

RESEARCH SUPERVISOR DETAILS

NAME (CAPITAL LETTERS) : Dr.S.RAJAKUMAR
DESIGNATION : Assistant Professor
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SUPERVISOR REG. NO : 2120337



RESEARCH SCHOLARS (COMPLETED):

REGISTER NUMBER(FT/PT)	NAME OF THE SCHOLAR
1414289124 PT	ANANTHA RAMAN L
1522289705 FT	E.VARADHA

RESEARCH SCHOLAR (ONGOING):

REGISTER NUMBER (FT/PT)	NAME OF THE SCHOLAR
1514289838 PT	M.EDWIN
1513289745 PT	A.SURESH

PUBLICATIONS OF THE SUPERVISOR:

1. Venkatachalam, G., Harichandran, R., **Rajakumar, S.**, Dharma raja, C.Pandivelan. C., “*Determination of J-integral and stress intensity factor using the commercial FE software ABAQUS in austenitic stainless steel (AISI 304) plates*”, Int J Adv Manuf Tech., Special Issue, pp. 1-4, 2008. (**Impact Factor:1.238**)
2. **Rajakumar, S.** and Ravindran, D. “*Performance Evaluation of Different NACA 4 Series Airfoils for Wind Turbines*”, International Journal of Fluids Engineering, Vol. 2, pp. 57-68, 2010.
3. **Rajakumar, S.** and Ravindran, D. “*Computational fluid dynamics of wind turbine blade at various angles of attack and low Reynolds number*”, International Journal of Engineering Science and Technology, Vol. 2, pp. 6474-6484, 2010.
4. M.Koilraj Gnanadason, P.Senthil Kumar, **S.Rajakumar**, M.H.Syed Yousuf, “*Effect of Nanofluids in a vacuum single basin solar still*” International Journal of Advanced Engineering research and Studies, Vol.1, issue.1, pp.171-177, 2011.

5. **Rajakumar, S.** and Ravindran, D. “*Iterative approach for optimizing coefficient of power, coefficient of lift and drag of wind turbine rotor*”, *Renew. Energy*, Elsevier, Vol. 38, pp. 83-93, 2012. **(Impact Factor: 8.6)**
6. **Rajakumar, S.** and Ravindran, D. “*Optimization of wind turbine power coefficient parameters using hybrid technique*”, *J. Inst. Eng. India Ser. C*, Springer, Vol. 93, No. 2, pp. 141-149, 2012. **(SNIP Impact Factor: 1.31)**
7. Abinaya Sorna Jothi, P. and **Rajakumar, S.**, “*Performance of PCM and Cooking Vessel in Solar Cooking System*”, *International Journal of Engineering Inventions*, Vol.2, No.6, pp.83-89, 2013.
8. Sowmini Priya and **Rajakumar, S.**, “*An Energy Storage System for Wind Turbine Generators-Battery and Supercapacitor*”, *International Journal of Engineering Research and Applications*, Vol.3, No.2, pp.1219 – 1223, March - April 2013.
9. Dhanusia and **Rajakumar, S.**, “*Thermal Analysis of PCM based building wall for cooling*”, *International Journal of Science, Engineering and Technology Research*, Vol.2., No.4., pp. 850-857, 2013.
10. Kokila, R.N. and **Rajakumar, S.**, “*Performance Evaluation of Solar Assisted Heat pump water heating system*”, *IOSR Journal of Engineering*, Vol.3, No.4., pp.12-17, 2013.
11. Prawyn Jeba.V.P. and **Rajakumar, S.**, “*Improving the Reliability in PMSM for Wind Turbine*”, *International Journal of Engineering Research and Development*, Vol.6, No.11., pp.55-61, 2013.
12. Esakkimuthu N and **Rajakumar, S.**, “*Structural Analysis of Composite Material Drive Shaft Using FEM*”, *The International Journal of Science & Technoledge*, Vol.2, No.4., pp. 140-146, 2014.
13. Muruganantham G and **Rajakumar, S.**, “*Finite Element Analysis of Torispherical Shell*” *The International Journal of Science & Technoledge*, Vol.2, No.4., pp. 130-135, 2014.
14. Kokila R N and **Rajakumar, S.**, “*Thermal performance analysis and optimization of solar Assisted heat pump water heater*”, *Applied Mechanics and Materials*, Vols. 592-594, pp 2416-2421, 2014. **(Impact Factor: 3.88)**
15. Vishnu Prasad, G. Venkatachalam, Akshat Rathi, **Rajakumar, S.**, “*Finite Element Analysis of Jute Fibre Made Hybrid Polymer Matrix Composite*” *Applied Mechanics and Materials*, Vols. 592-594, pp 363-367, 2014.**(Impact Factor: 3.88)**
16. Vishnu Prasad, Ajil Joy, G. Venkatachalam, S.Narayanan, **S.Rajakumar**, “*Finite Element analysis of jute and banana fibre reinforced hybrid polymer matrix composite and optimization of design parameters using ANOVA technique*”, *Procedia Engineering*, Vol. 97, pp.1116 – 1125, 2014.**(Impact Factor: 0.334)**

