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OVERVIEW:

Dr. A. Santhoshkumar is Working as an Assistant Professor in the Department of Mechanical Engineering at SRMIST, Ramapuram. He Graduated in Mechanical Engineering at E.G.S.Pillay Engineering College (Affiliated by Anna University Chennai) Nagapattinam, TamilNadu, India. She secured Master of Engineering in Thermal Engineering at Aadhi Parasakthi Engineering College (Affiliated by Anna University Chennai), Melmaruvathur, TamilNadu, India. He Pursued Ph.D. in the field of waste-to-energy conversion at the National Institute of Technology, Tiruchirappalli, India. He has been in the teaching profession for more than 5 years. He has recently received a SERB-TRAE research grant related to his field of research. He has presented significant number of papers in National and International Journals, Conference and Symposiums.

Areas of Research:

Waste-to-energy Conversion, IC Engine, Thermochemical Conversion Technologies

Selected Publications:

Web of Science/SCI

1. Santhoshkumar A., Thangarasu, V., & Ramanathan, A. (2023). Experimental and empirical analysis of performance, combustion and emission characteristics of diesel engine fueled with pyrolysis waste engine oil under single and split injection strategy. Sustainable Energy Technologies and Assessments, 55, 102893. (IF: 7.623). <https://doi.org/10.1016/j.seta.2022.102893>.
2. Santhoshkumar A., and Anand Ramanathan. "Recycling of waste engine oil through pyrolysis process for the production of diesel like fuel and its uses in diesel engine." Energy 197 (2020): 117240. (IF: 8.85). <https://doi.org/10.1016/j.energy.2020.117240>
3. Zahir Hussain A, A. Santhoshkumar, and Anand Ramanathan. "Assessment of pyrolysis waste engine oil as an alternative fuel source for diesel engine." Journal of Thermal Analysis and Calorimetry (2020): 1-17. (IF: 4.755) <https://doi.org/10.1007/s10973-020-09516-y>.
4. Babu Dharmalingam, A. Santhoshkumar, Sukunya Areeya, Kittipong Rattanaporn, Keerthi Katam, Pau-Loke Show, And Malinee Sriariyanun (2023). Bayesian Regularization Neural Network-based Machine Learning Approach on Optimization of CRDI-Split Injection Strategy on Diesel Engine

Characteristics Fuelled Waste Frying Oil Biodiesel, *Energies* 2023, 16(6), 2805. (IF: 3.2).
<https://doi.org/10.3390/en16062805>

5. Tamilvanan, A., Mohanraj, T., Ashok, B., & Santhoshkumar, A. (2023). Enhancement of energy conversion and emission reduction of *Calophyllum inophyllum* biodiesel in diesel engine using reactivity-controlled compression ignition strategy and TOPSIS optimization. *Energy*, 264, 126168. (IF: 8.85) <https://doi.org/10.1016/j.energy.2022.126168>

6. Ramalingam, S., Babu, D., Santhoshkumar, A., Deepakkumar, R., & Ravikanth, D. (2022). Impact of exhaust gas recirculation and split injection strategy combustion behavior on premixed charge compression ignition engine fuelled with moringa oleifera methyl ester. *Fuel*, 319, 123702. (IF: 8.03) <https://doi.org/10.1016/j.fuel.2022.123702>

7. Naik, B. D., Meivelu, U., Thangarasu, V., Santhoshkumar Annamalai, & Sivasankaralingam, V. (2022). Experimental and empirical analysis of a diesel engine fuelled with ternary blends of diesel, waste cooking sunflower oil biodiesel and diethyl ether. *Fuel*, 320, 123961. (IF: 8.03) <https://doi.org/10.1016/j.fuel.2022.123961>

8. Santhoshkumar, A., Hussain, A. Z., & Ramanathan, A. (2020). An experimental investigation of the effect of liquified petroleum gas addition on dual fuel diesel engine fuelled with pyrolysis waste engine oil. *Materials Today: Proceedings*. <https://doi.org/10.1016/j.matpr.2020.10.881>

9. Ramanathan, A., & Santhoshkumar, A. (2019). Feasibility analysis of pyrolysis waste engine oil in CRDI diesel engine. *Energy Procedia*, 158, 755-760. <https://doi.org/10.1016/j.egypro.2019.01.201>

