

National Institute of Technology, Tiruchirappalli: Performa for CV of Faculty/ Staff Members

Curriculum Vitae

Dr. R. B. Anand completed his post-graduation (M.Tech.) in Mechanical Engineering (Specialization: Thermal Engineering) from Indian Institute of Technology Madras (IITM) in January 1999. Subsequently, he carried out experimental and numerical investigations to establish the flow and performance characteristics of curved diffusing ducts (S-Shaped ducts) for a doctoral thesis at Indian Institute of Technology Delhi (IITD) and successfully defended his findings on June 2003. Dr. Anand worked as an Assistant Director (Technical / Faculty) in National Power Training Institute (NPTI), New Delhi from November 2002 to June 2003. NPTI is a premier institute in the area of power sector and it offers practical training in the field of thermal power plants. Presently he is working as a professor of Mechanical Engineering at National Institute of Technology, Tiruchirappalli and he teaches various courses related to Mechanical Engineering for under-graduate and post-graduate levels. In addition to his teaching procedures, he actively involved in research activities in the field of internal combustion engines and wind turbines.



1. Name: ANAND R B
2. Designation: Professor
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5. Email (Primary): rbanand@nitt.edu, anandrb@gmail.com
6. Field(s) of Specialization: Thermal Engineering

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7. Employment Profile

Job Title	Employer	From	To
Professor	NIT Trichy	March 2018	In service
Associate Professor	NIT Trichy	June 2010	March 2018
Assistant Professor	NIT Trichy	June 2007	June 2010
Assistant Director (Technical / Faculty)	NPTI, Delhi	November 2003	May 2007

8. Academic Qualifications (From Highest Degree to High School):

Examination / Degree	Board / University	Year	Division/ Grade	Subjects
Ph.D.	IIT Delhi	2003	NA	Fluid Mechanics
M.Tech.	IIT Madras	1999	NA	Thermal Engineering
Sec. A & B of The Inst. of Engineers (India) (Equivalent to UG in Mechanical Engg.)	The Institution of Engineers (India)	1996	NA	Mechanical Engineering
D.M.E.	Board of Tech. Education, Tamil Nadu	1988	First Class	Mechanical Engineering

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
Chairman of Transport committee	Transport Section, NIT Trichy		
Chairman of Security Committee	Security Section, NIT Trichy		

10. Academic/Administrative Responsibilities outside the University: Nil

11. Awards, Associateships etc.: Nil

12. Fellowships: Nil.

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13. Details of Academic Work

(i) Curriculum Development

(ii) Courses taught at Postgraduate and Undergraduate levels

UG Level:

1. Fluid Mechanics
2. Fluid Machines
3. Turbomachines
4. Engineering Mechanics
5. Basics of Mechanical Engineering
6. Design of Machine Elements
7. Design of Mechanical Transmission Systems
8. Power Plant Engineering
9. Metrology and Quality Control
10. Compressible Fluid Flow and Jet Propulsion

PG Level:

1. Fluid Mechanics of Turbomachines

(iii) Projects guided at Postgraduate level: >25

(iv) Other contribution(s)

14. Details of Major R&D Projects: Nil

15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role (Supervisor/ Co-Supervisor)	Year of Award
Dr. V. Arul Mozhi Selvan	Performance and emission characteristics of a variable compression ratio engine using diesel-biodiesel-ethanol-nanoparticle blends	Supervisor	2010
Dr. J. Sadhik Basha	Impact of nano-additives on the performance, emission and combustion characteristics of a direct injection compression ignition engine	Supervisor	2011
Dr. Marimuthu	Experimental investigation of performance and emission characteristics of diesel engine using mixture of oxygenated agents and vegetable oil	Supervisor	2012
Dr. A. Prabhu	Experimental investigations of the effect of oxygenates, antioxidants and nano particles as additives in Jatropha biodiesel on the working characteristics of a DIC engine	Supervisor	2015
Dr. N. Karthikeyan	Performance Augmentation Studies in Small Scale Wind Turbine for Low Reynolds Number Application	Supervisor	2020
Dr. Muthe Srinivasa Rao	Experimental studies on production of biodiesel and performance improvement using water and nano additives in a DIC engine	Supervisor	2016
Dr. K. Narayanan	Experimental investigation on production and working characteristics of fuel derived from high density polyethylene on a CI engine	Supervisor	2019
Dr. H. Sunil Kumar	Theoretical modelling and analysis of flutter performance of a large wind turbine blade using finite element method	Supervisor	2019

