

Bio – data of

**Dr. BALU NAIK BANOTH**

Professor of Mechanical Engineering & Director, UGC-HRDC

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Name : Dr. Balu Naik Banoth  
Father Name : Late Sri Lachiram Banoth  
Date of Birth : 02-04-1969  
Native District : Maripeda (Mdl), Warangal (Dist), Telangana State.  
Postal Address : MIG -357, Balaji Nagar Colony, Kukatpally,  
Hyderabad-500072

**1. Academic Qualifications:**

- B.Tech.(Mech. Engg.) from J.N.T. University, Hyderabad in the year 1992
- M.Tech (Prod. Engg.) from J.N.T. University, Hyderabad in the year 1999
- Ph.D. (Energy Systems) from J.N.T. University, Hyderabad in the year 2006

**2. Details of Experience : Total Academic & Administrative Experience - 23 Years & 8 months**

- 1992 to 2003 : Assistant Professor in Mechanical Engineering at J.N.T.U.H College of Engineering, Hyderabad.
- 2003 to 31.12.2010 : Associate Professor in Mechanical Engineering at J.N.T.U. H College of Engineering, Hyderabad.
- 01.01.2011 to 06.12.2012 : Professor in Mechanical Engineering at J.N.T.U College of Engineering, Hyderabad.
- 07.12.2012 to 27.07.2014 : Principal at J.N.T.U.H College of Engineering, Manthani, Karimnagar (Dist.)
- 28.07.2014 to 08-02-2015 : Professor in Mechanical Engineering at J.N.T.U.H College of Engineering, Hyderabad.
- 09-02-2015 till to date : Director, UGC-Human Resource Development Centre, JNTUH, Hyderabad

**3. Other Administrative Responsibilities held:**

- 1996 to 2001 : Deputy Warden, Boys Hostel, J.N.T.U.H. Campus, Hyderabad
- 2001 to 2003 : Hostel Manger, Boys & Girls Hostel , J.N.T.U.H Campus, Hyderabad
- 2003 to 2006 : Co-ordinator, NSS, J.N.T.U.H. Campus, Hyderabad.

- 2007 to 15.10.2008 : Deputy Director, UGC- Academic Staff College, J.N.T.U.H, Hyderabad.
- 2007 to 15.10.2008 : Officer-in-charge for University Examinations (UGC- Academic Staff College, Nodal Center-2)
- 2008 to 2009 : Project Officer(I/c) for National technical Manpower Information System (NTMIS), J.N.T.U.H, Hyderabad.
- 2008 to 2009 : Head Center for Nano - Science & Technology
- 2008 to 2010 : Officer –in-charge for University Examination (Nodal Centre – 3)
- 2010 and 2011 : Coordinator –EAMCET.
- 2010 to 2012 : Deputy Director, UGC-ASC,JNTUH
- 2012 to 27.07.2014 : Principal, JNTUH College of Engineering Manthani, Karimangar (Dist.)
- 09-02-2015 to till date : Director, UGC-Human Resource Development Centre, JNTUH, Hyderabad

#### 4. Research Work:

|                  |   |             |
|------------------|---|-------------|
| B.Tech Projects  | : | 64 Students |
| M.Tech. Projects | : | 34 Students |
| Ph.D.Scholars    | : | 16 Students |
| Ph.D Submitted   | : | 03          |
| Ph.D Awarded     | : | 09          |

#### 5. Research Publications : (Details in Annexure-1)

|   |   |     |
|---|---|-----|
| ➤ Total National and International Publications | : | 139 |
| ➤ Papers published in International Journals    | : | 43  |
| ➤ Papers published in National Journals         | : | 16  |
| ➤ Papers presented in International Conference  | : | 46  |
| ➤ Papers presented in National Conference       | : | 34  |

#### 6. Courses Coordinated:

1. UGC sponsored four week “43<sup>rd</sup> Orientation Course” held from 31-08-2015 to 29-09-2015.
2. UGC sponsored three week Summer School on “Role of Communication Skills in Effective Teaching” held from 08-06-2015 to 27-06-2015.
3. UGC sponsored One Week Short Term Course on “e-Learning and ICT for Teaching Learning” held from 02-11-2015 to 07-11-2015.

4. UGC sponsored four week “44<sup>th</sup> Orientation Course” held from 08-02-2016 to 05-03-2016.
5. UGC sponsored three week Summer School on “Strategies for Research Oriented Teaching” held from 06-06-2016 to 25-06-2016.
6. UGC sponsored four week “45<sup>th</sup> Orientation Course” held from 11-07-2016 to 08-08-2016.
7. UGC sponsored one week Short Term Course on “ICT in Teaching & Research” held from 03-10-2016 to 08-10-2016.
8. UGC sponsored four week “46<sup>th</sup> Orientation Course” held from 06-02-2017 to 04-03-2017.