10. Dharmalingam, B., Ramalingam, S., Santhoshkumar, A., Gundupalli, M. P., & Sriariyanun, M. (2022). A review on different additives and advanced injection strategy on diesel engine characteristics fuelled with first, second and third generation biodiesel. *Materials Today: Proceedings*. <https://doi.org/10.1016/j.matpr.2022.07.439>

11. Dharmalingam, B., & Santhoshkumar, A. (2023). Challenges and Evolution of Low Temperature Combustion Techniques in Internal Combustion Engines for Biodiesel Fuel. *วารสาร วิชาการ พระจอมเกล้าพระนครเหนือ*, 33(2), 351-354. <https://ph01.tci-thaijo.org/index.php/kmutnb-journal/article/view/251975>

12. Kannan, M., Murugan, J., Deepanraj, B., & Santhoshkumar, A. (2014). Thermal performance of a two-phase closed thermosyphon charged with different working fluids. *Daffodil International University Journal of Science and Technology*, 9(1), 1-5.

13. Kannan, M., Baskaran, R., Santhoshkumar, A., Lawrence, P., & Arunkumar, G. (2014). Application of Neat Cashew Nut Shell Oil in Compression Ignition Engine. *International Journal of Applied Environmental Sciences*, 9(4), 1191-1197.

14. Arunkumar, G., Santhoshkumar, A., Vivek, M., Raman, L. A., Sankaranarayanan, G., & Dhanesh, C. (2013). Performance and emission characteristics of low heat rejection diesel engine fuelled with rice bran oil biodiesel. In *Advanced Materials Research* (Vol. 768, pp. 245-249). Trans Tech Publications Ltd.

15 Kumar, N. S., Dhinakarra, C. K., Deepanraj, B., Babu, N. M., & Santhoshkumar, A. (2012). Modification and analysis of compressor intercooler fin in turbocharger using FEM. *Procedia Engineering*, 38, 379-384.

16. Deepanraj, B., Raman, L. A., Santhoshkumar, A., & Santhanakrishnan, S. (2012). The Effect of Preheated Crude Palm Oil on Performance and Emission Characteristics of a Compression Ignition Engine. In *Applied Mechanics and Materials* (Vol. 110, pp. 142-147). Trans Tech Publications Ltd.

17. Kannan, M., Murugan, J., Santhoshkumar, A & Deepanraj, B. (2012). Experimental investigation on thermal performance of two phase thermosyphon charged with water, ethanol, methanol and acetone. *Sciences*, 2, 3.

18 Deepanraj, B., Dhanesh, C., Senthil, R., Kannan, M., Santhoshkumar, A., & Lawrence, P. (2011). Use of palm oil biodiesel blends as a fuel for compression ignition engine. *American Journal of Applied Sciences*, 8(11), 1154-1158.

Patents:

Patent Applied - Detachable multi Storage container - Application Number - 365824-001.

Books/Book Chapters Published:

1. A. Santhoshkumar, R. Muthu Dinesh Kumar, D. Babu, Vinoth Thangarasu and R. Anand. *Effective Utilization High-Grade Energy through Thermochemical Conversion of Different Wastes, Pollutants from Energy Sources*, Springer & 2019, ISBN: 978-981-13-3281-4. https://doi.org/10.1007/978-981-13-3281-4_11

2. Santhoshkumar, A., & Anand, R. (2019). Microwave-assisted fast pyrolysis of hazardous waste engine oil into green fuels. In *Advances in Eco-Fuels for a Sustainable Environment* (pp. 119-155). Woodhead Publishing. <https://doi.org/10.1016/B978-0-08-102728-8.00005-X>

3. A. Santhoshkumar, Vinoth Thangarasu and R. Anand, *Performance, combustion and emission characteristics of DI diesel engine using Mahua biodiesel*, *Advanced Biofuels Applications, Technologies and Environmental Sustainability*, Woodhead Publishing, Elsevier & 2019, ISBN: 978-0-08-102791-2. <https://doi.org/10.1016/B978-0-08-102791-2.00012-X>

