

## BIO DATA

1 Name : **Dr. M. NATARAJ**

2 Designation & College : **ASSOCIATE PROFESSOR**  
Government College of Technology,  
Coimbatore-13  
Phone: 0422-2432221 Extn 351  
Mobile: 989451 6524  
Email: m\_natanuragct@yahoo.com  
m\_natanuragct@rediffmail.com



3 Residential Address : **P-1, New Quarters**  
Government College of Technology  
Coimbatore – 641 013  
Phone: 0422-2450089

4 Date of Birth & Age : **05.06.1962; 52Years**

### 5 Educational Qualifications

Sl. No.	Academic Qualification	Specialization	Institution / University	Year of Passing	Class Obtained
1	<b>B.E.</b>	<b>Mechanical Engineering</b>	<b>Alagappa Chettiar College of Engg &amp; Tech., Karaikudi</b>	<b>1984</b>	<b>I</b>
2	<b>M.E.</b>	<b>Engineering Design</b>	<b>Government College of Technology, Coimbatore</b>	<b>1991</b>	<b>I</b>
3	<b>Ph.D.</b>	<b>Mechanical Engineering</b>	<b>Bharathiar University</b>	<b>2006</b>	<b>-</b>

6 Teaching Experience: **UG - 29 Years**  
**PG - 24 Years**

7 Research Experience: **14 Years**

8 Papers Published: **Journals (25 with impact factor) - 33**  
**Conferences - 34**

9 Scholars pursuing Research and completed PhDs } **PhD produced: Anna University, Chennai - 3**  
**Research Scholars pursuing research work - 9**

## 10 ACHIEVEMENT & AWARD:

CERTIFICATE OF MERIT in recognition of research paper presented in XIII National Conference of INDIAN SOCIETY OF MECHANICAL ENGINEERING (ISME-2033) awarded by Indian Institute of Technology Roorke during December 2003

## 11 PROJECT PROPOSALS SUBMITTED:

RPS proposal entitled “Condition Monitoring and Fault Diagnosis Studies on Rotor Bearing System” to AICTE, New Delhi (Amount Rs.13.83 Lakhs)

Part II Scheme Proposal entitled “Establishing Centre of Excellence in Mechanical engineering” in Government College of Technology, Coimbatore under state funding to Directorate of Technical Education (Amount Rs. 1.7 Crores)

## FIELD OF INTEREST

- ➔ Product and Process Design Optimization using Design of Experiments Approach
- ➔ Tribology
- ➔ Vibration Engineering
- ➔ Energy Engineering

## CONSULTANCY

- Consultant for M/s.V- Guard Pump Industry, Cochin
- Consultant for M/s. Roots Industry, Coimbatore
- Consultant for M/s. Suzlon Infrastructure Services Limited, Coimbatore, India
- Consultant for TNEB to diagnosis the rotor bearing system failure in power station

## ACADEMIC AND ADMINISTRATIVE ACTIVITIES

- Expert Member for AICTE, New Delhi to scrutinize Research Promotion Schemes (RPS) , Modernization and Removal of Obsolescence (MODROB), Faculty Development Programme (FDP) and Winter / Summer Schools.
- Co-coordinating with Industries for organizing programs on behalf of Industry Institute Partnership Cell in Government College of Technology, Coimbatore
- Reviewer for Journal Vibration Control, Proc. IMechE Part A: Journal of Power and Energy, International Journal of Computer Application in Technology, Journal of Petroleum and Gas Engineering, International Journal of Quality and Reliability Engineering, Engineering Applications of Computational Fluid Mechanics.
- Presented technical lecture on “Improving Pump Performance using Design of Experiments Approach” from my research work in a one day workshop organized by SDM Engineering College (Dharvar) in Karnataka state

- Delivered technical lecture on Taguchi's robust design concept in AICTE-STTP organized by Mechanical Engineering Department at Kumaraguru College of Technology, Coimbatore
- Responsible in developing the Machine Design Laboratory in Engineering. Design Department at Government College of Technology, Coimbatore
- Valuation Expert for Tamil Nadu Industrial Investment Corporation
- Doctoral Committee Members for PhD Scholars in Anna University Chennai
- Academic Council Member in Government College of Technology, Coimbatore
- Expert member in Board of Studies, PSR Engineering College, Sivakasi, Tamilnadu
- Anna University Nominee as Member in Board of Studies (subject expert) in PSG College of Technology, Coimbatore, Tamilnadu
- Anna University Nominee as Member in Board of Studies (subject expert) in Coimbatore Institute of Technology, Coimbatore, Tamilnadu
- Anna University Nominee as Member in Board of Studies (subject expert) in Adhiyamaan College Engineering, Hosur, Tamilnadu
- Presented Lecture on Innovation and Invention in Research at Agni School of Business Excellence, Dindigul
- Presented Lecture in Faculty Development Programme on 'Bending in Beams' at Park College of Engineering, Coimbatore, Tamilnadu
- Presented Lecture in Faculty Development Programme on 'Design of Machine Elements' at Park College of Engineering, Coimbatore, Tamilnadu

