

ACADEMIC PROFILE

Dr. M.VARATHA VIJAYAN ME; Ph.D.
BE (Mech) ME (IC Engg) Ph.D (ICE Emission)



ANNAUNIVERSITY RANK HOLDER
COMMISSIONED OFFICER INDIAN NAVY
NCC NAVY OFFICER (EX-SERVICEMAN NAVY)
BEST RESEARCHER AWARDEE, BEST PUBLICATION AWARDEE
TAMILNADU BEST INNOVATION & SOCIAL SERVICE AWARDEE FROM LIONS CLUB

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OBJECTIVE:

- To impart **Effective Technical Teaching** exposure through competent strategies and integrative methods to meet the requirements of students community in all the levels.
- To update the existing **Teaching Learning Process** through viable options in the learning environment. To meet the requirements of institutional as well as regulatory measures of an educational institution towards **Quality Education**.
- To contribute adequate effects for academics, administration, extension and **Research and Development** oriented aspects in teaching learning environment.

QUALIFICATION SUMMARY:

Myself **17 years of experience** in Teaching, Handled various subjects and produced more than 95% Result in university exams and got Appreciation from the colleges , as a **PRINCIPAL and DEAN Research** successfully handled Anna University commissions, job fair, ISO Auditing, Association functions, National Conferences, Symposium, etc.,

EDUCATIONAL QUALIFICATION

- **Ph.D.** in IC Engine Emission at **Kanpur Govt.University, March' 2014.**
- **M.E.** in Internal Combustion Engineering from **Anna University, Chennai, May 2010.**
- **B.E.** in Mechanical Engineering from **Madurai Kamarajar University, Madurai. Apr'1999.**

PROFESSIONAL EXPERIENCE & EMPLOYMENT Details:

DESIGNATION	INSTITUTION	PERIOD	DURATION
PRINCIPAL	ASAN Memorial College of Engg & Technology	July 2017 to till date	Working
PRINCIPAL	Kit and Kim technical campus, Karaikudi, TN	July 2015- June2017	2 years
Dean (R&D) & HOD (MECH)	RAJADHANI Institute of Engineering & Tech Trivandrum, Kerala.	June 2014 –July 2015	1 year
Vice Principal & HOD (MECH)	CR Engineering College, AlagarKovil, Madurai.	Aug 2011 – May 2014	3 years
Assistant Professor	VELAMMAL Engineering College, Chennai	2006 -2011	5 years
Senior Lecturer	VELTECH Engineering College, Chennai	2003-2006	3 years
Lecturer	VELAMMAL Engineering College, Chennai	1999-2003	4 years

ENGINEERING SUBJECTS HANDLED

UG LEVEL SUBJECTS	PG LEVEL SUBJECTS
<p>Engineering Thermodynamics, Applied Thermodynamics, Thermal Engineering, Heat and Mass Transfer, Gas and JET propulsion, Fluid Mechanics ,Strength of Materials Process Planning and Cost Estimation Total Quality Management Principles of Management Applied Thermodynamics for Mechanical Engineering students Manufacturing Technology I &II, Basic Mechanical Engineering, Engineering Graphics</p> <p>Automobile Engineering, Vehicle design and Data Characteristics, Automotive Transmission, Vehicle Maintenance, Automotive Engine Components design, Automotive Chassis components design, Two and Three wheelers for Automobile Engineering Branch Students.</p>	<p>IC Engines, Alternative Fuels, Combustion in IC Engines, Advanced Thermal Engineering Advanced Power plant Engineering, Advanced Heat and Mass Transfer, Fuels and Combustion Simulation of I.C Engine Processes Super charging and Scavenging Design of Thermal Power Equipments Design and analysis of Heat Exchangers Computational Fluid Dynamics Cryogenics for M.E. Thermal Engineering students.</p> <p>Computer Aided Design, Computer Aided Manufacturing, Computer Integrated Manufacturing, Computer Graphics, Geometric Modeling for M.E. CAD students</p>