17. N. Karthikeyan , K. Kalidasa Murugavel, S. Arun Kumar, **S. Rajakumar.**, “*Review of aerodynamic developments on small horizontal axis wind turbine blade*” Renewable and Sustainable Energy Reviews, Vol. 42 (2015), pp. 801–822. **(Impact factor :16.79)**
 18. A.Sethu Ramalingam, **Rajakumar, S.**, “*Parametric modeling & study of structural characteristics of wind turbine blade*”, International journal of engineering and computer science”, Vol. 4, No. 5, pp. 141-149, 2015
 19. P.Premalatha, **S.Rajakumar**, “*Design of the small horizontal axis wind turbine blade with and without winglet*”, International Journal of Research in Science & Technology, 6 (1) 40-50 (2016)
 20. T.Vijay, **S.Rajakumar**, “*Generation of electric current from industrial exhaust by using turbocharger*”, International Journal of Research in Science & Technology, 6 (1) 67-72, (2016)
 21. R.Immanual, **S.Rajakumar**, “*Performance evaluation and optimisation of cross flow cooling tower*”, International Journal of Research in Science & Technology, 6 (1) 81-89, (2016)
 22. K.K. Dinesh Kumar, **S.Rajakumar**, “*Review on biogas production from co-digestion of cow dung and food waste with water hyacinth*”, International Journal of Research in Science & Technology, 6 (1) 119-124 (2016)
 23. S.John Paul Devaseelan, **S. Rajakumar**, “*Review on mechanical & thermal properties of hybrid reinforcement polymer composite*”, International Journal of Research in Science & Technology, 6 (1) 125-139 (2016)
 24. J.Jaisy , **Dr.S.Rajakumar**, “*Turbulence analysis on a 5kw horizontal axis wind turbine using CFD*”, International Journal of Research in Science & Technology, 6 (1) 148-157 (2016)
 25. M.Annal Rajam, **S.Rajakumar**, “*Control of temperature in bio-digester using phase change material (PCM)*”, International journal of research in social sciences & humanities, 6 (1) 86-93 (2016)
 26. B. Paul **Vinofer, S.Rajakumar**, Cooling load calculation and design of air conditioning system in automobile, International journal of research in social sciences & humanities, 6 (1) 94-103 (2016)
 27. G.Sureshkumar, **S.Rajakumar**, “*Empirical review on car radiator by using nanofluids*”, International journal of research in social sciences & humanities, 6 (1) 118-124 (2016)
 28. S.Premkumar, **S.Rajakumar**, “*A review paper on development of microwind turbine for automotives*”, International journal of advances in engineering research 10 (6) 139-144 (2015)
 29. A Suresh, **S Rajakumar**, “*Design and experimental investigation of micro wind turbine*”, International journal of advances in engineering research, 10 (6) 216-224 (2015)
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30. S. Daniel Selvakumar, R. Immanuel, **S. Rajakumar**, “*Calculation of cooling load for mushroom cultivation*”, International journal of advances in engineering research, 10 (6) 196-202 (2015)
 31. B.Paul Vinofer, **S.Rajakumar**, “*CFD evaluation on effect of double glazing over single glazing in a small utility vehicle*”, International journal of Research in Science & Technology, 6 (3) 82-89 (2016).
 32. S.Daniel Selvakumar , R.Immanuel , **S.Rajakumar**, “*Design and fabrication of photo voltaic refrigeration system for mushroom cultivation*”, International journal of Research in Science & Technology, 6 (3) 90-95 (2016).
 33. S.Premkumar, **S.Rajakumar**, “*Development on microwind turbine for automotives*”, International journal of Research in Science & Technology, 6 (3) 96-102 (2016).
 34. G.Sureshkumar, S.Rajakumar, **S.Ayyappan**, “*Experimental and numerical analysis on car radiator by using nanofluids*”, International journal of Research in Science & Technology, 6 (3) 103-111 (2016).
 35. K.K.Dinesh Kumar, **S.Rajakumar**, S.Ayyappan, “*Kinetic study on the effect of water hyacinths in food waste biogas production*”, International journal of Research in Science & Technology, 6 (3) 112-117 (2016).