### **SEMINARS / CONFERENCES WORKSHOPS / PROGRAMMES ORGANIZED**

- **National Seminar on Strategies for World Class Manufacturing** for the benefit of industries in Coimbatore in Government College of Technology, Coimbatore during **April 2006**.
- **Short-Training Programme Plastic Wire Knitting for Furniture** for socially disadvantaged group & youth under service to community & economy in A. C. College of Engineering & Technology, Karaikudi during **November 2006**.
- **Programme on Promoting Entrepreneurial Motivation among Engineering Students** for final year UG students and PG students to make them employable after graduation in Government College of Technology, Coimbatore during **February 2007**.
- **Training on Intellectual Property & Innovation Management in Knowledge Era** for the benefit of teaching faculty and students in colleges and engineers / technocrats from Industries in Government College of Technology, Coimbatore in association with NRDC, New Delhi during **October 2007**.

- **Workshop on Designing, Manufacturing and Inspection of Gears** for the technocrats working Coimbatore based Industries at Government College of Technology, Coimbatore during **May 2007**.
- **Faculty Development Programme on Vibration and Tribology Related Issues in Industrial Scenario** at Government College of Technology, Coimbatore during **October 2012**.

## **PhD PRODUCED**

- 1 **Topic: INVESTIGATIONS ON BIO-DIESEL AS A BLEND WITH DIESEL FOR CI ENGINE, ANNA UNIVERSITY: CHENNAI**  
**Category: Part Time, PhD Degree Awarded in March 2010**
- 2 **Topic: QUALITY IMPROVEMENT THROUGH THE INTEGRATION OF SIX SIGMA, QFD AND TRIZ IN MANUFACTURING AND SERVICE ORGANISATIONS, ANNA UNIVERSITY: CHENNAI**  
**Category: Full Time, PhD Degree Awarded in January 2013**
- 3 **Topic: FAULT DIAGNOSIS AND FAILURE ANALYSIS OF WIND TURBINE COMPONENTS, ANNA UNIVERSITY: CHENNAI**  
**Category: Part Time, PhD Degree Awarded in November 2013**

## **JOURNAL PUBLICATIONS**

- 1 **Nataraj, M.,** Arunachalam, V.P., (2004) "Modeling and Synthesizing of Drum Cam Mechanism for Printing Machine", *Journal of Manufacturing Technology Today*, Vol. 3 / Issue 8 / pp 18-22.
- 2 **Nataraj, M.,** Arunachalam, V.P., Dhandapani, N.," (2005) Optimizing Diesel Engine Parameters for Low Emissions using Taguchi Method: Variation Risk Analysis Approach - Part I", *Indian Journal of Engineering and Materials Sciences*, Vol. 12, pp 169-181.
- 3 **Nataraj, M.,** Arunachalam, V.P., Dhandapani, N., (2005)" Optimizing Diesel Engine Parameters for Emission Reduction using Taguchi Method: Variation Risk Analysis Approach - Part II", *Indian Journal of Engineering and Materials Sciences*. Vol. 12, pp 505-514.
- 4 **Nataraj, M.,** Arunachalam, V.P., and Ranganathan, G. (Jan 2006), "Using risk analysis and Taguchi's method to find the optimal conditions of design parameters: a case study", , *Int. Jr. of Advanced Manufacturing Technology*, Vol. 27, Issue 5-6, pp 445 - 454.
- 5 **Nataraj, M.,** Arunachalam, (2006) V.P. and Suresh, K.G., "Optimizing Planer Cam Mechanism in Printing Machine for Quality Improvement using Taguchi Method: Risk Analysis with Concurrent Engineering Approach", *Int. Jr. of Computer Applications in Technology*, Vol. 26, No. 3, pp. 164 – 173.