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16. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)

17. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convener / Co-Convener): Nil

18. Invited Talks delivered: Nil

19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member)	Organization	Membership No. with date
Fellow	The Institution of Engineers (India)	F-1287512

20. Academic Foreign Visits: Nil

21. Publications:

(A) Refereed Research Journals: Refer the ANNEXURE (Page 5 to 11)

(B) Conferences/Workshops/Symposia Proceedings: Refer the ANNEXURE (Page 5 to 11)

(C) Books & Monographs: Nil

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ANNEXURE

LIST OF PUBLICATIONS

1. **Anand, R. B.**, Lajpat Rai, Singh, S. N., Effect of turning angle on the flow and performance characteristics of Long S-shaped circular diffuser, Proc. IMechE, Journal of Aerospace Engineering, 2003, Vol. 217, pp. 29 - 41. <http://journals.sagepub.com/doi/abs/10.1243/095441003763031815>
2. **Anand, R. B.**, Lajpat Rai, Singh, S. N., Flow characteristics of short and long S-shaped circular diffusers: effect of Reynolds number, curvature ratio and swirl, Computational Fluid Dynamics Journal, 2005, Vol. 14, pp. 191 - 203.
3. **Anand, R. B.**, Lajpat Rai, Singh, S. N., Effect of inlet swirl on the performance of S-shaped circular diffuser, International Journal of Turbo and Jet Engines (Pub.: DE GRUYTER), 2009, Vol. 26, No. 1, pp. 51 - 60. <https://doi.org/10.1515/TJJ.2009.26.1.51>
4. Arul Mozhi Selvan, V., **Anand, R. B.**, Udayakumar, M., Combustion characteristics of diesohol using biodiesel as additive in a direct injection compression ignition engine under various compression ratios, Energy & Fuels Pub.: ACS), 2009, 23, pp. 5413-5422, DOI: 10.1021/ef900587h.
5. Arul Mozhi Selvan, V., **Anand, R. B.**, Udayakumar, M., Stability of diesohol using biodiesel as additive and its performance and emission characteristics in a compression ignition engine under various compression ratios, International Journal of Applied Engineering Research (IJAER), 2009, Vol. 4, No. 9, pp. 1723 - 1738.
6. Arul Mozhi Selvan, V., **Anand, R. B.**, Udayakumar, M., Stability, performance and emission characteristics of diesel-ethanol blend with castor oil as additive in variable compression ratio engine, SAE Paper No. 2009-32-0120.
7. Arul Mozhi Selvan, V., **Anand, R. B.**, Udayakumar, M., Effects of cerium oxide nanoparticle addition in diesel and diesel-biodiesel-ethanol blends on the performance and emission characteristics of a CI engine, Journal of Engineering and Applied Science, 2009, Vol. 4, No. 7. (No. of pages: 6.)
8. Arul Mozhi Selvan, V., **Anand, R. B.**, Udayakumar, M., Stability of diesohol blend with castor oil as additive and its performance and emission characteristics in a variable compression ratio engine, International Journal of Power Engineering, 2009, Vol. 1, No. 2, pp. 99-113.
9. Sadhik Basha, J., **Anand, R. B.**, Effects of nano particle blended water-biodiesel emulsion fuel on working characteristics of a diesel engine, International Journal of Global Warming (Pub.: Inderscience), 2010, Vol. 2, No.4, pp. 330 - 346. DOI: 10.1504/IJGW.2010.037589.
10. Sadhik Basha, J., **Anand, R. B.**, Performance and Emission Characteristics of a DI Compression Ignition Engine Using Carbon Nanotubes Blended Diesel, International Journal of Advances in Thermal Science and Engineering, 2010, Vol. 1, No. 1, pp. 67 - 76.
11. Sadhik Basha, J., **Anand, R. B.**, Application of nanoparticle / nanofluid in compression ignition engines – A case study, International Journal of Applied Engineering Research, 2010, Vol. 5 (4), pp. 697 - 708.
12. Sadhik Basha, J., **Anand, R. B.**, Effects of alumina nano particle blended Jatropa bio-diesel on working characteristics of a diesel engine, International Journal of Industrial Engineering and Technology, 2010, Vol. 2, pp. 53 - 66.