ACADEMIC RESPONSIBILITY

- Responsible for Teaching Mechanical Engineering subjects to the students.
- Preparing the time table for Theory and Practical hours every semester.
- Preparation of Notes of Lesson and verification of each semester.
- Performed invigilation, AUR and Chief Supt for University examinations.
- Arranging Industrial visits and In-plant Training to the students.
- Conducting the Monthly tests, assignments and Evaluations.
- Handling Laboratory university model exams and Evaluations.
- Allotting the various seminar topics to the students.
- Arranging Guest Lectures from Industries and Other Universities.
- Allotting Internal marks assessment to the Students.
- Conducting the Personality development programs to the students.
- Guiding Mini and Main Project works to the students.

TECHNICAL EXPERTISE:

Fluid Dynamic Simulation studies of I.C Engines, CFD Analysis of Combustion in a Compression Ignition Engine, Turbulence Modeling in I.C Engine using CFD Soft wares, Phase Change Heat transfer modeling, Cryogenic Treatment of Metals Emission Control studies of Alternate Fuels in Diesel Engines Using CFD software's. Fuel Preheating Studies in I.C engines, Performance Evaluation of Vegetable oils in Diesel Engines, Development of Auto Infotronics and Communication, Advanced Refrigeration Techniques and Air conditioning systems, Development of Alternate refrigerant for R&AC, Furnace Design

NO OF PROJECTS GUIDED: UG Level: 35
PG Level: 18
Ph.D Level: 03

NO OF MINI PROJECTS GUIDED: UG Level: 45
PG Level: 14

MEMBERSHIPS IN PROFESSIONAL BODIES:

- Indian Society For Technical Education –ISTE life Member: LM 29074
- Society Of Automotive Engineers – SAE India
- NME ICT – IIT BOMBAY membership

COMMISSIONED OFFICER: (INDIAN NAVY)

I served as **college NCC NAVY Officer** (GAZETTED OFFICER Class I Rank) in INDIAN NAVY COMMISSIONED OFFICER.

NCC Cadets Unity and Discipline	Responsibilities of Camp
Republic Day Celebration Independence Day Celebration College day Celebration ATC and NTAC Naval camp B and C certificate Exams	Tree Plantation Special ATC Camp Blood Donation Special Eye Camp Rain water harvesting

FUNDED PROJECTS:

Received the AICTE fund of Rs: 19,00,000 (Nineteen lakhs) project at the title for INTERNAL COMBUSTION ENGINE EMISSION CONTROL BY USING SCR CATALYSTS.

1. Developed a CFD modeling for lower blends of Bio- diesel in a CI engine.(Rs 200000)
2. Developed a model for “Accident information systems”(Rs 50000).
3. Improvement of Slip ring assembly-CVRDE/ DRDO Avadi , Chennai
4. Automation of dipping Pioneer oil seal cells in Fenner India pvt td (Under in process)

RESOURCE PERSON –SPECIAL LECTURE DELIVERED:

1. Resource person for International Conference in AIMS (SAIRAM Engg College, Chennai)
2. Technical Chief guest for FDP in Automobile Engg (Jeppiar Engg College,Chennai)
3. Resource person for National conference in Mechanical Engg (JNN Engg College,CH)
4. Resource person for FDP in Advanced Mechanical Instruments (SA Engg College)
5. Judge for the National level Technical symposium MechinaCR (CR Engineering college)
6. Judge for Technical symposium in ASTRA’ 13 at (Rajadhani Engg College,Kerala)

SOFTWARES KNOWN: AUTOCAD, ANSYS, CATIA, PRO-E,

SOLID WORKS, Nx NASTRAN, STAR CD.