- 6 **Nataraj, M.**, Arunachalam, V.P., (2006) "Optimizing impeller geometry for performance of centrifugal pump using Taguchi quality concept", *Proc. Instn. Mech. Engrs, Part A; Jr. of Power and Energy*, 220 (A7), pp. 765 – 782.
- 7 **Nataraj, M.**, Arunachalam, V.P., (2008) "A practical approach to optimize the coating parameters to win customer confidence ", *Proc. Instn. Mech. Engrs, Part B; Jr. of Engineering Manufacture*, 222 (B4), pp. 495 – 506.
- 8 **Nataraj, M.**, Thomas, R.B., (2009) "FEA based analysis of solenoid in automotive application with model development", *International Journal of Materials and Structural Integrity*, Vol. 3, No.4 pp. 269 - 293
- 9 Sankar, S., Sundar Raj, M., and **Nataraj, M.**, (September 2010), "Profile Modification for Increasing the Tooth Strength in Spur Gear Using CAD", *Engineering*, 2, pp. 740-749.
- 10 Shanmugaraja, M., **Nataraj, M.** and Gunasekaran, N., (2010) "Customer care management model for service industry", *IBusiness*, Vol. 2, pp. 145 – 155.
- 11 Shanmugaraja, M., **Nataraj, M.** and Gunasekaran, N., (2010) "Theory of inventive problem solving: concepts, tools and applications", *Int. J. of Engineering Studies*, Vol. 2, pp. 149 – 166.
- 12 Shanmugaraja, M., **Nataraj, M.** and Gunasekaran, N., (2010) "Empirical study for Six Sigma success: mapping organisational hierarchy with barriers", *Int. J. of Applied Engineering Research*, Vol.10, pp. 1821 – 1826.
- 13 Sankar, S., and **Nataraj, M.**, (June 2010), "Prevention of helical gear tooth damage in wind turbine generator: a case study", *Proc. IMechE Part A: Journal of Power and Energy*, Vol. 224, pp. 1117-1125.
- 14 **Nataraj, M.**, (September 2010) "Predicting Surface Excellence Using Parametric Design Concept: A Practical Approach with Mathematical Model", *Journal of Manufacturing Engineering*, Vol.5, No. 3, pp 170-176.
- 15 Shanmugaraja, M., **Nataraj, M.** and Gunasekaran, N., (2011) "Quality and productivity improvement using Six Sigma and Taguchi methods", *Int. J. of Business Excellence*, Vol. 4, No. 5, pp. 544 – 572.
- 16 Shanmugaraja, M., **Nataraj, M.** and Gunasekaran, N., (2011) "Defect control analysis for improving quality and productivity: an innovative six sigma case study", *Int. J. of Quality and Innovation*, Vol. 1, No. 3, pp. 259 – 282.
- 17 Sankar, S., and **Nataraj, M.**, (May 2011), "Profile modification - a design approach for increasing the tooth strength in spur gear", *International Journal of Advanced Manufacturing Technology (IJAMT)*, Vol. 55, No.1-4, pp. 1-10.
- 18 Sankar, S., **Nataraj, M.**, and Prabhu Raja, V (October 2011), "Failure analysis of shear pins in wind turbine generator", *Journal of Engineering Failure Analysis*, (Elsevier), Vol. 18, pp. 325 – 339.
- 19 Shanmugaraja, M., **Nataraj, M.** and Gunasekaran, N., (2012) "Literature snapshot on six sigma project selection for future research", *Int. J. of Services and Operations Mgmt*, Vol. 11, No. 3, pp. 335 – 357.
- 20 Shanmugaraja, M., **Nataraj, M.** And Gunasekaran, N., (2012) "Six Sigma project selection via quality function deployment", *Int. J. of Productivity and Quality Mgmt*, Vol. 10, No. 1, pp. 85 – 111.

