

Cellphone : 9551133779

e-Mail ID : agbabu@annauniv.edu

Address : RRC1301, Rosedale, ETA Apartments, Chennai
603013.



Present Position

Associate professor, Department of Industrial Engineering, College of Engineering Guindy, Anna University, Chennai from August-2014.

Other Employment

- > Professor & Head, ACT, Chennai for 0.5 years.
- > Professor & Head, KVCET, Chennai for 2.0 years.
- > Associate Professor & Head, AIHT, Chennai for 2.5 years.
- > Research Fellow, NIT Trichy for 3.0 years.
- > Assistant Professor, Dr MGR University, Chennai for 1.2 years.
- > Lecturer/Asst.Professor, TCET for 5.5 years.

Degree

- ❖ M.Tech. in INDUSTRIAL ENGINEERING , NITT, National Institute of Technology, Trichy (2004 - 2006).
- ❖ B.E. in MECHANICAL ENGINEERING , APEC, University of Madras (1994 - 1998).

Research Degree

- ❖ Ph.D. in Industrial Engineering from Faculty of Mechanical Engineering, National Institute of Technology Trichy, NITT (2007 - 2010).
Title: Simultaneous Scheduling of Flexible Manufacturing System Components using Non Traditional Optimization Techniques.

Area of Specialisation

- > Tribology of advanced materials
- > Composites

- > Computational Intelligence
- > Lean Sigma
- > Supply Chain Management
- > Design of Experiments

Membership in Professional Organization

- > Fellow in Institutions of Engineers (India)
- > Member in Indian Society for Technical Education
- > Member in Society of Automotive Engineers, India.

Research Guidance

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|---|------|
| Number of Ph.D Scholars Guided | : 4 |
| Number of Ph.D Scholars Guiding | : 5 |
| Number of M.S (By Research) Students Guiding | : 1 |
| Number of M.E./ M.Tech. Projects Guided | : 35 |
| Number of M.E./ M.Tech. Projects Guiding | : 6 |
| Number of Ph.D Scholars Guiding as Joint-Supervisor | : 1 |

Papers Published in Journals

| | |
|---|------|
| Research Papers Published in International Journals | : 66 |
| Research Papers Published in National Journals | : 0 |

1. Gnanavel Babu A, Jerald Jand Noorul Haq A, " Multi objective Scheduling of Jobs, AGVs and AS/RS in FMS using Non-Traditional Optimization Techniques", International Journal of Manufacturing Science and Production, published by Freund publisher, University of Sluvenia. Vol. 9, Issue 1, pp. 61-80 (2008).
2. Gnanavelbabu A, Jerald J, Noorul Haq A and Asokan P, "Simultaneous Scheduling of jobs, AGVs and AS/RS in FMS using Artificial Immune System", International Journal of Advances in Production Engineering and Management, Vol. 4, Issue 3, pp. 139-150 (2009).
3. Gnanavel Babu A, Jerald J, Narendar K and Noorul Haq A, "Simultaneous Scheduling Machines and AGVs in FMS Environment", Journal of Modern Manufacturing Technology, Vol. 1, Issue 1, pp. 43-57 (2009).
4. Gnanavel Babu A, Jerald Jand Noorul Haq A, "Scheduling of machines and AGVs in FMS using Sheep Flock Heredity Algorithm", International Journal of Industrial Engineering Practices, Vol. 1, Issue 2, pp. 109-118 (2009).

5. Gnanavelbabu A, Jerald Jand Noorul Haq A, "Simultaneous scheduling of Machines and Automated Guided Vehicles in FMS using Differential Evolution", International Journal of Production Research. , published by Taylor and Francis. Vol. 48, Issue 16, pp. 4683 - 4699 (2010).
6. Gnanavel Babu A, Jerald Jand Noorul Haq A, "Particle Swarm Optimization for scheduling of Machines and Automated Guided Vehicles in Flexible Manufacturing Systems", International Journal of Materials, Manufacturing and Optimization, Vol. 1, Issue 2, pp. 1-11 (2010).
7. Gnanavelbabu A, Dhivya S, Jerald J and Noorul Haq A, " Scatter search for scheduling of Machines and Automated Guided Vehicles in Flexible Manufacturing Systems", International Journal of Production Technology and Management Research, Vol. 1, Issue 2, pp. 9-18 (2010).
8. Arunagiri P, Gnanavel Babu A, Bhaskar GB and Muniraj R, "Theoretical Methodology for Reduction of Industrial MUDA using Lean Six Sigma", International Journal of Production Technology and Management Research, pp. 117-120 (2012).
9. Venkatesan N, Bhaskar GB, Gnanavelbabu A, "Mechanical Behavior of Various Volume Fractions of High Density Polyethylene Nanoclay Composite", International Journal of Mechanical Engineering and Materials Sciences, Vol. 5, Issue 1, pp. 1-5 (2012).
10. Rambabu D, Bhaskar GB, Gnanavel Babu A and Ratnakar, "Development of an Algorithm for Nesting with Common Cut Methodology Using Identity Coordinator Function", International Journal of Production Technology and Management Research, Vol. 3, Issue 1, pp. 1-10 (2012).
11. Arunagiri P, Gnanavelbabu A, Bhaskar GB and Muniraj R, "International Journal of Production Technology and Management Research", Theoretical Methodology for Reduction of Industrial MUDA using Lean Six Sigma, Vol. 3, Issue 2, pp. 117-120 (2012).
12. Arunagiri P and Gnanavelbabu A, "Review on Reduction of Delay in manufacturing process using Lean six sigma (LSS) systems", International Journal of Scientific and Research Publications, Vol. 3, Issue 2, pp. 1-4 (2013).
13. Panneerdhass R and Gnanavelbabu A, "Fatigue and creep life prediction for composites using FEA", International Journal of Mechanical Engineering and Materials Sciences, Vol. 6, Issue 2, pp. 171-180 (2013).
14. Thirumalvalavan S, Senthil R and Gnanavelbabu A, "Effect of Heat Treatment on Tensile Strength, Hardness and Microstructure of AZ61A Magnesium Alloy", International Journal of Metallurgical & Materials Science and Engineering, Vol. 3, Issue 4, pp. 39-48 (2013).
15. Arunagiri P and Gnanavelbabu A, "Implementation of Lean Manufacturing System in Bogie Assembly in Railway Coach Factory", Applied Mechanics and Materials, published by TransTech. Vol. 248, pp. 511-515 (2013).
16. Rambabu D, Lenin A, Bhaskar G.B and Gnanavelbabu A, "Gap analysis and optimization of process involved in product design and development by integrating enterprise resource planning & product lifecycle management", Procedia Engineering, published by Elsevier. Vol. 64, pp. 983-992 (2013).