 36. R.Immanuel, **S.Rajakumar**, B.Ragupathi, S.P.Ramkumar, “*Decrease the outlet water temperature of cross flow cooling tower*”, International journal of advances in engineering research, 11 (6) 1-7 (2016)
 37. C.Ashok, **S.Rajakumar**, Y.Balamurali, “*Finite element analysis of aluminum sandwich composite material*”, International journal of advances in engineering research, 11 (6) 8-14 (2016)
 38. T.Vijay, **S.Rajakumar**, S.Ayyappan, “*CFD analysis on electric current generation from industrial exhaust by using turbocharger*”, International journal of advances in engineering research, 11 (6) 15-21 (2016)
 39. S.John Paul Devaseelan, **S.Rajakumar**, “*Mechanical & Thermal properties of hybrid reinforcement polymer composite*”, International journal of advances in engineering research, 11 (6) 29-37 (2016)
 40. P.Premalatha, **S.Rajakumar**, “*CFD analysis of the small horizontal axis wind turbine blade with and without winglets*”, International journal of advances in engineering research, 11 (6) 38-46 (2016)
 41. J.Jaisy, **S.Rajakumar**, “*CFD analysis of 5kw horizontal axis wind turbine*”, International journal of advances in engineering research, 11 (6) 47-55 (2016)
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42. **S. Rajakumar**, D.Ravindran, M. Sivakumar, G.Venkatachalam, S. Muthukumar, “*Optimization of Power Coefficient of Wind Turbine Using Genetic Algorithm*”, J. Inst. Eng. India Ser. C, Springer, Vol. 98 No. 2 111–118 April (2017) **(Impact Factor: 1.31)**
43. Vandana Vidyadhari, **S.Rajakumar**, “*Aerodynamic design of mach 5 nozzle in large hypersonic wind tunnel*”, International Journal of Research in Science and Technology, Vol.7, Issue No. III, Jul-Sep 2017.
44. L.Anantha Raman, **S. Rajakumar** “*CFD Modeling and experimental measurement of fluid flow characteristics, swirl motion, Tumble motion in compression ignition engines – A Review*”, Journal of Research Innovations in Engineering & Technology, Vol. II, Issue 2, pp 16-24, 2016
45. L. Anantha Raman, **S. Rajakumar**, Lokesh Paradeshi, “*Effect of thermal barrier coating on performance and emission characteristics of a diesel engine*”, International Journal of Advanced Engineering Technology, Vol. VII, Issue I/Jan.-March, 851-853, 2016
46. Anantha Raman, L., **Rajakumar S**, Deepanraj B, and Paradeshi L, “*Study on performance and emission characteristics of a single cylinder diesel engine using exhaust gas recirculation*”, THERMAL SCIENCE, Year 2017, Vol. 21, (2), pp. S435-S441, 2017 **(Impact Factor:1.87)**
47. **Rajakumar.S** and Aumugasamy.M “*Design and performance improvement of darrieus type VAWT and solar hybrid system*”, SSRG International Journal of Electrical and Electronics Engineering (SSRG-IJEEE)-Special Issue ICCREST, pp 23-28, April 2018
48. E.Varadha and **Rajakumar.S** “*Design And Optimization of Piezoelectric Cantilever Beam for Improving Energy Harvesting using Taguchi’s Analysis*”, TAGA Journal, pp 502-513, 2018
49. E.Varadha and **Rajakumar.S** “*Performance improvement of piezoelectric materials in energy harvesting in recent days – a review*”, JOURNAL OF VIBROENGINEERING, pp 2632-2650, Vol. 20, Issue 7, NOVEMBER 2018**(Impact Factor:0.723)**
50. Gowtham and **Rajakumar**, “*Investigation of Natural Fiber Composite Material for Building Cooling System*”, International Journal of Science and Research, pp 1154 – 1156, Vol.8, No.1, January 2019.
51. L. Anantha Ramana, B. Deepanraj, **S. Rajakumar**, V. Sivasubramanian, “*Experimental investigation on performance, combustion and emission analysis of a direct injection diesel engine fuelled with rapeseed oil biodiesel*”, FUEL, pp 69 – 74, Vol.246, February 2019.**(Impact Factor:8.03)**
52. Gowtham and **Rajakumar**, “*Design and Analysis of Concrete Building without Insulation and with Insulation using ANSYS 15 Software*”, International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056, Volume: 06, Issue: 05, pp 6392-6395, May 2019