#### **7. Foreign Universities Visited:**

- Brazil University, Brazil.
- U.A.E University, U.A.E
- Massachusetts Institute of Tech.(M.I.T), Harvard University, Boston University, Massachusetts, Boston, U.S.A

#### **8. Membership in Professional Bodies:**

- Life Member in Indian Society for Technical Education: LM-30791.
- FIE, F-1213330.
- Life Member in ASME.
- Life Member of CSI Communications.
- Life Member in Solar Energy Society of India (SESI): LM/2205/2016

#### **9. Personal Distinctions:**

- 2001 to 2003 : General Secretary of J.N.T.U. College of Engineering, Teachers Association, Hyderabad
- 2003 to 2005 : Vice-President of J.N.T.U. College of Engineering Teachers Association, Hyderabad
- 2011 to 2014 : Vice-President of Telangana Universities Tribal Teachers Association (TUTTA), Hyderabad
- 2014 to date : President of Telangana Universities Tribal Teachers Association (TUTTA), Hyderabad

#### **10. Nominations to Governing Bodies:**

As Governing Body Member of Self Financed Engineering Colleges, such as

- Indur Institute of Engineering & Technology, Siddipet, Medak Dist.,
- Vaagdevi College of Engineering , Bollikunt (P), Warngal Dist.,

- Viswa Bharati College of Engineering & Technology, Nizampet, Hyderabad
- Narasimha Reddy Engineering College, Dundigal, R.R. Dist.,
- Vidhya Jyothi College of Engineering, Aziznagar, Ranga Reddy Dist.,
- Anurag College of Engineering, Kodad (M), Nalgonda Dist.

#### **11. Invited Lectures:**

- Ramappa Engineering College, Warangal Dist.
- Institute of Aeronautical Engineering, R.R. Dist.
- Vaagdevi College of Engineering, Warangal Dist
- Vivekananda Institution of Technology, Karimnagar Dist.
- CMR College of Engineering & Technology, Kandlakoya
- Ellenki College of Engineering & Technology, Patancheru
- G. Narayanamma institute of Technology & Science, Shaikpet, Hyderabad.

**(Dr. BALU NAIK BANOTH)**

## **Annexure-1**

### **11. Detailed List of Research Publications:**

1. A Solution for Efficient Energy Conservation and Pollution Reduction: Fuel Cell Technology, (Proceedings of National Conference on State of the Art of Technologies in Mechanical Engineering (NCSAME-2004) held on 29<sup>th</sup> and 30<sup>th</sup> June 2004 at J.N.T. University Hyderabad, PP: 469-476)
2. Performance Analysis of Two –Stage CONWIP Serial Productions System Under Saturated Condition (Proceedings of National Conference on State of the Art of Technologies in Mechanical Engineering (NCSAME-2004) held on 29<sup>th</sup> and 30<sup>th</sup> June 2004 at J.N.T. University Hyderabad PP: 117-122)
3. Bio Gas Energy, Proceedings of National Conference on Computer Applications in Mechanical Engineering (CAME-2005 held on 16<sup>th</sup> December 2005 at J.N.T. University Anantapur PP: 279-280)
4. The Prospectus of Solar Energy in Rural Areas, Proceedings of National Conference on Computer Applications in Mechanical Engineering (CAME-2005 held on 16<sup>th</sup> December 2005 at J.N.T. University Anantapur PP: 277-278)
5. Energy Audit Approach in Compressed Air-System (Proceedings of National Conference on Computer Applications in Mechanical Engineering (CAME-2005) held on 16<sup>th</sup> December 2005 at J.N.T. University Anantapur PP: 281-284)
6. On the Commercialization Aspects of Solar Hot Water Systems in India. Proceedings of (National Conference on State of the Art of Technologies in Mechanical Engineering (NCSANE-2006) held on 05<sup>th</sup> and 6<sup>th</sup> May 2006 at J.N.T. University Hyderabad)
7. Finite Element Modeling of some Fracture Mechanisms (Proceedings of International Conference of recent advances in Material proceeding Technology (RAMPT-2005) held on 23<sup>rd</sup> to 25<sup>th</sup> February 2005 at Koril Pathi, Tamil Nadu PP: 265-270)
8. Thermal Design and Analysis of Avionics (Proceeding of International Conference on 01<sup>st</sup> Asian Symposium on Computational Heat Transfer and Fluid Flow held on 18<sup>th</sup> to 21<sup>st</sup> October 2007 at Xian, China)
9. Phenomenological Three Zone Model Prediction for Fuel Spray Penetration and air Entertainment of Four Stroke C.I. Engine (Proceedings of 19<sup>th</sup> International Congress of Mechanical Engineering (COBEM-2007) held on 5<sup>th</sup> to 9<sup>th</sup> November 2007 at Brasilia, Brazil.

10. Review on Bio-Diesel Exhaust at Emission Basic, Standard & Control Measures (Proceedings of International Conference & XX National Conference on I.C Engine & Combustion (ICONICE-2007) held on 06<sup>th</sup> to 09<sup>th</sup> December 2007 at J.N.T University Hyderabad)
11. Finite Element Modeling and Analysis of Friction Stir Welding (Proceeding of International Conference of Recent Advances in Materials 2007 at J.N.T. University Hyderabad)
12. Applications of Design of Experiments on Direct and Indirect Resistance Spot Welding for Low Carbon Steel Sheet Fabrication (Publications of International Journal of Manufacturing Science & Technology issued on 02<sup>nd</sup> June 2008 PP:11-28)
13. Effect of Typical Process Parameters of Electro Discharge Sawing using Taguchi Method, (Proceedings of International Congress of 2008, ASME International Mechanical Engineering Congress and Expositions (IMECE-2008), held on 31<sup>st</sup> October to 06<sup>th</sup> November 2008)
14. Design Approach for Automotive spot welding (Publication of International Journal of Manufacturing Science & Technology issued on December 2008)
15. Optimization of cutting parameters to surface roughness of mild steel an experimental study (National Conference in August 2009)
16. Heat balance studies in Resistance Spot welds (International Journal of Highly reliable Electronics Systems published by International Science press Volume-1 Number-2 July-December 2008 PP: 59-80)
17. Evaluation of Tension-Shear stress for single and multi spot welds: Direct and indirect Techniques, (International Journal of Manufacturing Science and Technology, Vol. 3(1) June 2009, PP: 59-80)
18. Development design consideration of warm forming of Aluminum alloy (Presented at National Mechanical Conference, August 2009 at JNTUCE, Hyderabad)
19. P12-Study and analysis of process parameters in granite machining (National Conference on ACME March 25-26, 2010)
20. P-27 An analysis of scheduling rules in hypothetical job shop production system (National conference on Advances and Challenges in Mechanical Engineering (ACME-2010) March 25-26, 2010, Thudpathi, Erode, TN.
21. D04-Finite element simulation studies on the effect of interface friction in drawing AISI304 stainless steel and AL1100 materials at Constant Blank Holding Force (National Conference on ACME Erode Sengunthar Engineering College, Erode, Tamilnadu, March 25-26, 2010)