NATIONAL CONFERENCES PRESENTED-(16 Nos):

1. Workshop on Application of Finite Element Analysis Packages-SSN College of Engg.
2. Electronics Engine Management System for Reduction Of Emissions”-VEC.
3. Basic Training on STAR CD And STAR Design at CD-Adapco ,Bangalore.
4. National Level FDP on Dynamics of Communication
5. LAB View @VLSI –TCAD,IC CAD,FPGA Design using Silvaco and Tanner Tools.
6. Seminar on Promoting Excellence in Technical Education –The Deemed University Model.
7. FDP on Thermal Engineering at Anna University.
8. National Seminar on “ENERGY AND ENVIRONMENT FOR SUSTAINABLE DEVELOPMENT”.
9. National Conf1. “An Extensive Study of Nanomaterials for Heat Transfer Applications”, at the National Seminar on NSTCA ’08, Organized by the Dept. of Chemistry, VEC, Chennai – 19th August 2008.
11. .National Seminar on “ENERGY AND ENVIRONMENT FOR SUSTAINABLE DEVELOPMENT.
12. National conference on “EMERGING TRENDS IN INDUSTRIAL AUTOMATION on “Energy Conservation Techniques” on 22 Nov 2010.
13. Presented a paper titled, ”Condition Monitoring through oil analysis using Particle Quantifier Index Technique”, during 1st National Conference on Emerging Trends in Mechanical Engg. and Sciences, organized in Bannari Amman Institute of Technology, Satyamangalam.
14. Presented a paper titled, ”An overview Computational Analysis Blood flow Dynamics in Cerebral aneurysms from CTA and 3 D rotational angiography image data, during National Conference on VLSI design and image processing, NCVLSI 09, organized in Velammal Engg College, Ch-66.
15. Presented a paper titled, ”An algebraic approach to solve an Economic production quantity model with rework and service level constraints”, during National Conference on Mathematical Modeling in Global perspective, organized in Velammal Engg Coll, Ch-66.
16. Presented a paper titled, "CFD modeling of IC engines”, an employable and conceptual framework of updated advances during a National Conference on “Emerging Trends in Industrial Automation”, ETIA 08, organized in Velammal Engg College, Ch-66.

INTERNATIONAL JOURNAL EDITORIAL BOARD REVIEWER:

- **IJIRT (International Journal of Innovation Research in Technology)**
- **IJISSET (International journal of Innovative Studies in Sciences and Engg Tech)**
- **IJLRET(International journal of Latest Research in Engg and Tech)**
- **IJESRT (International Journal of Engineering Sciences & Research Technology)**
- **IJIRSET (International Journal of Innovative Research in Science Engineering and Technology)**
- **IJETT SSRG(International Journal of Engineering Trends and Technology)**
- **IJARSE (International Journal of Advanced Research in Science and Engineering)**
- **IJMTST (International Journal for Modern Trends in Science and Technology)**

INTERNATIONAL JOURNALS PUBLISHED –(14 Nos):

IJESRT ISSN: 2277-9655 Impact Factor: 1.852
INTERNATIONAL JOURNAL OF ENGINEERING SCIENCES & RESEARCH
TECHNOLOGY Published Month of NOV 2013 with title of
[Experimental Investigation of DI Diesel Engine Using Biodiesel Blends With
Different Injection Pressures](#)

- **IJIRT (International Journal of Innovation Research in Technology)**
- **IJES (International Journal of Engineering Sciences)**
- **IJEST (International Journal of Innovative Science and Technology)**
- **IJESRT (International Journal of Engineering Sciences & Research Technology)**
- **IJIRSET (International Journal of Innovative Research in Science Engg &Technology)**
- **Dr.G.Kalivarathan,M.VarathaVijayan “CFD Analysis of Turbulence in a Gas Turbine Combustor with Reference to the Context of Exit Phenomenon”, International Journal of Advanced Research in Engineering & Technology (IJARET), Volume 2, Issue 2, 2011, pp. 1 - 7, ISSN Print: 0977-6480, ISSN Online: 0977-6497.**
- **Dr.G.Kalivarathan, M.VarathaVijayan “CFD Analysis of Flow Characteristics in a Gas Turbine - A Viable Approach to Predict the Turbulence”, International Journal of Mechanical Engineering & Technology (IJMET), Volume 3, Issue 2, 2011, pp. 39 - 46, ISSN Print: 0956 – 6320, ISSN Online: 0956 – 6379.**
- **Dr.S.MohanaMurugan and M.VarathaVijayan “Densification And Deformation Behaviour Of Sintered powder Metallurgy Copper-7%Tungsten Composite During Cold Upsetting” International Journal of Mechanical Engineering & Technology (IJMET), Volume 2, Issue 1, 2012, pp. 66 - 73, ISSN Print: 0922 – 6340, ISSN Online: 0922 – 6369.**
- **Dr.S.MohanaMurugan and Dr.M.VarathaVijayan “Prediction Of Behaviour In Forming Of Sintered Copper-10%Tungsten Nano Powder Composite” International Journal of Mechanical**