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13. Marimuthu, M., **Anand, R. B.**, Udayakumar, M., Performance and emission characteristics of a DI diesel engine using palm oil and sunflower oil, *International Journal of Electrical Engineering and Embedded Systems*, 2010, Vol. 1, No. 2, pp.41 - 48.
14. **Anand, R. B.**, Chandraprabhu, A., Richards, X.J.A., Hareshrm, N., Flow and Performance Characteristics of a Y-Shaped Diffusing Duct Using CFD, *International Journal of Aerodynamics (Pub.: Inderscience)*, 2010, Vol. 1, No. 2, pp. 115 – 129. DOI: <http://dx.doi.org/10.1504/IJAD.2010.037923>.
15. Sadhik Basha, J., **Anand, R. B.**, An experimental investigation in a diesel engine using CNT blended water-diesel emulsion fuel, *Proc. IMechE, Journal of Power and Energy*, 2011, Vol. 225, pp. 279-288, DOI: 10.1177/2041296710394247.
16. Sadhik Basha, J., **Anand, R. B.**, Role of nano additive blended biodiesel emulsion fuel on the working characteristics of diesel engine, *Journal of Renewable and Sustainable Energy*, (Pub.: American Institute of Physics), 2011, DOI:10.1063/1.3575169.
17. Sadhik Basha, J., **Anand, R. B.**, An experimental study in a CI engine using nano additive blended water-diesel emulsion fuel, *International Journal of Green Energy (Pub.: Taylor & Francis)*, 2011, Vol. 8, pp. 332 – 348, DOI: 10.1080/15435075.2011.557844.
18. Melbin Jose and **Anand, R. B.**, Studies on compression ignition engine to establish effects of injection pressure, compression ratio and nano additives – A review, *International Journal of Advances in Engineering Research*, 2011, Vol. 2, No. IV. (ISSN: 2231-5152)
19. Sadhik Basha, J., **Anand, R. B.**, Effects of nano particle additive in the water-diesel emulsion fuel on the performance, emission and combustion characteristics of a diesel engine, *International Journal of Vehicle Design (Pub.: Inderscience)*, 2012, Vol. 59, No. 2/3, pp. 164 - 181. DOI: 10.1504/IJVD.2012.048692.
20. Prabu, A., **Anand, R. B.**, Production and application of biodiesel – A Case Study, *International Journal of Engineering Research and Development*, 2012, Vol. 2, pp. 28 - 41.
21. Sadhik Basha, J., **Anand, R. B.**, Influence of nano additive blended bio-diesel fuel on the working characteristics of a diesel engine, *Journal of the Brazilian Society of Mechanical and Sciences Engineering*, (Pub.: Springer), 2013, Vol. 35, pp. 257 - 264. DOI: 10.1007/s40430-013-0023-0.
22. Narayanan, K. S., **Anand, R. B.**, Effects of various additives blended with biodiesel and diesel on tribological behavior, performance emission characteristics in C.I. engines – A Review, 2013, *International Journal of Engineering Studies*, 2013, Vol. 5, No. 2, pp. 187 - 204.
23. Arul Mozhi Selvan, V., **Anand, R. B.**, Udayakumar, M., Effect of cerium oxide nanoparticles and carbon nanotubes as fuel-borne additives in diesterol blends on the performance, combustion and emission characteristics of a variable compression ratio engine, *Fuel (Pub.: Elsevier)*, 2014, Vol. 130, pp. 160 - 167. DOI: 10.1016/j.fuel.2014.04.034.
24. Sadhik Basha, J., **Anand, R. B.**, Performance, combustion and emission characteristics of a diesel engine using carbon nanotubes blended Jatropha methyl esters emulsions, *Alexandria Engineering Journal*, (Pub.: Elsevier), 2014, pp. 259 - 273. DOI: 10.1016/j.aej.2014.04.001.
25. Muthe Srinivasa Rao, **Anand, R. B.**, Techniques to improve the performance while reducing the pollutants level in the exhaust gases of compression ignition engines – A Review, *Journal of Engineering and Applied Sciences*, 2014, Vol. 9, No. 5, pp. 828 - 844.