- 21 Sankar, S., **Nataraj, M.**, and Prabhu Raja, V (February 2012), “Failure analysis of bearing in wind turbine generator gearbox”, *Journal of information systems and communication*, Vol. 3, pp. 302 – 309.
- 22 Ragoth Singh, R. and **Nataraj, M.** (August 2012) “Study on Performance of Plunger Pump at Various Crank Angle Using CFD”, *Engineering Science and Technology: An International Journal (ESTIJ)*, ISSN: 2250-3498, Vol. 2, No. 4, pp. 549 – 553.
- 23 Ragoth Singh, R. and **Nataraj, M.** (Aug-Sep 2012) “Analysis and Optimization of Pump Performance Variables using Genetic Algorithm and Taguchi Quality Concept: A Case Study”, *International Journal of Mechanical Engineering applications Research*, ISSN: 2249- 6564, Vol. 03, Issue 03, pp 185 – 189.
- 24 Ragoth Singh R. and **Nataraj, M.** (October 2012) “Optimizing impeller geometry for performance enhancement of a centrifugal Blower using the Taguchi quality concept”, *International Journal of Engineering Science and Technology*, ISSN: 0975-5462, Vol 04, No. 10, pp 4308 – 4314.
- 25 Ragoth Singh, R. and **Nataraj, M.** (November 2012) “Parametric study and optimization of pump impeller by varying the design parameter using computational fluid dynamics”, *International Review of Mechanical Engineering*, Vol. 6, No. 7, pp. 1581 - 1585.
- 26 Shanmugaraja, M., **Nataraj, M.** and Gunasekaran, N. (July - Dec, 2012) “Total Performance Excellence – a model to implement Six Sigma in service organizations”, *Int. J. of Six Sigma and Competitive Advantage*, Vol. 7, No. 2/3/4, pp. 209 – 242.
- 27 Sankar, S. and **Nataraj, M.** (Sept. 2012) ‘Bearing Failure Analysis in Wind Turbine Generator Gearbox’, *National Journal of Technology*, Vol.8, No.3.
- 28 Sunilkumar S Honnungar, **Nataraj, M.**, and Prabhu Raja, V. (February 2013) “Statistical-based Analysis of Thermally Induced Errors in Computer Numerical Control (CNC) Machining Center” *Frontiers in Aerospace Engineering (FAE)* Vol. 2 No. 1, pp. 53-59.
- 29 Baskaran, G. and **Nataraj, M.** (April 2013) "An Experimental Study on Angular Misalignment Detection in Rotor Bearing System Using Welch Power Spectral Density", *International Journal of COMADEM*, Vol. 16, No. 2, pp. 35–41.
- 30 Shanmugaraja, M., **Nataraj, M.** and Gunasekaran, N. (May-June, 2013), ‘Total performance excellence – a model for successful implementation of Six Sigma’, *Int. J. Procurement Management*, Vol. 6, No. 3, pp. 297–328.
- 31 **Nataraj, M.** and Ragoth Singh, R. (July 2013) “Analyzing pump impeller for performance evaluation using RSM and CFD”, *Desalination and Water Treatment*, doi: 10.1080/19443994.2013.818924.
- 32 Ragothsingh, R. and **Nataraj, M.** (August 2013) “Investigation of a Centrifugal Pump Impeller Vane Profile Using CFD”, *International Review on Modelling and Simulations*, Vol. 6, No. 4 pp. 1327 - 1333.
- 33 **M. Nataraj** and S.Neelamegan (August 2014) " Structural and thermal analysis of wheel cup assembly in automobile for efficient braking system", *International Journal of Advanced Engineering Applications*, ISSN:2321-7723 (Online), Vol.7, Issue 4, pp.7-17.