22. "Forecast of Price inflation for Electronic Systems" (International Conference on Global Interdependence and Decision Sciences (ICGIDS) at Administrative Staff College of India (ASCI), Hyderabad, 28-30 December 2009, Proceedings: ISBN 0230-32852-0, PP: 151 to 155)
23. R10ME045: Recent advancement in EDM Micro drilling process: A review (National Conference on Trends in Mechanical Engineering (TIME 2010) dated 25<sup>th</sup> and 26<sup>th</sup> February 2010)
24. P12-Study and Analysis of Process Parameters in Granite Machining (National Conference on ACME Erode Sengunthar Engineering College, Erode, Tamilnadu dated 25<sup>th</sup>-26<sup>th</sup> March 2010)
25. P27-An Analysis of Scheduling Rules in a Hypnotically job shop production system (National Conference on ACME Erode Sengunthar Engineering College, Erode, Tamilnadu dated 25<sup>th</sup>-26<sup>th</sup> March 2010)
26. D04-Finite Element simulations studies on the Effect of interface friction in drawing AISI 304 stainless steel and AI 1100 Materials at constant holding Force (National Conference on ACME Erode Sengunthar Engineering College, Erode, Tamilnadu dated 25<sup>th</sup> -26<sup>th</sup> March 2010)
27. Development of indirect resistance spot welding for automotive applications (held at Puducherry organizes by Indian Institute of Welding theme National weld MEET 2010 dated. August 6-9, 2010)
28. Development of Friction stir welding of Aluminum to Copper dissimilar materials for electrical industries experimental design result (held at Puducherry organized by Indian Institute of welding theme National weld meet 2010 dated August 6-9, 2010)
29. Performance and emission characteristics of adisel engine with kanuga and cotton seed oil As alternate flues (Publication of International Journal of Mechanics and Thermodynamics, Vol. 1, Number 1(2010) PP: 1-11)
30. Prediction of Surface Roughness in Machining of Homogenized SICP Reinforced Aluminum Metal Matrix Composites Using Multiple Regression Analysis (Publication of International Journal of Manufacturing Science and Technology, Vol. 4, Number 2, December 2010, PP: 81-91)
31. Effect of Process Parameters on Mechanical Properties of Friction Stir Welding Aluminum/Copper Lap Joint (Publication of International Journal of Manufacturing Science and Technology, Vol. 4, Number 2, December 2010, PP: 149-161)

32. Performance and emission characteristics a diesel engine with kanuga and cotton seed oil as alternate fuels (Publications of Technology Spectrum, Journal of Jawaharlal Nehru Technological University, Hyderabad, Vol. 4, No. 3, November 2010)
33. Reengineering treatment in Block Replacement Decision Using Higher Order Markow Chains (IUP Journal of Operations Management (ISSN 0972-6888) Vol. X No.4, 2011, PP: 1-17(Article in press)
34. Block Replacement Modeling for Electronics Systems with Higher Order Markov Chains (UP Journal of Computational mathematics (ISSN 0974-6544), Vol. IV, No.2, June 2011, PP: 49-63)
35. First Order Markov Chain Modeling for Replacement of Computers (International Journal of applied Engineering Research ISSN 0973-4562, Vol.7, 2011, PP: 861-871)
36. Deployment of Mathematical Model for Group Replacement of Electronic System Using Markov Chains (International Journal Technology Today (ISSN 2180-0987), Vol. III, Issue 1, January 2011, PP: 175-182)
37. Development of Mathematical Model for Block Replacement of Electronics Systems with Second Order Markov Chain Indian of Mathematics an Mathematical Science (ISSN 0973-3329), Vol.7, June 2011, PP: 1-11)
38. Forecast of Inflation for Electronic Systems (International Conference on Global Interdependence and Decision Sciences (ICGIDS) at Administrative Staff College of Indian (ASCI), Hyderabad, 28-30 December 2009, ISBN 0230-32852-0, PP: 151-155)
39. Development of Indirect resistance spot welding for automotive application, (Publication International Journal of Advanced Materials Manufacturing & Characterization. Vol. 1, Issue 2, October 2012, PP: 199)
40. Development of a composite materials from agro waste for wear resistance application (Journal of Chemistry and Chemical Engineering, ISSN: 1934-7375mUSA (Accepted for publication in International Journals, 2014).
41. Ingredients Compositions formulations and development of anew metal matrix composite for friction lining applications using MINITAB16 (International Journal of Engineering and Technology, Publishers GSTF, Singapore, Volume1, Number 1, PP: 99-104, ISSN: 2251-3701, June 2012)