17. Rajkumar K, Santosh S, Javed Syed Ibrahim, Gnanavelbabu A, "Effect of Electrical discharge machining parameters on microwave heat treated Aluminium-Boron carbide-Graphite composites", *Procedia Engineering*, published by Elsevier. Vol. 97, pp. 1543 - 1550 (2014).
18. Idayana A, Gnanavelbabu A and Rajkumar K, "Influence of Deep Cryogenic Treatment on the Mechanical Properties of AISI 440C Bearing Steel", *Procedia Engineering*, published by Elsevier. Vol. 97, pp. 1683-1691 (2014).
19. Loganathan D, Gnanavelbabu A, Rajkumar K and Ramadoss R, "Effect of Microwave Heat Treatment on Mechanical Properties of AA6061 Sheet Metal", *Procedia Engineering*, published by Elsevier. Vol. 97, pp. 1692-1697 (2014).
20. Senthil R and Gnanavelbabu A, "Numerical Analysis on Formability of AZ61A Magnesium Alloy by Incremental Forming", *Procedia Engineering*, published by Elsevier. Vol. 97, pp. 1975-1982 (2014).
21. Mugendiran V and Gnanavelbabu A, "Comparison of FLD and thickness distribution on AA5052 aluminium alloy formed parts by incremental forming process", *Procedia Engineering*, published by Elsevier. Vol. 97, pp. 1983-1990 (2014).
22. Mugendiran V and Gnanavelbabu A, "Parameter optimization for surface roughness and wall thickness on AA5052 Aluminium alloy by incremental forming using response surface methodology", *Procedia Engineering*, published by Elsevier. Vol. 97, pp. 1991-2000 (2014).
23. Panneerdhass R, Rajkumar K and Gnanavelbabu A, "Mechanical Properties of Luffa Fiber and Ground nut Reinforced Epoxy Polymer Hybrid Composites", *Procedia Engineering*, published by Elsevier. Vol. 97, pp. 2041-2051. (2014).
24. Arunagiri P and Gnanavelbabu A, "Identification of Major Lean Production Waste in Automobile Industries using Weighted Average Method ", *Procedia Engineering*, published by Elsevier. Vol. 97, pp. 2167-2175 (2014).
25. Sankar M, Gnanavelbabu A and Rajkumar K, "Effect of reinforcement particles on the abrasive assisted electrochemical machining of Aluminium-Boron carbide-Graphite composite", *Procedia Engineering*, published by Elsevier. Vol. 97, pp. 381-389 (2014).
26. Arunagiri P and Gnanavelbabu A, "Identification of High Impact Lean Production Tools in Automobile Industries using Weighted Average Method", *Procedia Engineering*, published by Elsevier. Vol. 97, pp. 2072-2082 (2014).
27. Sankar M and Gnanavelbabu A and R.Baskaran, "Optimization of Surface Roughness in Electro Chemical Machining", *Applied Mechanics and Materials*, published by TransTech. Vol. 606, pp. 193-198 (2014).
28. Muthazhagan C, Gnanavelbabu A, Bhaskar GB and Rajkumar K, "Influence of Graphite Reinforcement on Mechanical Properties of Aluminum-Boron Carbide Composites", *Advanced Materials Research*, published by TransTech. Vol. 845, pp. 398-402 (2014).
29. Dhandapani N, Gnanavelbabu A and Sivasankar M, "Failure Analysis of Cementless Hip Joint Prosthesis", *Advanced Materials Research*, published by TransTech. Vol. 845, pp. 403-407 (2014).