Engineering & **Technology (IJMET)**, Volume 3, Issue 1, 2012, pp. 66 - 73, ISSN Print: 0966 – 6344, ISSN Online: 0966 – 6355.

- Dr.M.VarathaVijayan and S.Prasath, “Investigation Of Mechanical Behaviour In Forming Of Sintered Copper-15%Tungsten Nano Powder Composite” International Journal of Production Engineering & **Technology (IJPET)**, Volume 4, Issue 1, 2012, pp. 54 - 60, ISSN Print: 0966 – 6363, ISSN Online: 0976 – 6398.
- Dr.G.Kalivarathan, and Dr.M.VarathaVijayan“Prediction Of Wireless Communication Systems In The Context Of Modeling”, International journal of Electronics and Communication Engineering &Technology (IJECET), Volume 3, Issue 1, 2013, pp. 11 - 17, Published by IAEME.
- Dr.M.Varatha Vijayan and Dr.G.Kalivarathan, “Prediction of a Reliable Code for Wireless Communication Systems” International Journal of Electrical Engineering & Technology (IJEET), Volume 4, Issue 1, 2013, pp. 19 - 26, ISSN Print : 0972-6585, ISSN Online:
- Mrs.R.Rajasree and Dr.M.VarathaVijayan “Analysis Of Programming Aspects Of Wireless Sensor Networks And Non Uniformity Issues-A Feasible Study”, International journal of Electronics and Communication Engineering &Technology (IJECET), Volume 3, Issue 3, 2013, pp. 2119 - 2216, Published by IAEME.
- Dr.M.VarathaVijayan and Dr.G.Kalivarathan, “A Review On Routing Protocols And Non Uniformity With Wireless Sensor Networks”, International journal of Computer Engineering & Technology (IJCET), Volume 3, Issue 3, 2013, pp. 3428 - 3524, Published by IAEME.

INTERNATIONAL CONFERENCES CONDUCTED (8 Nos):

1. Active member in International Conference “ERA 2009” – March ‘09 (Food & Accommodation Committee Member)
2. International conference on “EMERGING TRENDS IN ENERGY AND ENVIRONMENT”-Sri SAI RAM Engg College.
3. International conference on ERA-2009 at Velammal Engineering College, chennai.
4. Presented a paper titled, “A Conceptual Frame Work of Viable Development in Gear systems Using Artificial Intelligence and Spectral Analysis- A Review, in an International Conference on “ Advances in Industrial Engineering Applications, ICAIEA 2010Held during Jan 06-08 2010 organised by Department of Industrial Engineering, College of Engineering Guindy, Anna University, Chennai.

5. Presented a paper titled, “Fluid Dynamic Simulation studies of an Inlet Manifold of a C.I Engine by using Solid Works and Flotron CFD to represent the Non Linearities “ in an International Conference on energy and environment, organised by the Mechanical Engineering, Sri Sai Ram Engineering College, Held during Jan 06-08, 2010.
6. Presented a paper titled “ Accident Infomation System” in SAE International Mobility congress and Exposition 2009 organised by SAE International held in Chennai Trade Center, India, during 13-15 Dec 2009
7. Presented a paper titled, “An unique turbulent spray combustion model of direct injection CI Engine- Extension of a classic combustion model to represent detailed chemistry”, during International Conference on Emerging Research and Advances in Mechanical Engg ERA 2009, organized in Velammal Engg College, Chennai-66.
8. Presented a paper titled, “A CFD Modeling of Combustion in Compression-ignition-engine “Research and Advances in Mechanical Engineering, ERA 09, organized in Velammal Engineering College.Ch-66.