42. Effect of grit size and abrasive type on surface of machined AL-SiC MMC (International Journal of Manufacturing Engineering SMF Publications, Volume7, Issue 2. PP: 67-71, ISSN: 0973-6867, June 2012)
43. Development of bio-degradable friction material for brake pads form Palm Kernel Sheel (International Journal of Mechanical Engineering and Materials Science Vol. 4, Number 1, PP: 1-6, ISSN:0974-584X, June 2011)
44. Development of a composite from agro waste for wear resistance applications (15<sup>th</sup> International Conference on Advanced in Materials & Proceeding Technologies (AMOT 2012), University of Wollongong, Australia, PNAM-12007)
45. Ingredients Compositions Formulations and development of a new metal matrix composite for friction Lining applications using MINITAB16 (Annual International Conference on Materials Science, Metal & manufacturing (M3 2011), Michigan Technological University, December 12-13, 2011 SINGAPORE, PP: 7-13, ISSN:2251-1857)
46. Comparative evaluation of surface finish (Ra) for AL-SiC metal Matrix Composite machining with diamond grinding wheel using multiple regression analysis and ANN(MATLAB) (5<sup>th</sup> International Conference on Advance in Mechanical Engineering (ICAME-2011) June 2011, S.V. National Institute of Technology, Surat, India. PP: 586-591)
47. Performance of different grinding wheels machining of AL-SiC Metal matrix Composite (International Conference on Futuristic Trends in Materials & Energy Systems FTME 2011, 29-30 December 2011, V.R Siddhartha Engineering College, Vijayawada-520 007, Andhra Pradesh, INDIA.
48. Effect of grit size and abrasive type on surface finish of machined AL-SiC MMC (Second National Conference on Recent Advance In Manufacturing September 15-17,2011, S.V.NIT, Surat, INDIA, PP:1-6)
49. Optimization of process parameters for machining of AL-SiC MMC using Taguchi design (National Conference on Advance in Mechanical Engineering (AMIM 2012), October 11-12, VCE, Hyderabad, INDIA, PP: 228-233)
50. Some aspects of formability of ASS 304 under conditions (Journal of Manufacturing Engineering, December 2013, Vol.8, PP: 221-224)

51. Study of Formability and Thickness Distribution in Warm Forming of ASS 304 (4<sup>th</sup> International & 25<sup>th</sup> AIMTDR Conference 2012)
52. Study of Micro hardness of Deep Drawn Cups for Austenitic Stainless steel-304 under warm Conditions (International Conference, PP: 16 and participated in the HNS-2012 conference from 27<sup>th</sup> to 29<sup>th</sup> September, 2012 at GRT Grand, Chennai.
53. Experimental Investigation of Punch load of ASS 304 at various Temperatures (International Conference on Materials Processing and characterization March 8-10, 2012, Hyderabad)
54. Micro hardness Studies of Austenitic Stainless Steel-304 (International Conference on Materials Processing and Characterization March 8-10, 2012, Hyderabad)
55. Development and Design Considerations of Warm forming of Aluminum-alloy (National Conference on State of the Art of Technologies in Mechanical Engineering (NCSAME-2009) Aug. 20-21, 2009 at JNTUHCEH, Hyderabad.
56. Characterization of Friction Stir Welded Joint (AZ31) by TAGUCHI (National Conference on Innovation in Mechanical Engineering, 21<sup>st</sup> March 2014)
57. Friction Stir Welding of AZ31 MG Alloy (International Conference on Engineering Trends in Mechanical Engineering, 24<sup>th</sup> - 25<sup>th</sup> February 2014)
58. Formability Studies of ASS 304 and evaluations of friction for AI in deep drawing setup at elevated temperature using LS-DYNA (Journal of King Saud University – Engineering Sciences (2014) 26, 21-31)
59. Simulation and experimental investigation of AA 304 at Various temperatures in warm deep drawing forming Process (International Conference on Smart Systems (ICSS-2013), 07-08 October 2012, Hyderabad, India)
60. Experimental Analysis of Z-Pinned Carbon Fiber Composites (International Conference on Advanced Materials and Manufacturing Technologies (AMMT) 978-93-82163-46-6, 2011)
61. Experimental Investigations of process parameters of electro discharge sawing, a modified EDM using TAGUCHI approach. (International journal of emerging technology and advanced engineering, Nov-2012)

62. Evaluation of Electro discharge sawing, A modified EDM process (National conference on trends and advances in Mechanical Engineering, Oct. 2012)
63. Morphology of machined surfaces from Electro discharge sawing and sinking EDM (International Conference cum Journal-World Academy of Science, Engineering and Technology, 2013)
64. Study of Investigations on process parameters of Electro discharge sawing using Taguchi approach (International Journal of Engineering Research and Technology, July 2013)
65. Experimental Design and Analysis of Relative effects of variable factors on electro discharge sawing process using Taguchi approach (International Conference cum journal applied Mechanics and Materials, April-2013)
66. Machining characteristics of H.S.S. and Titanium using electro discharge sawing and wire-electro discharge machining (International conference cum journal on materials processing and characterization, 2014)
67. Experimental Investigations of HSS Mz alloy on wire electric discharge machining process using Taguchi methodology (International journal of Engineering Science and Innovative Technology, May-2014)
68. Some Metallurgical Studies of Austenitic Stainless steel 304 under warm deep drawing (Journal on Iron and Steel Research, International, 2014)
69. Parametric Optimization of Tool Wear Rate in Micro Drilling of Maraging Steel 300 Alloy (Reason – A Technical Journal, ISSN 2277-1654, Volume XIII.2014, Page No. 33-40)
70. Alcohol as Alternative Fuels for Diesel Engines : A Review (International Journal for Research in Applied Science & Engineering Technology, ISSN No: 2321-9653, Volume 3, Issue VI, June 2015)
71. Laser Ignition System for International Combustion Engine (International Journal of Engineering and Computer Science, ISSN No. 2319-7242, Volume 4 Issue 4 April 2015, page No. 11407-11412)
72. Laser Ignition System for Internal Combustion Engine (ISBN: 978-15-086565-24, International Conference on Emerging Trends in Engineering Research” , held at Hotel NRS Sakithyan, Chennai on 22<sup>nd</sup> March 2015)
73. Alcohols as alternative fuels to internal combustion diesel engine (All Indian Conference on Sustainable Product Development in Mechanical & Mechatronics Engineering”,