53. A. Suresh and **S. Rajakumar**, “Design of small horizontal axis wind turbine for low wind speed rural applications”, *Materials Today: Proceedings*, Volume:23, Issue:1, pp 16-22, 2020
<https://doi.org/10.1016/j.matpr.2019.06.008>(**Impact Factor:0.575**)
54. A.Manikandan and **S.Rajakumar**, “A review on natural fiber and its characteristics”, *Industrial Engineering Journal*, ISSN: 0970-2555, Volume:13, Issue:3, pp 21 – 28, March 2020.
55. S.Kaviyarasu and **S.Rajakumar**, ” Review on Battery Thermal management system using phase change material”, *International Research Journal of Modernization in Engineering Technology and science*, e ISSN: 2582-5208, Volume :2, Issue:3, pp 797 – 814, March 2020.
56. E. Varadha, **S. Rajakumar**, R. Immanuel, X.S. Ashok Jain, “Vibration analysis of transverse galloping of different bluff bodies”, *Materials Today: Proceedings*, Vol.45, Part 2, pp 1274-1279, May 2021
<https://doi.org/10.1016/j.matpr.2020.05.017> (**Impact Factor: 0.575**)
57. N. Muthu Saravanan, **S. Rajakumar**, A. Arul Marcel Moshi, “Experimental Investigation on the performance enhancement of single basin double slope solar still using kanchey marbles as sensible heat storage materials”, *Materials Today: Proceedings*, Vol 39, Part 4, pp 1600 -1604, March 2021.
<https://doi.org/10.1016/j.matpr.2020.05.710> (**Impact Factor: 0.575**)
58. E.Varadha, **S.Rajakumar** and X.S.Ashok Jain, “Wind Driven Leaf like Thin Film Piezoelectric harvester fro low Wind applications”, *Journal of Vibration Engineering & Technologies*, Vol.9, pp. 1005-1022, January 2021.(**Impact Factor: 2.3**)
59. V. Gopalan, S. Rajarajan, M. Wilson, J. Venkatesan, M. Elango, S. Natarajan, **S. Rajakumar**, “Studies on fly ash/coir/sugarcane reinforced epoxy polymer matrix composite”, *Materials Science & Engineering Technology*, <https://doi.org/10.1002/mawe.202200037>, Feb 2023. (**Impact Factor : 1.85**)
60. Suresh A, Rajakumar S, Robert Cep, Sivakumar M, “Optimization and Experimental Investigation of 3D printed Microwind Turbine blade made of PLA material”, *Materials*, <https://doi.org/10.3390/ma16062508>. Vol.16, No.6, March 2023.(**Impact Factor : 3.748**)
61. **M.Edwin**, **S.Rajakumar**, “Levy Flight Equilibrium Optimizer–Based Wing Design Optimization Using Functional Constraints”, *Journal of Aerospace Engineering*, Vol.36, No.5, June 2023
<https://doi.org/10.1061/JAEEZ.ASENG-3874> (**Impact Factor : 2.242**)

HONOURS / AWARDS(RECEIVED FROM PUBLISHER):

1. Received “**Sir Rajendra Nath Mookerjee Memorial Award**” from The Institution of Engineers (India) for best paper publication in The Journal of Institution of Engineers (India) on 20th December 2013 at 28th Indian Engineering Congress held at Chennai.
2. Received “**Best paper award**” for paper titled “Effect of Tubercle leading edge control surface on the performance of the double delta wing fighter aircraft” from International association of Engineering & Technology for skill development on 24th May 2015.