4. Dharmalingam, B., Ramireddy, R. R., Santhoshkumar Annamalai., Sriariyanun, M., Rajagopal, D., & Katla, V. R. (2022). Zero Emission Hydrogen Fuelled Fuel Cell Vehicle and Advanced Strategy on Internal Combustion Engine: A Review. Diesel Engines and Biodiesel Engines Technologies, 157. DOI: 10.5772/intechopen.102057. <https://www.intechopen.com/chapters/80334>

5. Dharmalingam, B., Sriariyanun, M., Ramanathan, A., Santhoshkumar A., Ramalingam, S., Deepakkumar, R., & Bhattacharya, K. A Comprehensive Review of Bio-catalyst Synthesis, Characterization, and Feedstock Selection for Biodiesel Synthesis Using Different Methods. Waste to Profit, 261-270. 2023. Taylor& Francis.

List of Publications in Conferences:

1. Santhoshkumar A, Anand R Potential of Pyrolysis fuel derived from waste engine oil a an alternative source for diesel engine. International conference on green energy and technology, Siva subramaniyanadar college of engineering, Chennai, 26-27 November 2021. (Best Paper)

2. Santhoshkumar, A., & Ramanathan, A. (2019, September). Energy and Life Cycle Assessment of Solar Assisted Microwave Pyrolysis of Waste Biomass. In IOP Conference Series: Earth and Environmental Science (Vol. 312, No. 1, p. 012017). NIT Puducherry. IOP Publishing. <https://iopscience.iop.org/article/10.1088/1755-1315/312/1/012017/meta>

3. Arunkumar, G., Santhoshkumar, A., Dhanesh, C., Vivek, M., & Raman, L. A. (2013, April). Investigation of rice bran oil biodiesel as fuel in a compression ignition engine. In 2013 International Conference on Energy Efficient Technologies for Sustainability (pp. 326-328). IEEE. St. Xavier's Catholic College of Engineering, Nagercoil, April 10-12, 2013. <https://ieeexplore.ieee.org/abstract/document/6533403>

4. Deepanraj, B., Sivaramakrishnan, V., Lawrence, P., Kumar, N. S., Santhoshkumar, A., & Valarmathi, R. (2012, March). Transesterified palm oil as an alternate fuel for compression ignition engine. In IEEE-International Conference On Advances In Engineering, Science And Management (ICAESM-2012) (pp. 389-392). IEEE. <https://ieeexplore.ieee.org/document/6216293>

5. Design and Fabrication of Wastage Collector in Water Bodies, International Conference on Technologies for Green Mobility. Bannari Amman Institute of Technology, Sathiyamangalam, 23- 24 December 2021.

6. Santhoshkumar A, P.Thangavel, P.Dhomodharan, S. Pannerselvam, Application of phase change materials in thermal energy storage system. National level conference on Recent Trends and

Advancements in Mechanical Engineering (RTAME'15). Angel college of Engineering & Technology, 13 March 2015.

7. Santhoshkumar A, Experimental Investigation of Double pipe heat exchanger with swirl flow, National Conference on Innovation in science, Engineering & Technology, Podhigai College of Engineering & Technology, Vellore on March 27 & 28, 2015.

8. M. VimalRaja, Santhoshkumar A, Design and Development of gasoline direct injection engine for two-wheeler application. International conference on green technology in engineering and applied sciences (ICGTEAS 2013). Adhiparasakthi Engineering college, Melmaruvathur. March 29-30, 2013.

9 Santhoshkumar A, Senthil. Large Eddy Simulation of Swirl flow over a bluff body. In IEEE International Conference On Advances In Engineering, Science And Management (ICAESM2012). IEEE

10. Santhoshkumar A, Britto Sebastiraj. An over view of organic and inorganic coolants effect in multi cylinder spark ignition engine. 2nd National Level Technical Conference of Recent Research In Mechanical Engineering (RRME-12). 2012.

11. Santhoshkumar, A; Dhanesh, C; Vivek, M; Raman, L Ananthan, Deepanraj B. Evaluation of 2-ethoxy ethyl octane as a blend component for diesel in CI engine. International Conference on Advances in Engineering and technology (ICAET). 2011.

Professional Bodies:

Member –ISTE

Google Scholar:

<https://scholar.google.com/citations?user=iZZ5eWIAAAAJ&hl=en>

Scopus ID :

<https://www.scopus.com/authid/detail.uri?authorId=54391682200>

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