

## PROFILE INFORMATION

Name **Dr.M.MURUGAN, M.E., Ph.D.,**  
 Designation Professor  
 Department Mechanical Engineering  
 Contact no: **98947 48330**  
 Mail id: **manickammurugan@gmail.com.**



Qualification	M.E, Ph.D.
Area of Specialization	<b>Production Engineering</b>
Teaching Experience	20 Years 5 Months
Industrial Experience	16 Years
Research Guidance	Approved Supervisor (8 Students)
Publications	International Journal: 24 National Journal: - International Conference: 10 National conference: - Books: 08
Project Guidance	UG: 25 PG: 16
FDP /WORKSHOP/CONFERENCE	Organised: 30 Attended: 15
Out Reach	Guest Lecture Given: - As Judge: Nil Other Roles: Nil
Membership In Professional Bodies	ISTE (Indian Society for Technical Education) International Association of Engineers <b>(IAENG - 118763)</b> Fellow Member In Institution of Engineers <b>(FIE- F-118722-4)</b>
Certification	05
Accomplished NPTEL Courses	Nil
Awards & Accolades	Awards : 3 Accolades: Nil

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### Working Experience: (Teaching & Industry)

<b>Institution/Industry</b>	<b>Designation</b>	<b>Experience</b>
Nadar Saraswathi College of Engineering & Technology, Theni.	<b>Professor</b>	<b>05.06.2019 to Till Date</b>
Suguna College of Engineering, Coimbatore- 641 014	<b>Principal</b>	25.04.2018 to 03.06.2019 <b>1 Year &amp; 2 months</b>
Excel College of Engineering & Technology, Komarapalayam.	<b>Professor &amp; Head</b>	29.05.2015 to 21.04.18 <b>2 Years &amp; 11 months</b>
Arjun College of Technology, Coimbatore-120	<b>Principal</b>	02.04.2014 to 27.05.14 <b>1 Year &amp; 2 months</b>
Rathinam Technical Campus, Coimbatore-21	<b>Principal</b>	02.07.2013 to 28.03.14 <b>9 months</b>
Hindusthan Institute of Technology, Coimbatore-32	<b>Professor &amp; Head</b>	10.11.2008 to 30.06.13 <b>4 years &amp; 8 months</b>
Sri Ramakrishna Engineering College, Coimbatore-22	<b>Assistant Professor</b>	01.08.2001 to 07.11.2008 <b>7 years and 4 months</b>
Dr. Mahalingam College of Engineering & Technology, Pollachi	<b>Senior Lecturer</b>	03.07.2000 to 31.07.2001 <b>1 year and 1 month</b>
M/s. Best Engineers Pumps Limited, Coimbatore-25	<b>Sr.Manager QA</b>	02.01.1994 to 30.06.2000 <b>6 years and 6 months</b>
M/s. Sakthi Square Engineering Enterprises, Coimbatore-44	<b>Production In charge</b>	02.05.1984 to 28.12.1993 <b>9 years and 8 months</b>

ISTE-STTP on “**Recent Trends in Modeling and Analysis of Manufacturing Systems**” organized by dept. of manufacturing technology, Regional Engineering College, Tiruchirapalli - 14

Duration: 2 weeks (15.12.2002 - 26.12.2002)

International Conference on “**Precision Engineering - COPEN 2002**” organized by Dept. of Production Engineering, P.S.G. College of Technology, Coimbatore - 641 004

Duration: 2 days (11.11.2001 & 12.11.2001)

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ISTE – Two Day Workshop on “**Design of Pumps & Blowers**” - organized by Dept. of Mechanical & Production Engineering, Amirta Institute of Technology and Science, Coimbatore

Duration: 2 days (30.11.2002 & 01.12.2002)

One Day Workshop on “**TIG Welding of Stainless Steel Plates & Tubes**” - organized by Dept. of Mechanical Engineering, Coimbatore Institute of Technology, Coimbatore - 641 014

Duration: 1 day (11.09.2002)

AICTE-ISTE-STTP on “**Dimensional Engineering and Analysis**”- organized by Department of Manufacturing Technology, Regional Engineering College, Trichirapalli-641 014

Duration: 2 weeks (13.05.2003 to 24.05.2003)

AICTE - sponsored quality Improvement Programme - STTP on “**Advances in Manufacturing Systems**” - organized by Indian Institute of Technology, Chennai-36

Duration: 2 weeks (01.12.2003 to 12.12.2003)

Two Days Collaborative International Workshop on “**Supply Chain Management**” - organized by Dept. of Mechanical Engineering, Coimbatore Institute of Technology, Coimbatore - 641014

Duration: 2 days (19.08.2005 & 20.08.2005)

Anna University sponsored Quality Improvement Programme -FDP on “**Applied Thermodynamics**” - organized by Bannariamman Institute of Technology, Sathyamangalam.

