculty Development Training Programme (FDTP) on “Production Planning and Control (ME2036)” from 17.12.2014 to 23.12.2014 at Karpagam College of Engineering, Coimbatore.
- Attended STTP on “Logical Image Processing and its Applications” at MEC, from February 02-04, 2010.
- Short term course on *Micromachining* at IIT Kanpur, 7 -11<sup>th</sup> Oct 2008.

**Seminars:**

- Conclave on Enhancing Quality of Technical Education through Accreditation held at NITTTR, 12th January 2012.
- AICTE Sponsored National seminar on Recent Trends in Automobile Engineering held on 28th and 29th May 2010 at MEC.

**Chaired:**

- Session chair during the *1<sup>st</sup> Int.Conf. on Modeling, Simulation and Control* held at Karpagam college of Engineering, Coimbatore on 15<sup>th</sup> and 16<sup>th</sup> October 2015.
- Session chair during the *Int. Conf. on Advances In Bio Technology, Civil and Mechanical Science*, held at Selvam College of Technology, Namakkal on 13<sup>th</sup> and 14<sup>th</sup> March 2015.
- Session Chair for technical symposium at Tagore Institute of Engineering and Technology, Salem (Dt) on 12.09.2014.
- Session Chair for technical symposium at Knowledge Institute of Technology, Salem (Dt) on 19.09.2014.
- Session chair during the *Int. Conf. on Advances In Bio Technology, Civil and Mechanical Science*, held at Selvam College of Technology, Namakkal on March 2012.

**Expert Lecture Delivered:**

- Delivered expert lecture on Topic “Micro and Nanomanufacturing” held on 19<sup>th</sup> May 2017 at SRM University, Chennai.
- Delivered expert lecture on topic “Applications of Rapid Prototyping and 3D Printing in Biomedical Engineering” on 15.04.2017 sponsored by CSIR at Karpagam College of Engineering, Coimbatore.
- Delivered expert lecture on “Thermal Engineering” in FDTP sponsored by Anna University, Chennai-25 on 9/12/2014 at Muthayammal College of Engineering.
- Delivered Expert Lecture on “*Micro Machining and Micro Mechanical System*” in SDP sponsored by AICTE held between at Adhiyamaan Engineering College, Hosur

**Membership in Scientific and Professional Societies**

- The Robotics Society
- Fellow Institution of Engineers (I)
- Member of Society of Automobile Engineers (SAEINDIA)
- Life Member of ISTE
- Life Member of Quality Circle Form of India (QCFI)

## **Skill sets**

- Hydrosim52 v.5.2.1974, PneuSim Pro 3.1
- Allen Bradely PLC
- LABVIEW
- Optimization Tools: Taguchi Technique, Grey Relational Analysis, Response Surface Methodology
- Fuzzy Logic using MATLAB

## **Reviewer in Journals**

- Materials and Manufacturing Processes ( Taylor and Francis)
- Neural computing and Applications ( Springer)
- International Journal of Advanced Manufacturing Processes (Springer)
- Measurements ( Elsevier)
- Recent Patents on Mechanical Engineering (Bentham Science Publishers)

## **Other Information's**

- **Recognized Supervisor for Guiding Ph.D Scholars under Anna University Chennai.**  
**(Ref No.19.269.25)**
- Question paper setter for various universities like Anna University of Technology Coimbatore, SASTRA University, Karpagam University, R L Institute of Nautical sciences, VMKV University, etc.

**(Dr.R.Thanigaivelan)**