April 24<sup>th</sup>–25<sup>th</sup> 2015, Chhatrapati Shivaji Institute of Technology, Shivaji Nagar, Durg (C.G.), India, ISBN: 978-81-923288-3-6)

74. An Entrepreneurship Opportunity on Bio-Diesel as an alternative Green Fuel to Internal Combustion Diesel Engine (2<sup>nd</sup> International Conference on Next Generation Education for Entrepreneurial Engineers on 9<sup>th</sup> – 10<sup>th</sup> March 2015, ISBN: 978-93-84743-53-6)
75. Biodiesel: Production, Properties, Applications and its Implementation in India (National Conference on Recent Trends in Science & Technology (NCRTST 2015), JNTUH College of Engineering, Nachupally (Kondagattu), Karimnagar, T.S. 25-26 February, 2015, pp. 78-83, ISBN: 978-93-82570-52-3)
76. Performance and emission analysis of waste vegetable oil and it's blends with diesel and additive (International Journal of Engineering Research and applications ISSN: 2248-9622, Vol.3, Issue 6, Nov-Dec 2013, pp. 473-478)
77. Experimental Analysis of Single cylinder diesel engine fueled with methyl ester mustard oil blended to diesel additive (International Symposium on "Recent advances in integrated Energy and energy Conservation (RAIEEC-2012), Dec. 19-20, 2012)
78. Effect of Process Parameters on Tool wear rate in Micro Drilling of Maraging Steel 300 Alloy (4<sup>th</sup> International & 25<sup>th</sup> All India Manufacturing Technology, Design and Research Conference (AIMTDR 2012) December 14<sup>th</sup> -16<sup>th</sup> 2012, Jadavpur University, Kolkata, India.
79. Investigating the Effect of Machining Parameters on Micro drilling of Titanium Grade 19 Alloy (ASME 2013 International Mechanical Engineering Congress and Exposition, Volume 2B: Advanced Manufacturing, San Diego, California, USA, November 15-21, 2013 ISBN: 978-0-7918-5619-2)
80. Realization of surface morphology and process parameter optimization in Micro EDM hole drilling of maraging steel 300 alloy (ASME 2015 International Mechanical Engineering Congress & Exposition IMECE2015, November 13-19, 2015 Houston, Texas, USA)
81. Parametric Optimization of tool wear rate in micro drilling of maraging steel 200 alloy (Reason – A Technical Journal ISSN 2277-1654, Volume XIII, 2014)
82. Evaluation of electrode wear rate in micro drilling of titanium 19 grade alloy using Taguchi Method (International Conference on Materials Processing and Characterization March 8-10, 2012, Hyderabad)

83. Recent Advances in Micro – EDM (National Conference on “Recent Advances in Manufacturing Engineering & Technology” January 10-11, 2011)
84. R10ME045: Review of EDM Micro Drilling Process (National Conference on Trends in Mechanical Engineering (TIME-2010) 25<sup>th</sup> – 26<sup>th</sup> February, 2010)
85. Parametric Study of Microwave horn antenna for optimum surface finish and improving electrical performance (Global Journal of Mechanical Engineering & Computer Sciences, 2011: 1(4))
86. Investigation of physiochemical properties of Fly Ash from Kothagudem Thermal Power Station (International Conference on “Environment and Energy – 2014, ISBN: 978-93-81212-96-7)
87. Resistance Spot Weld Quality Characteristics Improvement by Taguchi Method (4<sup>th</sup> International Conference on “Materials Processing and Characterization” Proceedings 2 (2015) 2595 - 2604)
88. Formability analysis of austenitic stainless steel – 304 under warm conditions (AIP Conference Proceedings 1567, 378-381 (2013), doi:10.1063/1.4849994)
89. Experimental Study on friction stir welding of Aluminium to copper dissimilar metals lap joint (4<sup>th</sup> National conference on “Advances in Mechanical Engineering (AIM 2013), Vasavi College of Engineering, AP., November 7-8, pp. 297-300)
90. Finite Element Modeling and analysis of Rotational tool used for friction stir welding of Al/Cu Bimetallic Lap Joints (National Conference Recent Advancements in Engineering and Management, April 10-13, 2012 (NCRAEM'12))
91. Mechanical Behavior of Friction Stir Welding of Aluminium to Copper Dissimilar Metals Lap Joint (National Conference on Advances in Mechanical Engineering [AIM-2010] 18<sup>th</sup> – 19<sup>th</sup> Nov. 2010, at Vasavi College of Engineering, Ibrahimbagh, Hyderabad)
92. Finite Element Modeling and Analysis of Friction Stir Welding International Conference on Recent Advances in Materials, Processing and Characterization, V.R. Siddhartha Engineering College, Vijayawada, A.P., 3-4 July 2008, pp. 37-42)
93. Parametric Optimization in Friction Stir Welded Aluminium / Copper Dissimilar Materials Lap Joint (International Conference on Advanced Materials, Manufacturing, Management & Thermal Sciences, 18<sup>th</sup> -19<sup>th</sup> Nov. 2010, Siddhartha Institute of Technology, Tumkur)