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26. Prabu, A., **Anand, R. B.**, Working characteristics of a C.I. engine fuelled with oxygenates as additives in Jatropha biodiesel, *Applied Mechanics and Materials*, (Pub.: Trans Tech Publications, Switzerland), 2014, pp. 1842 - 1846. DOI: 10.4028/www.scientific.net/AMM.592-594.1842.
27. Srinivasa Rao, **Anand, R. B.**, Working characteristics of a DICl engine by using water emulsion biodiesel fuels, *Applied Mechanics and Materials*, (Pub.: Trans Tech Publications, Switzerland), 2014, pp. 1847 - 1851. DOI: 10.4028/www.scientific.net/AMM.592-594.1847.
28. Narayanan, K. S., **Anand, R. B.**, Experimental investigation on optimization of parameters of thermocatalytic cracking process for H.D.P.E. & P.P. mixed plastic waste with synthesized alumina-silica catalysts, *Applied Mechanics and Materials*, (Pub.: Trans Tech Publications, Switzerland), 2014, pp. 307 - 311. DOI: 10.4028/www.scientific.net/AMM.592-594.307.
29. Arun, R., Srinivasa Rao, M., Prabu, A., **Anand, R. B.**, Experimental investigation on DICl engine by using chemical and nano additives blended biodiesel, *Applied Mechanics and Materials*, (Pub.: Trans Tech Publications, Switzerland), 2014, pp. 1575 - 1579. DOI: 10.4028/www.scientific.net/AMM.592-594.1575.
30. Prabu, A., **Anand, R. B.**, Inhibition of NO emission by adding antioxidant mixture in Jatropha Biodiesel on the performance and emission characteristics of a C.I. Engine, *Frontiers in Energy*, (Pub.: Springer), 2015, Vol. 9, pp. 238 - 245. DOI: 10.1007/s11708-015-0356-8.
31. Prabu Arockiasamy, **Ramachandran Bhagavathiammal Anand**, Performance, Combustion and Emission Characteristics of a D.I. Diesel Engine Fuelled with Nanoparticle Blended Jatropha, *Biodiesel, Periodica Polytechnica Mechanical Engineering*, (Pub.: Budapest University of Technology and Economics, Hungary), 2015, Vol. 59, No. 2, pp. 88 - 93. DOI: 10.3311/PPme.7766.
32. Prabu, A., **Anand, R. B.**, Emission control strategy by adding alumina and cerium oxide nano particle in biodiesel, *Journal of the Energy Institute*, (Pub.: Elsevier), 2015, DOI: 10.1016/j.joei.2015.03.003.
33. Prabu, A., **Anand, R. B.**, Influence of oxygenate additives on the performance and emission characteristics of Jatropha fuelled direct injection diesel engine, *Biofuels*, (Pub.: Taylor & Francis), 2015, DOI: 10.1080/17597269.2015.1012694.
34. Prabu, A., **Anand, R. B.**, Influence of antioxidant addition in Jatropha biodiesel on the performance, combustion and emission characteristics of a DI diesel engine, *J. Inst. Eng. India, Series C* (Pub.: Springer), 2017, DOI: 10.1007/s40032-017-0350-5.
35. Prabu, A., **Anand, R. B.**, Effects of oxygenate additive mixture on the performance and emission characteristics of a biodiesel fuelled compression ignition engine, *Australian Journal of Mechanical Engineering* (Pub.: Taylor & Francis), 2018, <https://doi.org/10.1080/14484846.2017.1422952>
36. Srinivasa Rao, **Anand, R. B.**, "Production characterization and working characteristics in DICl engine of Pongamia biodiesel", *Ecotoxicology and Environmental Safety*, (Pub.: Elsevier), 2015, pp. 16 - 21. DOI: [dx.doi.org/10.1016/j.ecoenv.2015.07.031](https://doi.org/10.1016/j.ecoenv.2015.07.031).
37. Muthe Srinivasa Rao, **Anand, R. B.**, "Performance and emission characteristics improvement studies on a biodiesel fuelled DICl engine using water and AlO(OH) nanoparticles", *Applied Thermal Engineering* (Pub.: Elsevier), 2016, Vol. pp. 636 - 645. <http://dx.doi.org/10.1016/j.applthermaleng.2015.12.090>.