30. Mugendiran V, Gnanavelbabu A and Ramadoss R, "Tensile Behavior of Al5052 Alloy Sheets Annealed at Different Temperatures", *Advanced Materials Research*, published by TransTech. Vol. 845, pp. 431-435 (2014).
31. Muthazhagan C, Gnanavelbabu A, Rajkumar K and Bhaskar G.B, "Corrosion behavior of Aluminium-Boron carbide-graphite composites", *Applied Mechanics and Materials*, published by TransTech. Vol. 591, pp. 51-54 (2014).
32. Loganathan D and Gnanavelbabu A, "Formability Analysis of AA6061 Aluminium Alloy at Room Temperature", *Applied Mechanics and Materials*, published by TransTech. Vol. 591, pp. 55-59 (2014).
33. Sankar M, Baskaran R, Rajkumar K and Gnanavelbabu A, "Abrasive Assisted Electro Chemical Machining of Aluminum-Boron Carbide-Graphite Hybrid Composite", *Applied Mechanics and Materials*, published by TransTech. Vol. 591, pp. 89-93 (2014).
34. Panneerdhass R, Baskaran R, Rajkumar K and Gnanavelbabu A, "Mechanical Properties of Chopped Randomly Oriented Epoxy - Luffa Fiber Reinforced Polymer Composite", *Applied Mechanics and Materials*, published by TransTech. Vol. 591, pp. 103-107 (2014).
35. Martin Charles M, Gnanavelbabu A and Rajkumar K, "Evaluation of Mechanical Property of Friction Welded EN24 Steel Joints", *Applied Mechanics and Materials*, published by TransTech. Vol. 591, pp. 108-111 (2014).
36. Senthil R, Gnanavelbabu A and Ramadoss R, "Characterization of AZ61A Magnesium Alloy at Elevated Temperature", *Applied Mechanics and Materials*, published by TransTech. Vol. 591, pp. 55-60 (2014).
37. Pandiaraj P, Gnanavelbabu A, Saravanan P, "Synthesis of CuO Nanofluids and Analysis of its increased effective thermal conductivity for Flat Plate Heat Pipe", *International Journal of ChemTech Research*, Vol. 8, Issue 4, pp. 1972-1976 (2015).
38. Santosh S, Rajkumar K, Gnanavelbabu A, "Effect of hBN solid lubricant concentration on machinability of Titanium (Ti-6Al-4V) alloy", *International Journal of Materials Science Forum*, published by Elsevier. Vol. 830, pp. 87-90 (2015).
39. Panneerdhass R, Gnanavelbabu A, Rajkumar K and Santhosh S, "Effect of Open Central Hole Stress Concentration on Mechanical Properties of Luffa fiber Reinforced Epoxy Composite", *International Journal of Applied Engineering Research*, published by Elsevier. Vol. 97, pp. 1763-1766 (2015).
40. Sankar M, Gnanavelbabu A, Rajkumar K and Santhosh S, "A Study On Sic Abrasive Assisted Electro Chemical Machining Of Aluminium Boron Carbide Composite", *International Journal of Applied Engineering Research*, published by Elsevier. Vol. 97, pp. 1848-1851 (2015).
41. Muthazhagan C, Gnanavelbabu A, Rajkumar K and Santhosh S, "Effect of Cooling Rate on Distribution of Boron Carbide and Graphite in Al 6061 Composites During Solidification", *International Journal of Applied Engineering Research*, published by Elsevier. Vol. 97, pp. 1429-1433 (2015).

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42. Pandiaraj P, Gnanavelbabu A, Saravanan P, "Prediction of Stability and Thermal conductivity of MgO Nanofluids using CCRD Statistical Design Analysis", Journal of Advances in Chemistry, Vol. 12, Issue 20, pp. 5225-5236 (2016).
 43. Arunagiri P and Gnanavelbabu A, "Identification of Major lean waste and its Contributing Factors using the Fuzzy Analytical Hierarchy Process", Transactions of the Canadian Society for Mechanical Engineering, pp. 371-382 (2016).
 44. Sankar M, Gnanavelbabu A, Rajkumar K, Mariyappan M, "Electro Chemical Machining of Aluminum-Boron Carbide-Nano Graphite Composites", Applied Mechanics and Materials, published by Trans Tech Publication. Vol. 852, pp. 136-141 (2016).
 45. SenthilNathan D, Rajkumar K, Gnanavelbabu A, Sabarinathan P, "Mechanical Properties and Machinability Studies on the Human Hair-Coconut Coir-Glass Fibre Hybrid Composite", Applied Mechanics and Materials, published by Trans Tech Publication. Vol. 852, pp. 79-84 (2016).
 46. Sabarinathan P, Rajkumar K, Gnanavelbabu A, " Mechanical Properties of Almond Shell-Sugarcane Leaves Hybrid Epoxy Polymer Composite", Applied Mechanics and Materials, published by Trans Tech Publication. Vol. 852, pp. 43-48 (2016).
 47. Panneerdhass R, Gnanavelbabu A, Rajkumar K, " Preparation, Properties and Machinability Study of Luffa Fiber -Groundnut Shell Reinforced Epoxy Composite", Applied Mechanics and Materials, published by Trans Tech Publication. Vol. 852, pp. 29-35 (2016).
 48. Varun KA, Rajkumar K, Gnanavelbabu A, "Wear and Life Characteristics of Al-B4C Nano Graphite Composite", Journal of Advanced Engineering Research, pp. pp 61-65. (2016).
 49. Gnanavelbabu A, Saravanan P, Rajkumar K, "Optimization of WEDM Process Parameters on Multiple Responses in cutting of Ti-6Al-4V", Materials Today: Proceedings, published by ELSEVIER. (2017).
 50. Gnanavelbabu A and Arunagiri P, " Ranking of MUDA using AHP and Fuzzy AHP algorithm", Materials Today: Proceedings, published by ELSEVIER. (2017).
 51. Sankar M, Gnanavelbabu A, Rajkumar K, " Parametric Optimization of Abrasive Assisted Electro Chemical Machining of Al6061-B4C-Gr using Taguchi-Grey Technique", Journal of the Balkan Tribological Association, Vol. 23, Issue 1, pp. 67-87 (2017).
 52. V Mugendiran, A Gnanavelbabu, "Comparison of plastic strains on AA5052 by single point incremental forming process using digital image processing †", Journal of Mechanical Science and Technology , published by Springer London. Vol. 31, Issue 6, pp. 2943-2947 (2017).
 53. V Mugendiran, A Gnanavelbabu, "Analysis of Formability and Twist Angle in AA5052 Alloy by Single Point Incremental Forming Process", Indian Journal of Engineering & Materials Sciences, Vol. 24, (2017).
 54. A Gnanavelbabu, P Arunagiri, G Bharathiraja, V Jayakumar, V Velmurugan, "REDUCTION OF OPERATOR'S LOADING AND UNLOADING TIME USING LEAN SYSTEMS FOR PRODUCTIVITY IMPROVEMENT", International Journal of Mechanical Engineering and Technolog, Vol. 8, Issue 10, pp. 207-216 (2017).