94. Thermo-Mechanical model of friction stir welding applied to Al/Cu Bimetallic lap joint (International Welding Symposium (IWS 2012), Mumbai)
95. Effect of Tool Geometry on Joint Properties of Friction Stir Welded Al/Cu Bimetallic Lap Joints (The IUP Journal of Mechanical Engineering, Vol. No.1, February 2012, PP: 38-50)
96. Evaluation of joint properties of Friction Stir Welded Al/Cu Bimetallic Lap joints made by threaded tool (Technology Spectrum ISSN: 0974-6854, Vol. 5, No.3, 2011)
97. Effect of Process Parameters on Mechanical Properties of Friction Stir welded Aluminium/Copper Lap Joint (International Journal of Manufacturing Science and Technology 4(2) December 2010; pp.149-161)
98. Finite Element Modeling and Thermo Mechanical Analysis of Friction Stir Welded Al/Cu Bimetallic Lap Joints (International Journal of Mechanical Engineering and Robotics Research, ISSN 2278-0149, Vol. 1, No. 2, July 2012)
99. Characterization of friction stir welded joint (AZ31) by Taguchi (Conference on Recent Innovation in Mechanical Engineering 2014, ISBN: 978-93-83038-13-8) March 21, 2014, Hyderabad)
100. Friction Stir welding of AZ31 MG Alloy (International Conference on Emerging Trends in Mechanical Engineering (International Conference on Emerging Trends in Mechanical Engineering ISBN: 978-93-82163-09-1, Vol. 1, 24<sup>th</sup>, 25<sup>th</sup> February 2014)
101. Effect of Liquid nitrogen on friction stir welded joint of magnesium alloy AZ31B (International Journal of Applied Engineering and Technology ISSN: 2277-212X (online), 2015 Vol. 5(2), April-June, pp. 40-44)
102. Microstructure and Mechanical Properties of Friction Stir Welded AZ31B Magnesium Alloy (International Journal of Ethics in Engineering & Management Education, ISSN: 2348-4748, Vol. 2, Issue 6, June 2015)
103. Investigating the effect of Cryogenic Process on a Friction Stir welding AZ31sB Magnesium Alloy (International Journal of Advanced Research Foundation ISSN: 2394-3394, Volume 2, Issue 5, May 2015)
104. Optimizing the Process parameters of friction stir welded joint of magnesium alloy AZ31B (International Journal of Research in Engineering & Technology, eISSN: 2319-1163, pISSN: 2321-7308, May 2014)

105. Mechanical behavior of friction stir welded joint of magnesium alloy (AZ31) by Taguchi (International Journal of Ethics in Engineering & Management Education, ISSN: 2348-4748, Volume 1, Issue 3, March 2014).
106. Resistance Spot Weld Quality Characteristics Improvement by Taguchi Method (4<sup>th</sup> International Conference on Materials Processing and Characterization (ICMPC 2015))
107. Characterization of Aluminium matrix composites (AA6061/B<sub>4</sub>C) fabricated by stir Casting Technique (4<sup>th</sup> International Conference on Materials Processing and Characterization (ICMPC 2015))
108. Experimental Investigation of Bi directional Carbon Fiber Composite (4<sup>th</sup> International Conference on Materials Processing and Characterization (ICMPC 2015))
109. Finite Element Simulation Studies for ASS 304 for Deep Drawing at various Temperatures (4<sup>th</sup> International Conference on Materials Processing and Characterization (ICMPC 2015))
110. Performance Characteristics of VCR Engine with Diesel Additive and Eucalyptus Oil (Aspects of Mechanical Engineering and Technology for Industry, ISBN: 978-93-83842-96-4, First Impression: 2014)
111. Experimental Investigation of performance and Emission Characteristics of Methyl Ester Palm Kernel Oil-Eucalyptus Oil Blends in a single cylinder diesel engine (International Journal of Mechanical Engineering Research & Applications (IJMERA), ISSN: 2347-1719, Vol. 1, Issue 3, August, 2013)
112. Experimental Investigations of HSS M2 Alloy on Wire Electric discharge machining Process Using Taguchi Methodology (International Journal of Engineering Sciences and Innovative Technology (IJESIT), ISSN: 2319-5967, Vol. 3, Issue 3, May 2014)
113. Experimental Investigations of Process Parameters of Electrodischarge Sawing, A modified EDM using TAGUCHI APPROACH (International Journal of Emerging Technology and Advanced Engineering ISSN: 2250-2459, Vol. 2, Issue.1, November 2012)
114. Study of Investigations on Process Parameters of Electro Discharge Sawing using Taguchi Approach (International Journal of Engineering Research & Technology (IJERT), ISSN: 2278-0181, Vol.2, Issue 7, July-2013)
115. Optimization of IRSW Process Parameters by Taguchi Method (IJMST: 8(2) December 2014, pp. 157-171)

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121. High Efficiency HVAC System for High Performance Building (RITS-International Conference on Advancement in Engineering & Management, 28 & 29 February, 2012)
122. Thermal Energy Storage System for Cooling Green Buildings (International Conference on Environment and Energy (ICEE-2014) during 15-17 December 2014 in JNTUH Kukatpally, Hyderabad)
123. An overview of Low Energy HVAC Systems for High Performance Buildings (Air Conditioning and Refrigeration Journal, Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) July-August 2013, Page 56-58)
124. Hybrid Matrices Layer of Carbon Fiber Composites (International Journal of Engineering Research, Vol. No. 2, Issue No. 2, pp: 44-50, ISSN: 2319-6890), 01 April, 2013)
125. Finite Element Analysis of a Unidirectional Carbon Fiber Composite (4<sup>th</sup> National Conference on Advances in Mechanical Engineering (AIM 2013), Vasavi College of Engineering, Hyderabad, November 7-8, 2013, pp. 37-44)
126. Experimental Investigation of Bi directional carbon Fiber Composite (4<sup>th</sup> International Conference on Materials Processing and Characterization (ICMPC 2015)).