## **PUBLICATIONS IN CONFERENCES**

1. **Nataraj, M**, Arunachalam, V.P. (Mar '2002), "Finding the near optimum combination of Design Parameters for Windtone Horn using Taguchi's Principle", National Conference on Modern trends in Electrical and Instrumentation System (NCEIS-2002), 13<sup>th</sup> – 14<sup>th</sup> March 2002, pp 101-106, Government College of Technology, Coimbatore.
2. **Nataraj, M**, Arunachalam, V.P. (Dec '2003) "Robust Design and Analysis of Helical Gear for Quality Improvement and Functional Reliability Using Taguchi Method ", XIII National Conference of INDIAN SOCIETY OF MECHANICAL ENGINEERS (ISME-2003), Paper No. MD-053, 30<sup>th</sup>-31<sup>st</sup> December 2003, Indian Institute of Technology, Roorkee.
3. **Nataraj, M**, Arunachalam, V.P. (May 2003) "Concurrent Engineering Based Modeling and Synthesizing of Drum Cam Mechanism for Printing Machine", National Conference on World Class Manufacturing (WCM-2003), 7<sup>th</sup>-9<sup>th</sup> May 2003, pp 109-115, Amrita Institute of Science and Technology, Coimbatore.
4. **Nataraj, M**, Arunachalam, V.P. (Dec '2004) "A Novel Design Approach for Quality Improvement of Centrifugal Pump Using Taguchi's Robust Design Concept with a Case Study from M/S V-Guard Industries (P) Limited", 21<sup>st</sup> All India Manufacturing Technology, Design and Research Conference on Innovating - The Future Through Manufacturing, (AIMTDR 14), 20<sup>th</sup>-22<sup>nd</sup> December 2004, pp. 536-547, Vellore Institute of Technology Deemed University.
5. **Nataraj, M**, Arunachalam, V.P. ( Mar' 2004) "Present Scenario of Indian Pump Industry in Fluid Flow and Control: An Overview", National Conference on fluid flow and control (NCFC-2004) sponsored from UGC-DRS Centre for Fluid Dynamics, 16<sup>th</sup>-17<sup>th</sup> March 2004, Bharathiar University, Coimbatore.
6. **Nataraj, M**, Arunachalam, V.P. and Boopathi, B. (Aug '2004) "Performance Analysis of Centrifugal Pump Using CFD Simulation of 3D Flow", All India Conference on Advances in Mechanical Engineering, 20<sup>th</sup>- 21<sup>st</sup> August 2004, pp. B 47 - 49, SVU College of Engineering Tirupati.
7. **Nataraj, M**, Arunachalam, V.P. and Raja Sankar, M. (Aug' 2004) " Investigating the influence of Diesel Engine Design and Operating parameters for low emissions using Taguchi Robust Design Concept ", All India Conference on Advances in Mechanical Engineering, 20<sup>th</sup>-21<sup>st</sup> August 2004, pp. B 50 - 52, SVU College of Engineering Tirupati.
8. **Nataraj, M.**, Arunachalam, V.P., (Jan '2004) "Parametric Optimization of Planar Cam Mechanism for Quality Improvement Using Taguchi Method", Proceedings of the International Conference on Responsive Supply Chain and Organizational Competitiveness – A Technology Watch (RSC 2004), Paper No 6, Coimbatore Institute of Technology, Coimbatore.
9. **Nataraj, M.**, Arunachalam, V.P., (Dec '2005) "Parameter optimization of electroplating process using Taguchi method with a case study ", Proceedings of the International Conference on Advances in Materials, Product Design & Manufacturing Systems (ICMPM 2005), 12<sup>th</sup> – 14<sup>th</sup> December 2005, pp. 725-733, Bannari Amman Institute of Technology, Sathyamangalam.
10. **Nataraj, M.**, Arunachalam, V.P., and Ragoth Singh, R. (May 2005) " Design and development of volute casing for centrifugal water pump: A virtual model analysis", National Conference on Product Development with Mechatronic System for Global Quality (PMGQ 2005), 2<sup>nd</sup>-3<sup>rd</sup> May 2005, pp 1-5, Thiagarajar college of Engineering, Madurai.

11. **Nataraj, M**, Sivakumar, S. (Aug '2007) "Regression model to predict the surface quality using Taguchi parametric design concept", Proceedings on globalization of engineering, design, R&D challenges and opportunities (Engineering Design in 2007), 9 - 11<sup>th</sup> August 2007, Indian Institute of Science, Bangalore.
12. Baskaran, G., **Nataraj, M.**, (Oct '2009), "Condition Monitoring and Fault Diagnosis of Rotor Bearing System- A Review", Proc. of the 7th National Conference on Modern Trends in Power Engineering and Power Plants, 8-9 October 2009, pp. 119-128.
13. Baskaran, G and **Nataraj, M.** (Dec '2009), "Practical Approach for Fault Detection in Rotor Bearing System using FFT Analyzer", Proc. of the International Conference on Advances in Mechanical and Building Sciences in the 3<sup>rd</sup> Millennium, ICAMB 2009, Dec 14-16 (2009), pp. 765-769
14. **Nataraj, M.**, Sankar, S and M.Sundar Raj. (Mar '2009) "An innovative design approach for improving spur gear tooth strength", Proceedings of the National Conference on Recent Innovations in Design and Analysis (RIDA 2009), 18<sup>th</sup> March 2009, pp.17-22, Government College of Engineering, Tirunelveli.
15. **Nataraj, M.**, Sankar, S. (Apr '2009) "Analysis of Helical Gears in Wind Turbine Generator", Proceedings of Second National Conference on Innovative Practices for Sustainable Energy and Waste Management (IPSEWM), 24th & 25th April 2009, pp 137-144, Sri Ramakrishna Institute of Technology, Coimbatore.
16. **Nataraj, M** and Shanmugaraja, M, (Mar '2009) "An innovative approach in product design for quality and customer delight", Proceedings of the National Conference on Recent Innovations in Design and Analysis (RIDA 2009), 18<sup>th</sup> March 2009, pp.11-16, Government College of Engineering, Tirunelveli.
17. Sankar, S and **Nataraj, M.**, (Dec '2009) "Effects of Standard Pressure Angle on Tooth Deflection and Root Stresses of High Precision Helical Gear", International Conference on Precision on Macro, Micro and Nano Engineering (COPEN6), 11-12 December, 2009, pp. I 41- 46, Organized by PSG College of Technology, AMRITA School of Engineering and University of North Carolina at Coimbatore.
18. Sankar, S and **Nataraj, M.**, (Dec '2009) "Increasing Tooth Strength in Helical Gear by Profile Modification- CAD Approach", International Conference on Advances in Mechanical and Building Sciences in the 3<sup>rd</sup> Millennium (ICAMB 2009) December 14-16 2009, pp. 69 VIT University, Vellore.
19. Shanmugaraja, M and **Nataraj, M.**, (July '2009) "An approach for rejuvenating Six Sigma with case study", International Conference on Mechanical and Electronics Engineering [ICMEE- 2009] July 24-27 2009, pp. 249-254, International Association of Computer Science & Information Technology (IACSIT) Singapore, Chennai.
20. Shanmugaraja, M and **Nataraj, M.**, (Dec' 2009) "A conceptual model by integrating TRIZ and Six Sigma for innovative solutions", International Conference on Advances in Mechanical and Building Sciences in the 3<sup>rd</sup> Millennium (ICAMB 2009) December 14-16 2009, pp. 107, VIT University, Vellore,.
21. Shanmugaraja, M., **Nataraj, M.**, (Mar' 2009) "A novel move towards product design for quality and consumer happiness", National Conference on Advances in Mechanical Science (AIMS 2009), March 26<sup>th</sup> 2009, pp. 36, Kumaraguru College of Technology, Coimbatore.