55. Gnanavelbabu A, Saravanan P, Rajkumar K, Karthikeyan S, Baskaran R, "Effect of Abrasive Water jet Machining Parameters on Hybrid AA6061-B4C- CNT Composites", *Materials Today: Proceedings*, published by ELSEVIER. (2017).
56. Gnanavelbabu A, Saravanan P, Rajkumar K, Karthikeyan S, "Experimental Investigations on Multiple Responses in ABWJT Machining of Ti-6Al-4V Alloy", *Materials Today: Proceedings*, published by ELSEVIER. (2017).
57. Rajkumar K, Thushal N A, Gnanavelbabu A, Sabarinathan P, "Experimental investigations on the Wire Electrochemical Micro Machining (WECM) integrity of AA6061-TiB2 composite", *Materials Today: Proceedings*, published by ELSEVIER. (2017).
58. Sankar M, Gnanavelbabu A, Rajkumar K, Thushal N A, " Electrolytic Concentration Effect on the Abrasive Assisted- Electrochemical Machining of Aluminium-Boron Carbide Composite", *Materials and Manufacturing Process*, published by Taylor and Francis. Vol. 32, Issue 6, pp. 687-692 (2017).
59. Mugendiran V and Gnanavelbabu A, " Comparison of plastic strains on AA5052 by single point incremental forming process using digital image processing", *Journal of Mechanical Science and Technology*, published by Springer London. Vol. 31, Issue 6, pp. 2943-2949 (2017).
60. A Gnanavelbabu, P Arunagiri, D Dhanasekar, "Implementation of Robotic Welding for the Improvement of Production Systems", *International Journal of Engineering Trends and Technology*, Vol. 49, Issue 5, pp. 304-309 (2017).
61. Pandiaraj P, Gnanavelbabu A, Saravanan P, "Experimental Analysis on Thermal Performance of Fabricated Flat Plate Heat Pipe Using Titanium Dioxide Nanofluid", *Materials Today: Proceedings*, published by ELSEVIER. (2017).
62. Gnanavelbabu A, Muthazhagan C, Rajkumar K, Ayyanar S, Loganathan P, "Experimental Investigation And Reliability Analysis on Wear Performance Of AA6061-B4C-Nanographite Hybrid Composites", *Materials Today: Proceedings*, published by ELSEVIER. (2017).
63. Nambiraj KM, Rajkumar K, Gnanavelbabu A, "Machining characteristics evaluation of aluminium composites based on cBN and PCD inserts", *Materials Today: Proceedings*, published by ELSEVIER. (2017).
64. Mugendiran V and Gnanavelbabu A, "Analysis of hole flanging on AA5052 alloy by single point incremental forming process", *Materials Today: Proceedings*, published by ELSEVIER. (2017).
65. P. Pandiaraj, A. Gnanavelbabu, P. Saravanan, " Experimental and Statistical Analysis of MgO Nanofluids for Thermal Enhancement in a Novel Flat Plate Heat Pipes ", *International Journal of Nanoscience*, Vol. 17, Issue 1, pp. 1760018 (2018).
66. P. SARAVANAN, A. GNANAVELBABU, P. PANDIARAJ, " EFFECT OF PRE-ANNEALING ON THERMAL AND OPTICAL PROPERTIES OF ZNO AL-ZNO THIN FILMS", *International Journal of Nanoscience*, Vol. 17, Issue 1, pp. 1760017 (2018).

Papers Presented in Programmes

Research Papers Presented in International Programmes : 32
Research Papers Presented in National Programmes : 11

1. Gnanavelbabu A, Jerald J and Noorul Haq A, "Multi objective scheduling of jobs, AGVs and AS/RS in FMS using Artificial Immune System" presented in a National level conference on National conference on Emerging trends in Engineering and Sciences, organised by Bannari Amman Institute of Technology, India from 07-Dec-2007.
2. Gnanavelbabu A, Prabhakaran P, Jerald J and Noorul Haq A, "Particle swarm optimization for scheduling of machines and AGVs in FMS" presented in a International level conference on International conference on Advances in Manufacturing Technology, organised by IIT Madras, India from 01-Feb-2008.
3. Gnanavelbabu A, Noorul Haq A and Jerald J, "Multi objective scheduling of jobs, AGVs and AS/RS in FMS using Sheaf Flock Heridity Algorithm, International conference on Advances in Manufacturing Technology" presented in a International level conference on International Conference on Advances in Manufacturing Technology, organised by IIT Madras, Inda from 01-Feb-2008.
4. NoorulHaq A, Munikumar J, Gnanavelbabu A and Jerald J, "Scheduling of machines and AGVs in FMS using Sheep Flock Heridity Algorithm" presented in a National level conference on National Conference on Recent Advances in Manufacturing Management, organised by Annamalai University, India from 08-Feb-2008.
5. Gnanavelbabu A, Jerald J, Prabhakaran P and Noorul Haq A, "Scheduling Optimization of Machines and AGVs in Flexible Manufacturing Systems" presented in a International level conference on International conference on Digital Factory, organised by Coimbatore Institute of Technology, India from 01-Aug-2008.
6. Noorul Haq A, Gnanavelbabu A, Jerald J, Asokan P and Narendar K, "Simultaneous scheduling of machines and AGVs by using AIS" presented in a International level conference on International Conference on manufacturing Research , organised by Brunel University, West London, United Kingdom from 05-Sep-2008.
7. Gnanavelbabu A, Noorul Haq A and Jerald J, "Artificial Immune system based scheduling for Machines and Material Handling Systems in FMS" presented in a International level conference on International conference on Manufacturing Technology, Design and Research , organised by IIT Madras, India from 12-Dec-2008.
8. Gnanavelbabu A, Jerald J and Noorul Haq A, "Multi objective scheduling of Machines and Material Handling Systems in FMS Environment" presented in a International level conference on International Conference on Supply chain Management and Information Systems, organised by National Institute of Technology, Tiruchirappalli, India from 19-Dec-2008.
9. Gnanavelbabu A, Dhivya S, and Noorul Haq A, "Scatter search for Multi Objective Scheduling Machines and AGVs in Flexible Manufacturing Systems" presented in a International level conference on International conference on Advances in Industrial Engineering Applications, organised by Anna University, Chennai, India from 08-Jan-2010.