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128. Eucalyptus-Palm Kernel Oil Blends: A Complete Elimination of Diesel in a 4-Strike VCR Diesel Engine (Hindawi Publishing Corporation, Journal of Combustion, Volume 2015, Article ID 182879).
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130. Modeling and Simulation of Direct Injection Diesel Engine to Analyze Combustion and Emission using KIVA 3V Code (International Journal of Applied Engineering Research (ISSN 0973-4562 Volume 10, Number 22 (2015) pp 42949-42954).
131. Performance and Emission Analysis of Porous Media Combustion Chamber in Diesel Engines using KIVA 3V (International Journal of Mechanical and Production Engineering Research and Development (IJMPERD) ISSN (P): 2249-6890; ISSN (E): 2249-8001).
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134. Investigation and Analysis of Moulding Properties of Fly Ash: An alternative Moulding Material to Make Non-Ferrous Castings – The 5<sup>th</sup> International Conference on Solid Waste Management – Bengaluru, Karnataka – November 25 – November 27, 2015.
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136. Industrial waste of Fly ash: An alternative moulding material for foundry Industry - International Conference on Processing of Materials, Minerals and Energy PMME-2016 – at Pace Institute of Technology & Science, Ongole, Prakasam Dist., A.P., during 29<sup>th</sup> to 30<sup>th</sup> July 2016.
137. Analysis of Performance and Emission Characteristics of Diesel Engine Equipped with EGR, Fueled with Chicken Waste Based Biodiesel Blended with Diesel - National Conference on Trends in Mechanical Engineering (TIME-15), held at JNTUACE, Ananthapuramu, on 23<sup>rd</sup> September, 2015.

138. Experimental Investigation of the Suitability of Hydrogen with Cottonseed Oil as Alternate Fuel for IC Engines: A Review – 6<sup>th</sup> National Conference on Advances in Mechanical Engineering (AIM 2016) – Vasavi College of Engineering (A), Hyderabad, T.S., - October 6-7, 2016, pp. 34-43.
139. A Review on Optimization of performance and emission characteristics of C.I. Engine operated on Bio-Diesel Fuel using Taguchi method – First International Conference on Recent Innovations in Engineering and Technology (ICRIEAT-2016), ISBN: 978-1-5396-2645-9, Page NO: 1772-1775.

**Ph.D. GUIDED**

| <b>S. No</b> | <b>Student Names</b>                           | <b>Title</b>   | <b>Date of Award</b> |
|--------------|--|--|----------------------|
| 1            | Kancha Sammaiah<br>H. No. 0703PH1534           | Characterization of Direct and Indirect Resistance Spot Welds for Sheet Metal Fabrication Industries                             | 09-07-2010           |
| 2            | K. Naveen<br>H.No. 0803PH1561                  | Development of Optimal Replacement Model for Block of items – Discrete Markov Chains Approach                                    | 25-06-2012           |
| 3            | M. Satyanarayana<br>Gupta<br>H. No. 0803PH1518 | Finite element Thermo-Mechanical analysis & evaluation of joint properties of friction stir welded Al/Cu Bimetallic Lap Joints   | 18-06-2014           |
| 4            | K. Harinarayana<br>H. No. 0803PH1559           | Experimental Investigations of H.S.S. & Titanium alloy using Electrodischarge sawing & Wire Cut EDM                              | 29-04-2015           |
| 5            | L. Jayahari<br>H. No. 0903PH1564               | Simulation & experimentation on forming process of high strength sheet metal alloy at various temperatures under warm conditions | 03-07-2015           |
| 6            | Dareddy Ramana<br>Reddy<br>H. No. 0903PH1542   | Influence of Machining Parameters in Grinding, Fabrication and Testing of Composite material                                     | 03-08-2015           |
| 7            | Yeole Shivraj Narayan<br>H. T. No. 0903PH1556  | Surface Analysis of Ferrous and Non-Ferrous Materials using Electro Discharge Micro Drilling and Conventional EDM Drilling       | 29-09-2016           |
| 8            | Dhanraj Pamar Jarapla<br>H.T. No. 1003PH1531   | Characterization of Z-Pinned Unidirectional Carbon Composites: An Experimental Approach  | 15-02-2017           |
| 9            | G. Surya Prakash Rao<br>H.T. No. 0903PH1552    | Study of Microstructures and Mechanical behavior of Friction Stir Welded A231 Magnesium alloy under Cryogenic conditions         | May 2017             |