22. Shanmugaraja, M and **Nataraj, M**, (Dec 2009) "Customer care model development using Six Sigma and QFD" in the International Conference on Advances in Mechanical and Building Sciences in the 3<sup>rd</sup> Millennium (ICAMB 2009), December 14-16 2009, pp. 104, VIT University, Vellore.
23. Baskaran, G., **Nataraj, M**, (Aug '2010) "Application of Signal Processing Response Analysis in Rotor Bearing System – A Review", Proc. of the International Conference on System Dynamics and Control, ICSDC 2010, August 19-22 (2010), pp.70
24. Baskaran, G., **Nataraj, M**, (Aug '2010) "Dynamic Analysis of Angular misalignment and Looseness in a Rotor Bearing System Using Discrete Wavelet Transform Tool", Proc. of the International Conference on System Dynamics and Control, ICSDC 2010, August 19-22(2010), pp. 373-378
25. Sankar, S and **Nataraj, M**, (Aug '2010) "A Dynamic Analysis of Cylindrical Roller Bearing in Wind Turbine Generator: A Case Study" International Conference on System Dynamics and Control (ICSDC-2010), 19<sup>th</sup> to 22<sup>nd</sup> August 2010, Manipal Institute of Technology, Manipal, Karnataka.
26. Sankar, S and **Nataraj, M**, (May '2010) "An Approach to Increase Spur Gear Tooth Strength by Profile Modification", International Conference on Frontiers in Mechanical Engineering (FIME 2010), 20 -22 May, 2010, pp.83, National Institute of Technology, Mangalore, Karnataka.
27. Sankar, S and **Nataraj, M**, (Apr '2010) "Analysis of Shear Pin in Wind Turbine Generator: A case study", International Conference on Recent Advances in Mechanical Engineering (ICRAME2010), 8-9 April 2010, Noorul Islam University, Kanyakumari, INDIA in collaboration with University of Sheffield, London, U.K
28. Sankar, S and **Nataraj, M**, (Aug '2010) "Bearing Fault Diagnosis of a Gearbox Used in Wind Turbine Generator by Vibration Condition Monitoring Technique", International Conference on System Dynamics and Control (ICSDC-2010), 19<sup>th</sup> – 22<sup>nd</sup> August 2010, Manipal Institute of Technology, Manipal, Karnataka.
29. Sankar, S and **Nataraj, M**, (May '2010) "Failure Investigation of an Input Hollow Shaft in Wind Turbine Generator Gearbox", International Conference on Frontiers in Mechanical Engineering (FIME 2010) May 20-22 2010, pp. 82, National Institute of Technology, Mangalore, Karnataka.
30. Neelamegan, S and **Nataraj, M**, (Sept '2012) " Overview of Two Stroke Free Piston SI Engine Technology for Hybrid Electric Vehicles" 28<sup>th</sup> National Convention of Mechanical Engineers and National Seminar on Emerging Technologies in Product Development for Safe and Sustainable Mobility, September 3<sup>rd</sup> -5<sup>th</sup>, 2012, pp.152, PSG College of Technology, Coimbatore.
31. **Nataraj, M** and Neelamegan, S. (Apr '2013) "Scavenging Analysis of Single Cylinder Two Stroke Free Piston SI Engine - CFD Study" 2<sup>nd</sup> Conference on Advances and Challenges in Mechanical Engineering, April 26, 2013, pp.64, Erode Sengunthar Engineering College.
32. Neelamegan, S and **Nataraj, M**, Rajasekar, R. (Mar '2014) "A Computational Study on Free Piston Engine Combustion under Various Compression Ratios" 5<sup>th</sup> National Conference on Emerging Trends in Mechanical Engineering, 7<sup>th</sup> March 2014, SNS College of Engineering & Technology, Coimbatore.