10. Rambabu D, Bhaskar G.B, Gnanavelbabu A and Ratnakar, "Development of an Algorithm for Nesting with Common Cut Methodology Using Identity Coordinate Function" presented in a International level conference on International Conference on Futuristic Trends in Mechanical Engineering, organised by Thiruvalluvar College of Engg and Tech, Vandavasi, India from 28-Jan-2012 to 29-Jan-2012.
11. Venkatesan N, Muruganandam N, Bhaskar G.B, Gnanavelbabu A, "A Critical review on Nano clay related polymer composite material" presented in a International level conference on International Conference on Futuristic Trends in Mechanical Engineering, organised by Thiruvalluvar College of Engg and Tech, Vandavasi, India from 28-Jan-2012 to 29-Jan-2012.
12. Venkatesan N, Fredric J, Vigneshan S, Kalaiarasu R, Bhaskar G B, Gnanavelbabu A, "Mechanical Behavior of Various Volume Fractions of High Density Polyethylene Nanoclay Composite" presented in a National level conference on National Conference on Research Trends In Mechanical Engineering, organised by Vel's University, India from 11-Apr-2012.
13. Rambabu D, Senthil Rajan U, Vasanthan KP, Bhaskar G.B and Gnanavelbabu A, "Modeling of Heavy Vehicle Break Drum through Static and Thermal Analysis using CAE" presented in a National level conference on National Conference on Fascinating Advancements In Mechanical Engineering, organised by RMK College of Engineering and Technology, India from 01-Mar-2013.
14. Venkatesan N, Babu S, Jaheer Hussain S, Ashokraj, Bhaskar G.B, and Gnanavelbabu A, "Important Mechanical Properties in High Density Polyethylene Nano Composite" presented in a National level conference on National Conference on Fascinating Advancements In Mechanical Engineering, organised by RMK College of Engineering and Technology, India from 01-Mar-2013.
15. Rambabu D, Lenin A, Bhaskar G.B and Gnanavelbabu A, "Design and Optimization of Material Selection through the Integration of Enterprise Planning and Product Lifecycle Management" presented in a International level conference on International Conference on Engineering Materials and Processes, organised by Tagore Engineering College, India from 10-May-2013.
16. Senthilnathan D, Gnanavelbabu A, Bhaskar G. B and Gopinath , "Characterization of Glass Fibre – Coconut Coir– Human Hair Hybrid Composites" presented in a International level conference on International Conference on Engineering Materials and Processes, organised by Tagore Engineering College, India from 10-May-2013.
17. Panneerdhass R and Gnanavelbabu A, "Fatigue and Creep Life Prediction for Composite Material Using FEA" presented in a International level conference on International Conference on Engineering Materials and Processes, organised by Tagore Engineering College, India from 10-May-2013.
18. Arunagiri P, Gnanavelbabu A and Bhaskar GB, "Redesign of Manufacturing Process flow for UPCR Pump housing in Automobile Industry to Improve Productivity through Lean Production Systems" presented in a International level conference on International Conference on Engineering Materials and Processes, organised by Tagore Engineering College, India from 10-May-2013.

19. Venkatesan N, Bhaskar G.B, Poyyathappan K and Gnanavelbabu A, "Effect of Nanoclay (MMT) on Mechanical Properties of High Density Polyethylene Nanocomposites" presented in a International level conference on International Conference on Engineering Materials and Processes, organised by Tagore Engineering College, India from 10-May-2013.
20. Sankar M, Gnanavelbabu A, Manikandan SK and Tamilarasan V, "Multi Objective Optimization of Micro Electro Chemical Optimization Process" presented in a International level conference on International Conference on Green Technology in Engineering and Applied Sciences, organised by APEC, India from 01-Jun-2013.
21. Javed Syed Ibrahim S, Rajkumar K, Gnanavelbabu A, Panneerdhass R, "Mechanical, Thermal and Microstructural Properties of Microwave Processed Luffa-Epoxy Natural Fibre Composite" presented in a International level conference on International Conference on Advances in Design and Manufacturing , organised by National Institute of Technology, Tiruchirappalli, India from 05-Dec-2014 to 07-Dec-2014.
22. Rajkumar K, Javed Syed Ibrahim S, Panneerdhass R and Gnanavelbabu A, "Effects of Nano-Graphite Addition on Luffa-Epoxy Natural Fibre Composite" presented in a International level conference on International Conference on Advances in Design and Manufacturing , organised by National Institute of Technology, Tiruchirappalli, India from 05-Dec-2014 to 07-Dec-2014.
23. Panneerdhass R, Gnanavelbabu A, Javed Syed Ibrahim S, Rajkumar K, Preparation, "Properties and Machinability Study of Groundnut Shell-Broom Fibre-Reinforced Epoxy Composite" presented in a International level conference on International Conference on Advances in Materials, Manufacturing and Applications , organised by National Institute of Technology, Tiruchirappalli, India from 09-Apr-2015 to 11-Apr-2015.
24. Muthazhagan C , Gnanavelbabu A, Rajkumar K , Santosh S, "Tribological studies on solid lubricant concentration in aluminium boron carbide composites" presented in a International level conference on International Conference on Advances in Materials, Manufacturing and Applications , organised by National Institute of Technology, Tiruchirappalli, India from 09-Apr-2015 to 11-Apr-2015.
25. R.Senthil and A.Gnanavelbabu, "Prediction of forming limit diagram of AZ61A Mg alloy sheet" presented in a International level conference on International Conference on Materials, Design and Manufacturing Process , organised by Anna University, Chennai, India from 17-Feb-2016 to 19-Feb-2016.
26. P.Pandiayaraj, A.Gnanavelbabu and P.Saravanan, "Synthesis of MgO nanoparticles using Sol gel method for porous wick structure of flat plate heat pipe" presented in a International level conference on International Conference on Materials, Design and Manufacturing Process , organised by Anna University, Chennai, India from 17-Feb-2016 to 19-Feb-2016.
27. M.Sankar, A.Gnanavelbabu, K.Rajkumar and N.A.Thushal, "Electrolytic concentration effect on the abrasive assisted electrochemical machining of aluminium-boron" presented in a International level conference on International Conference on Materials, Design and Manufacturing Process , organised by Anna University, Chennai, India from 17-Feb-2016 to 19-Feb-2016.