## RESEARCH GUIDANCE

### M. Tech Guided

| S. No | Student Names                               | Title   | Date of Award |
|-------|---|---|---------------|
| 1     | Y.R. Venkateswar Reddy<br>H. No. 01011D2101 | Design & Analysis of Solar Photo voltaic surface mounted centrifugal pumping system for agricultural purpose      | 2003          |
| 2     | Y. Dilip Kumar<br>H. No. 01011D2109         | Experimental Investigation of heat Recovery from Bio-mass energy  | 2003          |
| 3     | K. Sammaiah<br>H. No. 01062D1329            | Process improvement cabinet linear for visible cooler liner component for voltas product                          | 2003          |
| 4     | M. Ramesh<br>H. No. 02011D2111              | Experimental Study on Bio-mass gas fired I.C. Engine  | 2004          |
| 5     | M. Rama Devi<br>H. No. 02011D2113           | Method for Residual life assessment of major power plant components   | 2004          |
| 6     | S.S.R. Prasad<br>H. No. 02011D2102          | Design an evaporatively cooled heat exchanger   | 2004          |
| 7     | N.V. Krishna Reddy<br>H. No. 01062D1325     | Effective utilization of maintenance equipments   | 2004          |
| 8     | G. Prasada Rao<br>H. No. 03011D2107         | Energy Conservation Potential in Boiler using Bio-mass feed   | 2006          |
| 9     | D. Srinivasulu<br>H. No. 03011D2106         | Thermal Performance Analysis on solar flat plate collector as per IS-12933  | 2006          |
| 10    | K. Naveen<br>H. No. 03014D2113              | Analysis of Energy Conservation possibilities in compressed air system in ceramic tiles industry                  | 2006          |
| 11    | N. Rajitha Rami<br>H. No. 01014D2113        | Testing of alternative fuels for S.I. Engine  | 2006          |
| 12    | Rahmatullah<br>H. No. 04014D211             | Study, Analysis & Improvement of Performance of Boiler in Bio-mass thermal power plant                            | 2007          |
| 13    | D. Raghu Rami Reddy<br>H. No. 03014D2106    | Numerical Analysis of thermal sizing of multi tube pass shell & tube heat exchanger                               | 2007          |
| 14    | V.P. Raju                                   | Modification of a variable compression ration C.I. Engine & its performance with diesel and sun flower oil blends | 2007          |
| 15    | K. Manikyal Rao<br>H. No. 03014D2116        | Performance evaluation of 5 KW Gasifier engine system   | 2008          |
| 16    | M. Arun Kumar<br>H. No. 01011D2117          | Gasification based bio-mass power generation including dual fuel firing   | 2008          |

|    |  |  |      |
|----|--|--|------|
| 17 | K.V. Ramana Murthy<br>H. No. 00011D2117    | Experimental analysis of vapour compression refrigeration system with variable condenser length                                  | 2008 |
| 18 | B. Venkata Krishnaiah<br>H. No. 04014D2122 | Performance of emission characteristics of a S.I. Engine using isobutanol gasoline blends  | 2008 |
| 19 | M. Penchala Reddy<br>H. No. 03011D2113     | Performance evaluation of the components of thermal power Plant (RTPP)   | 2008 |
| 20 | G. Rajendra Prasad<br>H. No. 05014D2122    | Performance evaluation of 5 KW Gasifier engine system  | 2008 |
| 21 | K. Srinivas<br>H. No. 05014D2113           | Performance evaluation of Diesel engine using jathrophs oil & its blends   | 2008 |
| 22 | Ch. Shilpa Chakra<br>H. No. 07031D6615     | Synthesis & Characterization of magnetic Nanoparticles for biomedical applications   | 2009 |
| 23 | Nerella Kameswari<br>H. No. 07031D6604     | Synthesis of silver nanoparticles, Montecarlo Simulation & Antibacterial studies   | 2009 |
| 24 | N. Mayur<br>H. No. 07031D6605              | Synthesis of Tungten Silver nano composites by solvothermal Decomposition methods  | 2009 |
| 25 | V. Subhashini<br>H. No. 07031D6617         | Characterization of single & multi wall carbon nano tubes for senser applications  | 2009 |
| 26 | S. Vara Prasad<br>H. No. 03014D2116        | Analysis of Jathropha oil & its blend with dieses as an alternative fuel to diesel in C.I. engines                               | 2009 |
| 27 | V. Gopi<br>H. No. 09012D2113               | Modeling & Static analysis of Relay Bar Assembly used in long wall mining”   | 2012 |
| 28 | M. Anil Kumar Reddy<br>H. No. 09012D2130   | Thermal Analysis and Simulational casting of Aluminum Alloy – 4405-Wp. Inertial Navigation System chassis of Avionic Application | 2012 |
| 29 | N. Alekhya<br>H. No. 10011D2105            | Performance Analysis of Diesel Engine using Biodiesel with exhaust Gas Recirculation   | 2012 |
| 30 | K. Bharadwaja<br>H. No. 05014D2118         | Performance Evaluation of 5 KW Gasfier Engine System   | 2012 |
| 31 | K. Ramadheer Raju<br>H. No. 10011D2106     | CFD Analysis on Heat transfer Enhancement in ARIB Grid Roughened Surface Solar Air Heater  | 2012 |
| 32 | Gopi Vuyyuru<br>H. No. 09012D2113          | Modeling and Static Analysis of Relay Bar Assembly used in Long Wall Mining  | 2012 |
| 33 | Ambira Vijender<br>H. No. 14011D1004       | Compensation of utility current using PV-Active Power Filter while supplying the nonlinear load                                  | 2016 |
| 34 | K. Siva Karthik<br>H. No. 14011D2111       | Investigation into enhancement of heat transfer using assorted inserts in a circular tube using CFD analysis                     | 2016 |