Duration: 2 weeks (22.05.2006 to 02.06.2006)

One Day Workshop on “**Effective Teaching and Research Methodology for College Teachers**” - organized by Dept. of Computer Science & Engineering, Sri Ramakrishna Engineering College, Coimbatore - 22.

Duration: 1 day (23.09.2006)

One Week Comprehensive Training Programme on “**CNC Milling**” - organized by MTAB - Denford Technology Centre, Chennai.

Duration: 1 week (25.12.2006 to 29.12.2006)

Two Days Faculty Development Programme on “**Revival to Rebirth**” - organized by Placement and Training Cell, SNS College of Technology, Coimbatore - 35.

Duration: 2 days (21.07.2009 & 22.07.2009)

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One Day Workshop on “**Leveraging Accreditation for Assuring Quality in Higher Educational Institutions**” - organized by Confederation of Indian Industry, Coimbatore -18

Duration: 1 day (09.09.2011)

Two Days National conference on “**Higher Education Conclave**” - organized by Confederation of Indian Industry, Coimbatore -18

Duration: 2 days (27.11.2013 & 28.11.2013)

### **Subjects Handled:**

- Teaching UG Course subjects in Mechanical Engineering - **Operations Research, Process Planning & Cost Estimation, Engineering Metrology, Kinematics of Machinery, Engineering Mechanics, Production Technology, Principles of Management, Power Plant Engineering, Computer Aided Manufacturing, Computer Integrated Manufacturing, Manufacturing Technology I & II, Basic Mechanical Engineering and Engineering Graphics.**

### **Research Interests:**

- Analysis on Cell Formation Methods
- Scheduling Cellular Manufacturing Systems
- Simulation of Manufacturing System
- Implementation of CMS- Case Studies
- Cell formation with Reduction in Setup Time
- Cell formation using ART 1 Neural Networks
- Optimization of Manufacturing systems
- Optimization of Facility Layouts

### **Research Experience:**

- Experience in analysis on Cell formation methods related to Cellular Manufacturing Systems.
- Research in analysis and comparison of various cell formation approaches.
- Research in scheduling of Flow Line Manufacturing Cell.
- Experience in implementing Cellular Manufacturing System in a leading Submersible Pump manufacturing industry

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### International Journal Publications:

- **Murugan M. and Selladurai V.** (2007), 'Optimization and implementation of cellular manufacturing system in a pump industry using three cell formation algorithms'. *International Journal of Advanced Manufacturing Technology*. Vol.35, No.1-2, pp.135 -149.
- **Murugan M. and Selladurai V.** (2006), 'Manufacturing cell design with reduction in setup time through Genetic Algorithm', *International Journal of theoretical and applied information technology*. Vol.3, No.1, pp. 77-98.
- **Murugan M., Selladurai V. and Senthil P.V.** (2008), 'An integrated ART-MOD-SLC approach for solving part family/cell formation problem in Cellular Manufacturing Systems'. *International Journal of Manufacturing*. Vol.7, No.1, pp. 20-26.
- **Murugan M., and Selladurai V.** (2008), 'Scheduling Flow Line Manufacturing Cell through Multi Objective Memetic Algorithm', *International Journal of Manufacturing*. Vol.7, No.2, pp. 84-88.
- **Murugan M., and Selladurai V.** (2008), 'Reverse Engineering on Port Cores of a Cylinder Head Using Digitizing Technique', *International Journal for Manufacturing Science and Production*. Vol.9, No.1-2, pp. 33-44.
- **Murugan M., and Selladurai V.** (2008), 'Productivity Improvement in Manufacturing 'S' Cam Shafts using Implementation of Lean Manufacturing System', *International Journal for Manufacturing Science and Production*. Vol.9, No. 3-4, pp. 119-144.
- **Murugan M., and Selladurai V.** (2008), 'Solving Part Family / Machine Cell formation problem in Cellular Manufacturing Systems using an Integrated ART-MOD-SLC Approach', *International Journal of Industrial Engineering –Applied Theory and Practice*. (**Accepted for Publication**).
- **Murugan M., and Selladurai V.** (2011), 'Formation of Machine Cells/ Part Families in Cellular Manufacturing Systems using an Integrated ART-Modified Single Linkage Clustering Approach – A Comparative Study', *Jordan Journal of Mechanical and Industrial Engineering*. Vol. 5, No.3, pp. 199-212.
- **Murugan M., and Selladurai V.** (2014), 'Improving Productivity using Implementation of Lean Manufacturing System in Manufacturing Submersible Pump Diffuser Housing', *Journal of Engineering Research*. Vol. 2, No.1, pp. 163-182.
- **T.Varun Kumar, B.Ganesh Babu, M.Saravanan and M.Murugan** (2014), Designing a User Friendly Effective Tool in Small and Medium Scale Enterprises, *IOSR Journal of Mechanical and Civil Engineering-* (IOSR-JMCE) 2014, e-ISSN: 2278-1684, p-ISSN: 2320-334X, pp. 01-06.
- **T.Varun Kumar, B.Ganesh Babu, M.Saravanan and M.Murugan** (2014), Agile Manufacturing in Small and Medium Scale Enterprises, *International Journal of Innovative Research in Science, Engineering and Technology-(IJIRSET)*, e-ISSN: 2319-8753, p-ISSN: 2347-6710, pp. 253-260.
- **Murugan M,** (2016), Hydro Fog Fire Fighting System, *International Journal Of Engineering Science And Computing-(IJESC)*
- **M.Sathishkumar, Murugan M, S.P.Venkatesan** (2017), EHS Plan For Underground Metro Station E&M Work & Safe Operating System For Panel Erection At Underground Metro Station, *International Journal Of Engineering Science And Computing-(IJESC)*, p-ISSN: 2321-3361, pp. 13763-13768.

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- **S.Karthikeyan, Murugan M** (2017), Occupational Hazard and Control Measures in Foundry Dust, International Journal for Research in Applied Science and Engineering Technology-(IJRASET), p-ISSN: 2321-9653, pp. 1776-1780.
- **M.Syed Abuthahir, Murugan M, S.P.Venkatesan** (2017), Fire Protection System Effectiveness with NFPA Standard in Car Manufacturing Plant, International Journal of Engineering Science and Computing-(IJESC), p-ISSN: 2321-3361, pp. 13719-13763.
- **B.Satheesh Kumar, N.Venkatachalam, Murugan M** (2017), Analyzing Safe Practices In Water Jet Cutting Machine Using Risk Matrix, International Journal Of Engineering Science And Computing-(IJESC), p-ISSN: 2321-3361, pp. 13058-13062.
- **T.Keerthivasan, M.Murugan, S.P.Venkatesan** (2017), Legal Compliance of Paint Mix Room In Car Manufacturing Plant, International Journal Of Engineering Science And Computing-(IJESC), p-ISSN: 2321-3361, pp. 13654-13660.
- **Murugan M** (2017), Risk Assessment And Air Pollution In The Cement Industries And Consequences, International Journal for research in applied science and engineering technology-(IJRASET),
- **Murugan M** (2017), Safety Improvements In Old Generation Hydra With Reasonable Cost Control, International Journal for research in applied science and engineering technology-(IJRASET),
- **Murugan M** (2017), Analysis The Surface Roughness In Drilling Of Aluminum Composites, International Conference on Research Trends In Engineering, Applied Science And Management-(ICRTEEM), ISSN: 2349-4476
- **Sachin S.Vasudevaiah, S.P.Venkatesan, M.Murugan** (2017), Risk Assessment in Compressed Natural Gas (CNG) Pumping Stations, International Journal for Research in Applied Science And Engineering Technology-(IJRASET), ISSN: 2321-9653, pp. 1180-1187.
  