28. K.Rajkumar, I.Poovazhagan, N.A.Thushal and A.Gnanavelbabu, "Experimental studies of wire electrical discharge machining on the aluminium / (SiC + B4C) nano composite" presented in a International level conference on International Conference on Materials, Design and Manufacturing Process , organised by Anna University, Chennai, India from 17-Feb-2016 to 19-Feb-2016.
29. A.Arunkumar, R.Baskaran and A.Gnanavelbabu, "Optimizing the process parameters of friction stir welding for joining dissimilar aluminium alloys AA5083 and AA6061" presented in a International level conference on International Conference on Materials, Design and Manufacturing Process , organised by Anna University, Chennai, India from 17-Feb-2016 to 19-Feb-2016.
30. S.Prasanna Venkatesan, R.Baskaran, and A.Gnanavelbabu, "Optimization of friction Welding parameters for joining Aluminium Alloy7075-T6 and stainless steel AISI304" presented in a International level conference on International Conference on Materials, Design and Manufacturing Process, organised by Anna University, Chennai, India from 17-Feb-2016 to 19-Feb-2016.
31. D.Senthilnathan, A.Gnanavelbabu, and K.Rajkumar, "Assessment of open central hole on the stress concentration factor of glass fibre-coconut coir-human hair hybrid composite" presented in a International level conference on International Conference on Materials, Design and Manufacturing Process, organised by Anna University, Chennai, India from 17-Feb-2016 to 19-Feb-2016.
32. R.Sunil, A.Gnanavelbabu, K.Rajkumar, and C.Muthazhagan, "Assessment of wear performance on AA6061-B4C-nanographite hybrid composite" presented in a International level conference on International Conference on Materials, Design and Manufacturing Process , organised by Anna University, Chennai, India from 17-Feb-2016 to 19-Feb-2016.
33. P.Arunagiri and A.Gnanavelbabu, "Identification of major contributing factors for the Transportation waste using Binary Logistics Regression" presented in a International level conference on International Conference on Advanced Engineering and Technology for Sustainable Development, organised by Karpagam College of Engineering, India from 19-Feb-2016 to 20-Feb-2016.
34. P.Saravanan, A.Gnanavelbabu and S.Dinsha Sadhanandhan, "A New Efficient Method for Test Data Compression: 2nd Reduced Pattern Run-Length" presented in a International level conference on International Conference on Innovations in Information, Embedded and Communications Systems, organised by Karpagam College of Engineering, India from 17-Mar-2016 to 18-Mar-2016.
35. SaigopalVasudevan, Subbiah. N, SamKamal. B, Siva Sankar, Rajkumar. K and Gnanavelbabu. A, "Wire cut electric discharge machining of AA6061-CNT-Boron carbide Hybrid composite" presented in a National level conference on National Conference on Processing and Characterization of Advanced Engineering Materials, organised by SSN College of Engineering, India from 11-May-2016.
36. S.P. Raghavan, Rajkumar. K and Gnanavelbabu. A, "Optimisation of abrasive water jet machining of Titanium by controlling kerf quality characteristic" presented in a National level conference on National Conference on Processing and Characterization of Advanced Engineering Materials, organised by SSN College of Engineering, India from 11-May-2016.

37. N.A.Thushal, Rajkumar. K and Gnanavelbabu. A, "Processing and Characterization of Aluminium/Titanium Diboride Metal Matrix Composite" presented in a National level conference on National Conference on Processing and Characterization of Advanced Engineering Materials, organised by SSN College of Engineering, India from 11-May-2016.
38. Sunil R, Gnanavelbabu A, Rajkumar K and Varun KA, "Accelerated wear and life characteristics of AA6061- B4C-CNT Composite" presented in a National level conference on National Conference on Processing and Characterization of Advanced Engineering Materials, organised by SSN College of Engineering, India from 11-May-2016.
39. Ayyanar. S, Gnanavelbabu. A and P.Loganathan, "Tribology studies and mechanical properties of Pure Al reinforcement Solid Lubricants" presented in a National level conference on National Conference on Processing and Characterization of Advanced Engineering Materials, organised by SSN College of Engineering, India from 11-May-2016.
40. Sabarinathan. P, Panneerdhass. R, Rajkumar. K and Gnanavelbabu. A, "Investigation of Mechanical Properties of Luffa Cylindrica and Flax Reinforced Hybrid Polymer Composite" presented in a National level conference on National Conference on Processing and Characterization of Advanced Engineering Materials, organised by SSN College of Engineering, India from 11-May-2016.
41. K. Rajkumar, P.Sabarinathan, A.Gnanavelbabu, V.Muthukumar, "Synthesis And Experimental Analysis of Novel TiO₂-Nanographene Nano Fluids for Thermal Enhancement In Flat Plate Heat Pipes" presented in a International level conference on International Conference On Recent Innovations In Production Engineering - RIPE 2017, organised by Department of Production Technology, MIT Campus, Anna University, Chennai , India from 24-Mar-2017 to 25-Mar-2017.
42. "11. Reliability and life data analysis of tungsten carbide tool for the EN24 steel turning process under accelerated tool wear test" presented in a International level conference on International Conference On Recent Innovations In Production Engineering - RIPE 2017, organised by Department of Production Technology, MIT Campus, Anna University, Chennai , India from 24-Mar-2017 to 25-Mar-2017.
43. "Wire cut electric discharge machining of AA6061-CNT- boron carbide hybrid composite" presented in a International level conference on International Conference On Recent Innovations In Production Engineering - RIPE 2017, organised by Department of Production Technology, MIT Campus, Anna University, Chennai , India from 24-Mar-2017 to 25-Mar-2017.