SHORT TERM COURSE / WORKSHOP / SEMINAR ATTENDED

- Attended one week Quality Improvement Programme (QIP), sponsored by the AICTE on “**Thermal Engineering of Electronic Equipments**” organized by Department of Mechanical Engineering – IISC, Bangalore, (From 28.01.2002 to 01.02.2002) (**Five working days**)
- Attended one week, AICTE sponsored short – term training programme on “**Thermal and Manufacturing aspects of Composite Materials**” organized by the Dept., of Mechanical Engg., Annamalai University (From 26.05.2003 to 31.05.2003) (**Six working days**)
- Attended two weeks, AICTE sponsored short-term training programme on “**Automotive Emission Control Strategies**” organized by Department of Mechanical Engineering, Annamalai University, from 20.05.2000 to 31.05.2000. (**Twelve working days**)
- Attended one week Faculty Development Programme on “**Mechatronics**” organized by the Dept. of Mechanical Engineering, National Engineering College, Kovilpatti, jointly with the **FDP cell of Anna University** from 26.05.2004 to 31.05.2004. (**Six working days**)
- Attended a National workshop, sponsored by the AICTE on “**Environmental Pollution and its awareness**” organized by the Department of Mechanical Engineering, **Mepco – Schlenk Engineering College**, Sivakasi on 05.06.2004 (**One day**)

- Attended one week Faculty Development Programme in the recent fields of Mechanical Engineering (**CAD / CAM / FEA, CFD**) etc., organized by the Department of Mechanical Engineering , Mepco – Schlenk Engineering College, Sivakasi jointly with **FDP cell of Anna University** from 09.06.2004 to 13.06.2004 (**Five working days**)
- Attended a special Seminar on “**Recycling and Management of Plastics Wastes**” organized by the Department of Polymer – Technology, **Amrita Institute of Technology, University – Coimbatore**, on 21.06.2003. (**One day**)
- Attended a National Seminar on “**Advances in Manufacturing Technology**”, organized by the Department of Mechanical Engineering, **Sri Venkateswara University, (SVUCE) Tirupathi**, Andhrapradesh on 23.07.2003. (**One day**)
- Attended a National Seminar on “**Global Trends in Manufacturing Technology**”, organized by the Department of Manufacturing, **Anna University**, on 25.07.2003 (**One day**)
- Attended a course on “**Thermo Mechanical Processing of UFG – Ultra Fine Grine and TRIP Steels – Development and Applications in Automotive and other Industries**”, Organized by the Department of Metallurgy and Materials IIT Madras, jointly with **Indian Institute of Metals, Chennai Chapter** on 07.11.2003 (**One day**)
- Attended a Seminar on “**Information Requirements of Today’s Library User**”, organized by BSA Crescent Engineering College on 12.11.2005.
- Attended **one week** Faculty Development Programme on “**Total Quality Management**” sponsored by Anna University, organized by Department of Mechanical Engineering, Sri Sai Ram Engineering College, from 21.11.2005 to 26.11.2005 (**Six working days**)
- Attended a course on “**Quantitative Techniques for Research in Engineering and Management**“, organized by the Department of Industrial Engineering, College of Engineering, Guindy, Anna University, from 05.12.2005 to 07.12.2005.
- Attended National Workshop on Wind Energy Conservation Technologies 2010 in Velammal Engineering College
- Attended National Level FDP on Advanced Teaching methodologies ATM 09 in Velammal Engineering college and Attended FDP on E-Governance in Velammal Engineering college, Chennai.
- Attended AICTE sponsored Staff Development program on Application of Geomatics in Digital Cartography in Velammal Engineering college.
- Attended a National Conference on Computing Technologies in Velammal Engineering College