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38. Narayanan, K. S., **Anand, R. B.**, Experimental investigation on thermocatalytic pyrolysis of HDPE plastic waste and the effects of its liquid yield over the performance, emission, and combustion characteristics of CI engine, *Energy & Fuels* (Pub.: ACS), 2016, 30, 5379 – 5390. DOI: 10.1021/acs.energyfuels.6b00407.
39. Narayanan, K. S., **Anand, R. B.**, Improvement studies on emission and combustion characteristics of DICl engine fuelled with colloidal emulsion of diesel distillate of plastic oil, TiO₂ nanoparticles and water, *Environmental Science and Pollution Research* (Pub.: Springer, ISSN 0944-1344), 2018, <https://doi.org/10.1007/s11356-018-1380-0>
40. Karthikeyan, N., Suthakar, T., **Anand, R. B.**, "Numerical investigation of airfoils for small wind turbines applications", *Thermal Science – International Scientific Journal* (Pub.: VINCA Institute of Nuclear Sciences, Serbia), 2016, Vol. 20, pp. 1091 – 1098. DOI: 10.2298/TSCI16S4091N.
41. Karthikeyan, N., **Anand, R. B.**, Suthakar, T. and Barhate, S., Materials, Innovations and Future Research Opportunities on Wind Turbine Blades - Insight Review. *Environmental Progress and Sustainable Energy.*, 2018. <https://doi:10.1002/ep.13046>
42. H. S. Sunil Kumar, and **Anand, R. B.**, A case study on damage detection of wind turbine composite blade, *FME Transactions, Journal of Faculty of Mechanical Engineering*, 2018, 47, 135-141. DOI: 10.5937/fmet1901135S. (Pub.: Faculty of Mechanical Engineering, Belgrade)
43. H. S. Sunil Kumar, **Anand, R. B.**, and D. L. Prabhakara, Numerical investigation on vibration and stability of cutting fluid delivery viscoelastic conduits, *Arabian Journal for Science and Engineering*, 2018, <https://doi.org/10.1007/s13369-019-03723-y> (Pub.: Springer)
44. H. S. Sunil Kumar, and **Anand, R. B.**, A study on repairing procedures involved with leading edge cracks, offsetting, overbite & underbite of glass fabric reinforced composite based wind turbine blades, *Scientia Iranica International Journal of Science and Technology*, doi: 10.24200/SCI.2019.51824.2380.
45. Rakesh Kumaraswamy, Karthikeyan Natarajan, **Anand, R. B.**, CFD Analysis of Flow and Performance Characteristics of a 90° curved Rectangular Diffuser: Effects of Aspect Ratio and Reynolds Number *International Journal of Turbo Jet Engines*, 2019, DOI: 10.1515/tjj-2019-0011
46. **Anand, R. B.**, Lajpat Rai, Singh, S. N., Sharma, O. P., "Flow Characteristics of a low aspect ratio 90°/90° S-shaped diffuser", *Journal of Aeronautical Society of India*, 2001, Vol. 53, pp. 239 - 252.
47. **Anand, R. B.**, Lajpat Rai, Singh, S. N., "Effect of swirl on the flow characteristics of S-shaped diffusing duct", *Indian Journal of Engineering and Material Sciences*, 2008, Vol. 15, pp. 317 – 325.

Conferences:

48. Prasad, B. V. S. S. S., Gowda, B. H. L., **Anand, R. B.**, "Flow induced vibrations of a circular cylinder in triangular arrangement", *Proc. International Conference on Fluid mechanics and Fluid Power*, India, 1999, pp. 246 - 255.
49. **Anand, R. B.**, Lajpat Rai, Singh, S. N., "Flow and performance characteristics of a 22.5°/22.5° S-shaped circular diffuser", *Proc. of the 28th National Conference on Fluid mechanics and Fluid Power*, India, 2001, pp. 364 - 371.
50. **Anand, R. B.**, Lajpat Rai, Singh, S. N., "Effect of surface roughness on flow and performance characteristics of a 22.5°/22.5° S-shaped circular diffuser using CFD", *Proc. 2nd International (29th National) Conference on Fluid Mechanics and Fluid Power*, 2002, pp. 436 - 444