- **Ram Prabhu T, Murugan M, Chiranth B.P, Mishra R.K, Rajini N, Marimuthu P, Dinesh Babu P, Suganya G**, (2019), Effects of Dual – Phase Reinforcement Particles (Fly Ash + Al<sub>2</sub>O<sub>3</sub>) on the Wear and Tensile Properties of the AA 7075 Al Alloy Based Composites, Journal of The Institution of Engineers(India): Series D, Springer,ISSN:2250-2122, pp. 1– 7.
- **Thangavel S, Murugan M**, (2019), Investigation of Cutting Force in End Milling of Al/n-TiC/MoS<sub>2</sub> Sintered Nano Composite, Journal of Croation Metallurgical Soc, ISSN: 0543-5846 METABAK 59(3).
- **Ganesh S, Murugan M, Ras Mathew Y, Ganesh Babu B**, (2019), Shape Modification of Automatic Actuated Fire Sprinkler(AAFS) Made Up of Nitinol Spring, Journal of the Balkan Tribological Association, ISSN: 0543-5846, METABAK 59(3),

### National / International Conferences:

- **Murugan M., and Sivaprakasam R.** et al (2006), ‘Scheduling N jobs M machines machine shop using Ant Colony Optimization’, National Conference “OPTTEST-2006” held at BIT, Sathyamangalam.

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- **Murugan M., and Sivaprakasam R.** et al (2006), 'Cell formation with Reduction in Setup Time through Genetic Algorithm', National Conference "AQMENT-2006" held at Erode Sengunthar Engineering College, Erode.
- **Murugan M., and Sivaprakasam R.** et al (2006), 'Performance Measure of Cells through Genetic Algorithm', International National Conference "CARFOF-06" to be held at Vellore Institute of Technology, Vellore.
- **Murugan M. and Selladurai V.** (2008), 'Art cell formation using modified single linkage clustering approach in cellular manufacturing'. International Conference "ISCO-2008" held at KCE, Coimbatore.
- **Murugan M. and Selladurai V.** (2008), 'Integrated ART-MOD-SLC approach for solving part family/cell formation problem in cellular manufacturing - Comparative Study'. International Conference "ISCO-2008" held at Karpagam College Engineering, Coimbatore.
- **Murugan M. and Selladurai V.** (2009), "Productivity Improvement in Manufacturing Submersible Pump Diffuser Housing Using Lean Manufacturing System" Twenty Fourth National Convention of Production Engineering & National Seminar on "Convergence of Technologies - Task Ahead For Production Engineers" held at Institution of Engineers , Trissur.
- **T.Varun Kumar, B.Ganesh Babu, M.Saravanan and M.Murugan,**(2014), "Designing a User Friendly Dynamic Tool in Small and Medium Scale Enterprises", International Conference on Computational Intelligence & Advanced Manufacturing Research-ICCIAMR- 2014, Vel's University, Chennai, pp. 83.
- **T.Varun Kumar, B.Ganesh Babu, M.Saravanan and M.Murugan,**(2014), "Designing a User Friendly Effective Tool in Small and Medium Scale Enterprises", International Conference on Recent Trends in Engineering and Management-ICRTEM 2014, Indra Ganesan College of Engineering, Tiruchirappalli, pp - 65.
- **M.Murugan, M.Sambathkumar, K.Suresh and E.Palaniswamy,**(2016), "Characteristics Analysis of Hybrid Aluminium Metal Matrix Composites", International Conference on Technological Advancement in Materials and Manufacturing for Industrial Environment - TAMMIE 2016, KPR Institute of Engineering and Technology, Coimbatore.
- **M.Murugan,** (2017), "Automotive Collision Avoidance and Tracking System", National Level Conference on Recent Innovations in Science and Engineering-RISE 2017, PES Institute of Technology, Bangalore South Campus, Bangalore.

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### Book publications:

S. No	Name of the Book	Name of the publisher	ISBN No.
1	MANUFACTURING TECHNOLOGY-I	AIRWALK PUBLICATIONS, CHENNAI	978-81-924031-3-7
2	COMPUTER INTEGRATED MANUFACTURING	AIRWALK PUBLICATIONS, CHENNAI	978-93-84893-47-7
3	ENGINEERING THERMODYNAMICS	AIRWALK PUBLICATIONS, CHENNAI	978-81-924031-0-6
4	METROLOGY AND MEASUREMENTS	AIRWALK PUBLICATIONS, CHENNAI	978-93-84893-16-3
5	ADVANCED IC ENGINES	AIRWALK PUBLICATIONS	978-93-84893-62-0
6	MANUFACTURING TECHNOLOGY-II	AIRWALK PUBLICATIONS	978-93-84893-01-9
7	UNCONVENTIONAL MACHINING PROCESS	CHESS EDUCATIONAL PUBLISHERS	-
8	PRINCIPLES OF MANAGEMENT	CHESS EDUCATIONAL PUBLISHERS	978-81-934303-9-2