33. Sasikumar, T, **Nataraj, M** and Ramamoorthy, M. (Apr '2014) "Influence of Cutting Parameters on Surface Roughness and tool wear in hard turning of Inconel 718" National Conference on Advances in Design and Manufacturing of Mechanical Systems (ADAMMS 2014), 3<sup>rd</sup>-4<sup>th</sup>, April 2014, pp.7, Sri Krishna College of Engineering & Technology, Coimbatore.
34. **Nataraj, M.**, Ramamoorthy, M. Arunkarthik, T., Pradeepkumar, M. (June '2014) "Parametric optimization of high speed turning of Inconel 718 and modeling of surface roughness using DoE approach" Advances in Mechanical Engineering, Proceedings of the International Mechanical Engineering Congress (IMEC), 13<sup>th</sup> -15<sup>th</sup> June 2014, pp. 274-277, National Institute of Technology, Trichy.

### **PhD Produced**

1. **Topic: INVESTIGATIONS ON BIO-DIESEL AS A BLEND WITH DIESEL FOR CI ENGINE**

**Candidate: ANTONISWAMY, R (Reg. No. 2002249715)**

**University: ANNA UNIVERSITY: CHENNAI**

**Year of registration: 2002**

**Category: Part Time**

**Institution: Park College of Engineering & Technology, Coimbatore**

**PhD Degree Awarded in March 2010**

2. **Topic: QUALITY IMPROVEMENT THROUGH THE INTEGRATION OF SIX SIGMA, QFD AND TRIZ IN MANUFACTURING AND SERVICE ORGANISATIONS**

**Candidate: SHANMUGARAJA, M. (Reg. No. 2007269132)**

**University: ANNA UNIVERSITY: CHENNAI**

**Year of registration: 2007**

**Category: Full Time**

**Institution: Government College of Technology, Coimbatore**

**PhD Degree Awarded in January 2013**

3. **Topic: FAULT DIAGNOSIS AND FAILURE ANALYSIS OF WIND TURBINE COMPONENTS**

**Candidate: SANKAR, S. (Reg. No. 7081033137)**

**University: ANNA UNIVERSITY: CHENNAI**

**Year of registration: 2008**

**Category: Part Time**

**Institution: Government College of Technology, Coimbatore**

**PhD Degree Awarded in November 2013**

### Summer and Winter School attended

Sl. No.	Name	Place	Duration of Course	
			From	To
1	Computer Aided Metal Casting	Mechanical Department, G.C.T., Coimbatore.	05.02.94	18.02.94
2	Machine Tool Drives and Controls	Production & Mechanical Engineering Department, PSG College of Tech., Coimbatore.	17.11.96	30.11.96
3	Design and Computer Simulation of Pneumatic/Electro-Pneumatic Systems for Mechanization	Production & Mechanical Engineering Department, PSG College of Tech., Coimbatore.	11.05.97	24.05.97
4	Workshop on Product Design Technology	Mechanical Engg Department Sri Krishna College of Engg. & Tech., Coimbatore.	02.02. 02	
5	Cleaner Manufacturing in Industries	Production Department, Amrita Institute of Tech. Coimbatore.	25.10.04	07.11.04
6	National Seminar on Strategies for World Class Manufacturing Sponsored by TEQUIP	Mechanical Engg Department, Government College of Technology, Coimbatore	28.04.06	29.04.06
7	Faculty Development Programme on Entrepreneurship	PSG-STEP in association with DSTEP	13.11.06	25.11.06
8	Strategies for World Class Manufacturing	Government College of Technology, Coimbatore	28.04. 06	29.04. 06
9	Reverse Engineering Applications	Government College of Technology, Coimbatore	29.09.07	30.09.07
10	Globalization of Engineering, Design, R & D Challenges and Opportunities.	II Sc. Bangalore	09.08.07	11.08.07
11	Intellectual Property Rights and Indian Patent System in India	NITTTR, Chandigarh	23.07.07	27.07.07
12	Intellectual Property Rights	ANNA University, Chennai	26.09.07	28.09.07
13	Indo German Workshop on Microsystems for Automotive and Machine Tool Industries	PSG College of Technology Coimbatore	13.02.08	
14	Recent advancements in Virtual Instrumentation & Embedded System Design	Government College of Technology, Coimbatore	16.06.10	22.06.10