NATIONAL & INTERNATIONAL CONFERENCES ATTENDED:

- Attended workshop on Virtual Instrumentation using Labview in Velammal Engineering College
- Attended workshop on wireless Sensor networks and its application in Velammal Engineering College
- Attended an International Conference on VLSI Design and Embedded systems ICVLSI 08 in Velammal Engineering college
- Attended a National Conference on Innovative Techniques in Power Engineering and Drives in Velammal Engineering College
- Attended a seminar on Promoting excellence in Technical education in Velammal Engineering College
- Attended FDP on Task oriented Teaching in velammal Engineering College
- Attended National seminar on Nano Science and Technology- Challenges ahead in Velammal Engineering College.
- Attended a National Workshop on Recent trends in Manufacturing and Thermal Engineering held in Anand Institute of higher Technology, Chennai.
- Participated in NI Yantra 2009, and Annual Embedded system Design program in Chennai trade center organised by National Instruments, Bangalore.
- Attended workshop on Application of optimisation technique held in Raja Rajeswari Engineering College, Chennai .
- Attended a work shop on Thermal Storage on Energy Efficient buildings and solar applications organised by Institute of Energy studies, Anna University, Chennai
- Attended a workshop on Trends in Operations research and applications, organised by Chennai Chapter of Operational Research society of India, Held in Anna University Chennai.
- Attended a National conference on Recent Computing technologies in **Velammal Engineering college** organised by TIFAC-CORE – Pervasive computing.

TEXT BOOKS PUBLISHED:

- 1). “A text book on Automobile Engineering” published by Anuradha publishers ltd Chennai.
- 2). “A text book on aero space engines” published by Anuradha publishers ltd Chennai and Accepted for international publication by Springer publication U.K.
- 3).” A text book on compressible fluid flow and propulsion” is published in Tech- Max publishers ltd Chennai.
- 4) “A Text Book On Basic Mechanical and Civil Engineering” published in Lakshmi Publisher ltd.

ADDITIONAL RESPONSIBILITY:

1. Board Chairman-Anna University Central Evaluation, Chennai.
2. Chief Examiner- Anna University, Central Evaluation, Chennai.
3. Chief Superintend- Exams Anna University, and Kerala University
4. College sports TIES Coordinator
5. College Additional Deputy Warden for Boys Hostel
6. Anna University EDU SAT Programmer

Department Responsibilities	College Responsibilities
<ul style="list-style-type: none">• Mechanical Dept Library In-charge• Mechanical Dept Associt In-charge• Mechanical Dept Sports In-charge Lab In-charges – MFT ,ICE and EPL Laboratories	<ul style="list-style-type: none">• SAE faculty advisor• Department Secretary• Sponsored Research In-charge• ISO internal auditor• Aptitude Coordinator• Chairing the technical sessions

PERSONAL DETAILS

Occupation: Teaching (Professor)
Date of Birth: 01-05-1977 (37 years)
Father Name: M.S.Muthu
Mother Name: M.Amirtham
Spouse Name: R.Santhi, B.Sc.;B.Ed
Children: Boy-1; Girl-1
Permanent Address: **NO: 2/685-5 , SANTHI NIVAS
GR NAGAR 7 th STREET
K.PUDUR , MADURAI-625007.**

PASS PORT Number: H8927940 Valid upto: 9th March 2020

Reference Academicians: 1) Dr.V. JEJABALARAJA, ME;Ph.D.
Professor & Head, VELAMMAL Engg.College,Chennai.
2) Dr.P.ALAVUDEEN ME;Ph.D.
Professor-Mech ,Kalasalingam University,Srivillipudur.
3) Dr.G.KALIVARATHAN ME;Ph.D.
Principal, PSN College of Engg, Tirunelveli.

PLACE: MADURAI

DATE: 08.09.2017


(M.VarathaVijayan)