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51. Rahim, A., Singh, S. N., Seshadri, V., **Anand, R. B.**, "Numerical simulation of flow characteristics in a combustor model", Proc. 30th National Conference on Fluid Mechanics and Fluid Power, India, 2003.
52. **Anand, R. B.**, Lajpat Rai, Singh, S. N., "Performance characteristics of miniature S-shaped circular diffuser". Proc. Fluent CFD Conference for India and South Asia, November, 2003 (No. of pages: 11).
53. Arul Mozhi Selvan, V., **Anand, R. B.**, Udayakumar, M., "Stability and performance characteristics of diesohol using biodiesel as additive in compression ignition engine", Proc. International Conference on Fascinating Advancement in Mechanical Engineering (FAME 2008), December 11 – 13, 2008.
54. Arul Mozhi Selvan, V., **Anand, R. B.**, Udayakumar, M., "Stability, performance and emission characteristics of diesel-ethanol blend with castor oil as additive in variable compression ratio engine", Proc. Small Engine Technology Conference (SETC 2009), Malaysia, JSAE and SAE International, Paper No. 2009-32-0120/20097120, November 3-5, 2009. (This paper has also been published in SAE Transactions, Paper No. 2009-32-0120).
55. Sadhik Basha, J., **Anand, R. B.**, Performance and emission characteristics of a DI compression ignition engine using carbon nanotubes blended diesel, Proc. International Conference on Advances in Mechanical Engineering (ICAME-2009), NIT, Surat, India, August 3-5, 2009. (Extended version of this paper has been published in the International Journal of Advances in Thermal Science and Engineering).
56. Marimuthu, M., **Anand, R. B.**, Udayakumar, M., Performance and emission characteristics of a DI diesel engine using palm oil and sunflower oil, Proc. National conference on Energy Security for Rural Development (ESRD 2009), Gandhigram Rural University, Gandhigram, March 26, 2009. (This paper has also been published in the journal, International Journal of Electrical Engineering and Embedded Systems).
57. Arul Mozhi Selvan, V., **Anand, R. B.**, Udayakumar, M., Stability of diesohol blend with castor oil as additive and its performance and emission characteristics in a variable compression ratio engine, Proc. National conference on Energy Security for Rural Development (ESRD 2009), Gandhigram Rural University, Gandhigram, March 26, 2009. (This paper has also been published in the journal, International Journal of Power Engineering)
58. Marimuthu, M., **Anand, R. B.**, Udayakumar, M., Analysis of performance and pollutants emitted from a DI diesel engine using mixture of oxygenated agents with diesel, National Conference on Emerging Trends in Mechanical Engineering, April 2009, Trichy, Tamil Nadu, India.
59. **Anand, R. B.**, Sandeep, R., Effect of angle of turn on flow characteristics of Y-shaped diffusing duct using CFD, Proc. International Conference Frontiers in Automobile and Mechanical Engineering, November 25 - 27, 2010, Chennai. DOI: 10.1109/FAME.2010.5714819
60. Sivakumar, V, Sarangan, J., **Anand, R. B.**, Performance, combustion and emission characteristics of a CI engine using MTBE blended diesel fuel, Proc. International Conference Frontiers in Automobile and Mechanical Engineering, November 25 - 27, 2010, Chennai. DOI: 10.1109/FAME.2010.5714826
61. Mariappan, V., **Anand, R. B.**, Udayakumar, M., A simplified design procedure of R134A-DMAC plate type bubble absorber for vapour absorption refrigeration system, Proc. International Conference Frontiers in Automobile and Mechanical Engineering, November 25 - 27, 2010, Chennai. DOI: 10.1109/FAME.2010.5714804
62. Mariappan, V., Udayakumar, M., Suresh, S., **Anand, R. B.**, Shafeeq, K. P., Experimental investigation on thermo physical properties of AL2O3/DMAC nano fluid, TechConnect World Summit, Expo & Showcase, June 18-21, 2012, Santa Clara, CA.