### TRAINING PROGRAMME ATTENDED

Sl. No.	Name	Place	Duration of Course	
			From	To
1	AICTE sponsored winter school on "Computer Aided Metal Casting"	Mechanical Engg. Dept, Government College of Technology, Coimbatore	05.02.94	18.02.94

2	AICTE sponsored winter school on "Machine Tool Drives and Controls"	Production & Mechanical Engg. Department, PSG College of Tech., Coimbatore.	17.11.96	30.11.96
3	AICTE sponsored summer school on "Design and Computer Simulation of Pneumatic/Electro-Pneumatic Systems for Mechanization"	Production & Mechanical Engg. Department, PSG College of Tech., Coimbatore.	11.05.97	24.05.97
4	One day workshop on "Product Design Technology"	Mechanical Engg Dept., Sri Krishna College of Engg. & Tech., Coimbatore.	02.02. 02	
5	AICTE sponsored summer school on "Cleaner Manufacturing in Industries"	Production Department, Amrita Institute of Tech. Coimbatore.	25.10.04	07.11.04
6	TEQIP Phase I sponsored FDP on "National Seminar on Strategies for World Class Manufacturing"	Mechanical Engg Dept, Government College of Technology, Coimbatore.	28.04.06	29.04.06
7	AICTE Sponsored FDP on "Entrepreneurship"	PSG-STEP in association with DSTEP	13.11.06	25.11.06
8	TEQIP Phase I sponsored FDP on "Strategies for World Class Manufacturing"	Government College of Technology, Coimbatore.	28.04. 06	29.04.06
9	TEQIP Phase I sponsored FDP on "Reverse Engineering Applications"	Government College of Technology, Coimbatore .	29.09.07	30.09.07
10	Globalization of Engineering, Design, R & D Challenges and Opportunities.	Indian Institute of Science, Bangalore.	09.08.07	11.08.07
11	TEQIP Phase I sponsored Training Programe on "Intellectual Property Rights and Indian Patent System in India"	National Institute of Technical Teachers Training and Research (NITTTR), Chandigarh.	23.07.07	27.07.07
12	TEQIP Phase I sponsored FDP on "Intellectual Property Rights"	ANNA University, Chennai.	26.09.07	28.09.07
13	Indo German Workshop on Microsystems for Automotive and Machine Tool Industries	PSG College of Technology Coimbatore.	13.02.08	
14	TEQIP sponsored FDP on "Recent advancements in Virtual Instrumentation & Embedded System Design"	Government College of Technology, Coimbatore.	16.06.10	22.06.10

15	TEQIP Phase II sponsored FDP on "Vibration and Tribology related issues in industrial Scenario"	Government College of Technology, Coimbatore.	02.10.2012	08.10.12
16	One Workshop on NPTEL	Government College of Technology, Coimbatore.	09.04.13	
17	TEQIP Phase II sponsored FDP on "Current Research Trends in Nanoscience & Technology, and Application in Solar Cells"	Government College of Technology, Coimbatore.	15.05.13	21.05.13
18	TEQIP Phase II sponsored FDP on "Industry – Academia Collaboration Workshop"	Central Leather Research Institute (CLRI), Chennai.	24.05.13	25.05.13
19	TEQIP Phase II sponsored FDP on "Management Capacity Enhancement"	IIM Indore & Coimbatore Institute of Technology, Coimbatore.	27.08.13	31.05.13
20	AICTE sponsored STC on "Product Design and Engineering"	Indian Institute of Technology Madras, Chennai.	21.10.13	25.10.13
21	Indian Engineering Congress "Innovative Teaching, Research Learning & Accreditation Practices"	Hotel Leela Palace, Chennai, Organized Institution of Engineers (India) in association with ESCI and Anna University, Chennai and	20.12.13	22.12.13
22	TEQIP Phase II sponsored FDP on "Management Capacity Building"	Indian Institute of Technology Madras, Chennai.	29.01.2014	31.01.2014
23	ICTACT Bridge 2014 -Technology & Entrepreneurship Submit	ICT Academy of Tamil Nadu (ICTAT) in association with NASSCOM, Coimbatore.	25.06.2014	

- Dr. M.NATARAJ -