Current Sponsored Projects

1. "Variable Frequency Ultrasonic Treatment on Microstructure and Dry Sliding Wear Behavior of Mg Alloy/UHTC Composite", funded by DST-SERB (March-2018 - March-2021). Project Cost: 49.36.

Sponsored Projects Completed

1. "Optimization of High Temperature Wear Performance of Al-B₄C-Nanographite/CNT Hybrid Compositied", funded by CTD, Anna University, India (March-2015 - February-2016). Project Cost: 50000.00.

2. "Nano-Modification of Luffa-Epoxy Natural Fibre Composite and Optimization of its Potential to develop Multi-Functional Materials", funded by CTDT, Anna University, India. (March-2015 - September-2015). Project Cost: 25000.00.
3. "Tribological Evolution and Reliability Analysis on AA7075 based hybrid composites with hBN solid lubricant", funded by CTDT, Anna University, India. (March-2016 - September-2016). Project Cost: 25000.00.
4. "Modernization and Removal of Obsolesces - on Mechanics lab equipments", funded by AICTE, Govt. of India (June-2011 - May-2012). Project Cost: 1300000.00.

Programme Chaired

1. Co Chairman, International level conference titled "International Conference on Recent Advances in Mechanical Engineering, INCRAME 2012." conducted by Dr.MGR Educational & Research Institute University, Chennai 600 095. from 20-Apr-2012 to 31-Dec-1969.
2. Chairman, National level conference titled "National Conference on Modeling , simulation and optimization, NCMISO'12 " conducted by Vels University, Chennai 600 117. from 02-Nov-2012.
3. Chairman, National level conference titled "Contemporary Approaches in Mechanical Engineering" conducted by KVCET, Chennai from 28-Feb-2013 to 31-Dec-1969.
4. Chairman, International level conference titled "International Conference on Engineering Materials and Processes" conducted by Tagore Engineering College, India from 08-May-2013 to 10-May-2013.
5. Chairman, National level conference titled "International Conference on Recent Advances in Mechanical Engineering, INCRAME 2013" conducted by Vels University Chennai from 16-May-2013 to 17-May-2013.
6. Co Chairman, International level conference titled "International Conference on Advances in Mechanical Engineering, ICAME 2015" conducted by Department of Mechanical Engineering, University College of Engineering Villupuram, Villupuram -605103. from 16-Oct-2013 to 31-Dec-1969.

Programme Organized

1. Convener, National level seminar on "Technical Symposium @ Mexploration-11" from 11-Feb-2011 to 11-Feb-2011.
2. Convener, National level conference on "Contemporary Approaches in Mechanical Engineering" from 28-Feb-2012 to 28-Feb-2012.
3. Convener, National level workshop on "Recent Trends in Industrial Engineering & Mechanical Sciences" from 20-Mar-2012 to 21-Mar-2012.
4. Convener, International level workshop on "Research Methodology" from 03-Apr-2013 to 03-Apr-2013.

5. Convener, National level workshop on "Emerging Trends in Alternate Fuels & Automotive Electronics" from 07-Sep-2017 to 08-Sep-2012.

Programme Attended

1. Participated in a National level workshop on "Recent Trends in manufacturing & Materials under TEQIP Community services" organized by Department of Production Engineering, National Institute of Technology, Tiruchirappalli-620015, India from 06-Jan-2006 to 07-Jan-2006.
2. Participated in a National level workshop on "Metal Forming and Powder Metallurgy under TEQIP Community services" organized by Department of Production Engineering, National Institute of Technology, Tiruchirappalli-620 015., India from 28-Jan-2008 to 30-Jan-2008.
3. Attended a National level Short Course on "Metallurgy and Materials: Today and Tomorrow Sponsored by AICTE – QIP" organized by Department of Metallurgy and Materials Engineering, NIT, Tiruchirappalli-620 015, India from 11-Feb-2008 to 15-Feb-2008.
4. Attended a National level Short Course on "Advanced Tools and Techniques for Research in Engineering problems, Sponsored by AICTE – QIP" organized by Department of Production Engineering, NIT, Tiruchirappalli-620 015, India from 25-Feb-2008 to 29-Feb-2008.
5. Attended a National level Short Course on "Attended a short term course on Laser Processing of Materials under TEQIP Community services" organized by Department of Production Engineering, NIT, Tiruchirappalli-620 015, India from 06-Mar-2008 to 07-Mar-2008.
6. Participated in a National level workshop on "Applications of Information Technology Tools in Manufacturing" organized by Department of Production Engineering, NIT, Tiruchirappalli-620 015, India from 11-Mar-2008 to 12-Mar-2008.
7. Participated in a National level workshop on "X-Ray Diffraction Analysis (XRD) & Intellectual Property Rights (IPR), organized under Technical Education Quality Improvement Program " organized by Department of Physics, National Institute of Technology, Trichy-15. , India from 15-Mar-2008 to 15-Mar-2008.
8. Attended a National level Short Course on "Advances in Materials Processing, Sponsored by MHRD- AICTE" organized by Department of Production Engineering, National institute of Technology, Tiruchirappalli-620 015., India from 30-Jun-2008 to 09-Jul-2008.
9. Attended a National level Short Course on "Weldability of Advanced Materials & Newer Joining Techniques, sponsored by AICTE – QIP" organized by Department of Metallurgy and Materials Engineering, NIT, Tiruchirappalli-620 015, India from 29-Jan-2009 to 03-Jul-2009.
10. Attended a International level seminar on "Alternate Fuels" organized by Department of Mechanical Engineering, School of Engineering, Vels University, Chennai 600 117., India from 25-Feb-2012 to 25-Feb-2012.
11. Attended a International level Short Course on "FDTP - Applied Hydraulics and Pneumatics" organized by Department of Production Technology, Madras institute of Technology, Anna University, Chennai 600 025, India from 07-Jun-2012 to 13-Jun-2012.