### Reviewer for International Journals:

- Reviewer for Journal of Industrial Engineering and Management.
- Reviewer for International Journal of Industrial Engineering - Theory, Applications and Practice.
- Reviewer for International Journal of Production Research.
- Reviewer for International Journal of Advanced Manufacturing.
- Reviewer for Journal of Intelligent Manufacturing.
- Reviewer for Jordan Journal of Mechanical and Industrial Engineering.
- Reviewer for International Journal of Management Science and Engineering Management.
- Reviewer for International Journal of Operational Research.
- Reviewer for International Journal of Mechanical Engineering and Applications.

### Ph.D Guidance:

- Presently guiding **6 (six) Ph.D** Research Scholars under Anna University, Chennai. 2 Scholars have submitted their synopsis recently.

### Conferences Organized:



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- Organized a National conference on Recent Trends in Mechanical Engineering “**RTME-10**” at Hindusthan of Technology, Coimbatore-32 on 10.03.2010.
- Organized a National conference on Emerging Trends in Design and Manufacturing “**ETDM-11**” at Hindusthan Institute of Technology, Coimbatore-32 on 30.09.2011 and got **Rs. 30,000/= as grant in aid from CSIR, New Delhi.**
- Organized a National conference on Emerging Trends in Design and Manufacturing “**ETDM-13**” at Hindusthan Institute of Technology, Coimbatore-32 on 13.03.2013.
- Organized a Two Day National workshop on Recent Trends in Material Science “**RTMS-17**” at Excel College Of Engineering And Technology, Komarapalayam-03 during 28.04.2017-29.04.2017 and got **Rs. 50,000/= as grant in aid from SERB-CSIR, New Delhi.**

### Awards & Recognitions:

- Selected and listed as Eminent Professional in the chosen field “**Who is who in the World**” by Marquis Publication of 2008<sup>th</sup> Edition.
- Selected and Recognized as Eminent Professional in the Chosen Field of Mechanical Engineering “**TOP 100 ENGINEERS 2009 & 2013**” by International Biographical Centre, CAMBRIDGE, ENGLAND.
- Selected and Recognized as Eminent Professional in the Chosen Field of Mechanical Engineering “**INTERNATIONAL ENGINEER OF THE YEAR 2010**” by International Biographical Centre, CAMBRIDGE, ENGLAND.
- Selected and Recognized as Eminent Professional in the Chosen Field of Mechanical Engineering “**LEADING ENGINEER IN THE WORLD 2013**” by International Biographical Centre, CAMBRIDGE, ENGLAND.

### Memberships in Professional Societies:

- Life Member in Indian Society of Technical Education (**MISTE - LM29956**)
- Associate Member in Indian Institute of Welding (**AMIIW**)
- International Association of Engineers (**IAENG - 118763**)
- Fellow Member In Institution of Engineers (**FIE- F-118722-4**)

### Administrative Responsibilities:

- In charge for conducting Internal Assessment Tests for Mechanical Engineering Department from June 2002 - 2008.
- In charge for Mechanical Engg. Association Activities from Jan 2002 - 2008.
- Member - Editorial Board - SREC News Letter from June 2002 - Apr.2003.
- Placement In charge for Mech. Engg. Department from June 2002 to 2003.
- Acted as University Representative for Anna University examinations.
- Acted as Question Paper setter for Anna University, Government College of Technology and Coimbatore Institute of Technology.

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- Actively involved in **preparing for NBA** and other Departmental activities from 2002 to 2008 at Sri Ramakrishna Engineering College, Coimbatore.
- Actively involved in arranging Guest Lectures and One Day Workshops.
- Actively involved in organizing many Faculty Development Programmes and National Conferences.
- Actively involved in developing the laboratories for Mechanical Engineering Department at Hindustan Institute of Technology, Coimbatore.
- Actively involved in **preparing and obtaining NAAC, NBA** accreditation for Mechanical Engineering Department from 2015 - 2018 at Excel Engineering College.