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63. Tony, **Anand, R. B.**, Prabu, A., Impact of nano particle addition in biodiesel on the working characteristics of a D.I. diesel engine, Proc. International Conference on Materials for the Future – Innovative Materials, Processes, Products and Applications (ICMF-2013), 2013, pp. 141 – 146.
64. Mariappan, V., M. Udayakumar, S. Suresh, **Anand, R. B.**, Thermodynamic analysis of R134a-DMAC/AL₂O₃ vapour absorption refrigeration system, International Multi Conference (IISRO) 2013, Pattaya, Thailand, September 7, 2013. pp. 59 – 64.
65. Prabu, A., **Anand, R. B.**, Impact of geometric sequence percentage addition of oxygenated additives on the performance and emission characteristics of Jatropha biodiesel fuelled single cylinder D.I diesel engine, Smart Technologies for Mechanical Engineering, Proceedings of STME 2013, Delhi Technological University, 25-26.
66. Prabu, A., **Anand, R. B.**, Working Characteristics of a C.I. Engine Fuelled with oxygenates as additives in Jatropha Biodiesel, International Mechanical Engineering Congress, (IMEC – 2014), National Institute of Technology Tiruchirappalli, 2014. (This paper has been published in a international journal; Applied Mechanics and Materials, (Pub.: Trans Tech Publications, Switzerland), 2014, Vol. 592 - 594, pp. 1842 – 1846).
67. Arun, R., Muthe Srinivasa Rao., Prabu, A., **Anand, R. B.**, Experimental Investigation on DICl Engine by Using Chemical and Nano Additives Blended Biodiesel, International Mechanical Engineering Congress (IMEC - 2014), 2014, National Institute of Technology Tiruchirappalli. (This paper has been published in a international journal; Applied Mechanics and Materials, (Pub.: Trans Tech Publications, Switzerland), 2014, Vol. 592-594 (2014) pp. 1575 - 1579).
68. Narayanan, K. S., **Anand, R. B.**, Experimental investigation on optimization of parameters of thermocatalytic cracking process for H.D.P.E. & P.P. mixed plastic waste with synthesized alumina-silica catalysts, International Mechanical Engineering Congress, National Institute of Technology, Tiruchirappalli, India, June, 2014. (The full version of this paper has been published in Applied Mechanics and Materials, 2014, pp. 307 - 311).
69. Srinivasa Rao, M., **Anand, R. B.**, Working characteristics of a DICl engine by using water emulsion biodiesel fuels, International Mechanical Engineering Congress, National Institute of Technology, Tiruchirappalli, India, June, 2014. (The full version of this paper has been published in Applied Mechanics and Materials, 592-594, 2014, 1847 – 1851).
70. Srinivasa Rao, M., **Anand, R. B.**, Production and characterization of Pongamia biodiesel, International Conference on Green Technology for Environmental Pollution Prevention and control, National Institute of Technology, Tiruchirappalli, India, June, 2014. (The extended version of this paper is published in Ecotoxicology and Environmental Safety, 121, 16–21. DOI: 10.1016/j.ecoenv.2015.07.031. [Pub.: Elsevier]).
71. Srinivasa Rao, M., **Anand, R. B.**, Properties characterization using CHNS, FTIR and GC-MS of biodiesel and its working characteristics on a DICl engine, International Conference on Advances in Mechanical Engineering, University College of Engineering, Villupuram (Anna University), India, October, 2015.
72. Narayanan K. S. and **Anand, R. B.**, Scientific analysis of pyrolytic yield of plastic waste for value added and Pollution free waste management, International Conference on Green Technologies for Environmental Pollution Prevention and Control, National Institute of Technology Tiruchirappalli, India, June, 2014.
73. Sunil Kumar, H. S., **Anand, R. B.**, A case study on damage detection of wind turbine composite blade. 6thInternational Conference on Advances in Energy Research. Indian Institute of Technology Bombay, India, December 11 – 14, 2017. (ICAER 2017), 216,114-115.

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74. Sunil Kumar, H. S., **Anand, R. B.**, Glass reinforced composite based wind turbine blades: Finishing operations after fabrication process. International Conference on Recent Trends in Engineering Materials and Renewable Energy, University College of Engineering, Villupuram (Anna University), India. January 4 & 5, 2018. (ICEMRE 2018)
75. Sunil Kumar, H. S., **Anand, R. B.**, Parametric study of flutter velocity of wind turbine blades and its effect on process parameters. International Conference on Civil, Mechanical, Chemical Engineering and Technologies, SVS College of Engineering, Coimbatore (Anna University), India. February 23 & 24, 2018. (ICCMCT 2018).
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