12. Participated in a National level workshop on "Recent Trends in Manufacturing Processes" organized by Department of Mechanical Engineering, Tagore Engineering College, Chennai 600 048, India from 07-Aug-2012 to 08-Aug-2012.
13. Attended a National level seminar on "Computational Fluid Dynamics" organized by Organized by Department of Mechanical Engineering, School of Engineering, Vels University, Chennai 600 117, India from 22-Sep-2012 to 31-Dec-1969.
14. Attended a National level Short Course on "FDTP - Engineering Materials and Metallurgy" organized by Department of Production Technology, Madras institute of Technology, Anna University, Chennai 600 025, India from 05-Dec-2012 to 11-Dec-2012.
15. Attended a National level Short Course on "FDTP - Automotive Electrical and Electronics" organized by Department of Automobile Engineering, Madras institute of Technology, Anna University, Chennai 600 025, India from 10-Jun-2013 to 16-Jun-2013.
16. Attended a National level Short Course on "New Materials Their Characterization and Applications, Sponsored by UGC" organized by Centre for Nanoscience and technology, Crystal growth center & Department of mechanical Engineering, Anna university, Chennai 600025, India from 09-Oct-2014 to 10-Oct-2014.
17. Participated in a National level workshop on "Advanced Metrology in Manufacturing Engineering" organized by Department of Manufacturing Engineering, College of Engineering Guindy, Chennai 600 025, India from 30-Oct-2014 to 31-Oct-2014.
18. Attended a National level Short Course on "FDTP - ME-6402 – Manufacturing Technology II" organized by Department of Mechanical Engineering, College of Engineering Guindy, Anna University, Chennai 600 025, India from 08-Dec-2014 to 14-Dec-2014.
19. Attended a National level Short Course on "Saksham-IT Champion Training program" organized by Saksham, Microsoft at Anna University Chennai-600025, India from 15-Dec-2014 to 20-Dec-2014.
20. Participated in a National level workshop on "Green manufacturing concepts (GMC-2015)" organized by Department of Production Technology, Madras institute of Technology campus, Chennai 600 044, India from 16-Feb-2015 to 17-Feb-2015.
21. Participated in a National level workshop on "Advanced characterization techniques of materials" organized by Department of Mechanical Engineering, College of Engineering Guindy, Chennai 600 025., India from 24-Feb-2015 to 25-Feb-2015.
22. Participated in a National level workshop on "Trends in Non-Destructive Evaluation of weldments" organized by Department of Mechanical Engineering, Anna university, Chennai 600 025, India from 09-Mar-2015 to 10-Mar-2015.
23. Attended a National level Short Course on "Two week FDTP on Advanced Manufacturing Process for Automobiles (AMPA2015)" organized by Department of Automobile Engineering, BIT Campus, Anna University, Trichy 620 024. , India from 20-May-2015 to 02-Jun-2015.
24. Attended a National level Short Course on "FDTP - ME-6404 – Thermal Engineering" organized by Department of Mechanical Engineering, University College of Engineering Villupuram, Anna University, Chennai 600 025, India from 14-Dec-2015 to 20-Dec-2015.

25. Attended a National level Short Course on "FDTP - ME-6504 – Metrology and Measurements" organized by Department of Production Technology, Madras Institute of Technology campus, Chennai 600 044, India from 30-May-2016 to 05-Jun-2016.
26. Attended a National level Short Course on "FDTP - ME-6503 – Design of Machine Elements" organized by Department of Mechanical Engineering, Saveetha Engineering College, Chennai 602 105, India from 13-Jun-2016 to 20-Jun-2016.
27. Participated in a National level workshop on "Student Evaluation and Question Paper Setting" organized by National Institute of Technical Teachers Training Chennai at CEG Anna University, Chennai 600 025, India from 21-Sep-2016 to 23-Sep-2016.
28. Participated in a National level workshop on "Surface and Form Measurements" organized by Department of Mechanical Engineering, CEG Anna University, Chennai 600 025, India from 12-Jan-2017 to 12-Jan-2017.
29. Attended a National level Short Course on "Green Techniques for Sustainable Construction through ICT" organized by National Institute of Technical Teachers Training & Research, Chandigarh -160019, India from 06-Feb-2017 to 10-Feb-2017.
30. Attended a National level Short Course on "ME-6503 – Design of Machine Elements" organized by Department of Mechanical Engineering, University College of Engineering, Panruti 607 106. , India from 17-May-2017 to 23-May-2017.

Experience Abroad

1. Visited Kerry Production Systems for One Year, United Kingdom . Purpose of visit :Lean Practioner.

Invited Lectures

1. Delivered a Lecture on "Computer Integrated Manufacturing" in Guest Lecture organized by DoME, Tagore Engineering College, Chennai-48, TamilNadu, India. (15-Oct-2012).
2. Delivered a Lecture on "Lean Manufacturing" in Guest lecture organized by Manakula Vinayagar Institute of Technology, Puducherry-605107. India. (06-Feb-2016).
3. Delivered a Lecture on "Composite Materials & Advanced Manufacturing Systems" in Guest lecture organized by Adhiparasakthi College of Engineering, Kalavai-632506, TamilNadu, India. (12-Feb-2016).
4. Delivered a Lecture on "Advanced Manufacturing Systems" in Guest lecture organized by University College of Engineering, Anna University, Panruti -632506, TamilNadu, India (10-Feb-2017).