

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

Curriculum Vitae



1. Name: S.Vedharaj
2. Designation: Assistant Professor
3. Office Address: M-13, Department of Mechanical Engineering,
National Institute of Technology,
Tiruchirappalli - 620015
4. Telephone: 0431 2503400 Extn (Optional):
5. Email (Primary): vedha@nitt.edu Email (Secondary): vedhusiva@gmail.com
6. Field(s) of Specialization: IC engines, Alternate fuels, High efficiency combustion concepts.

7. Employment Profile

Job Title	Employer	From	To
Assistant Professor	National Institute of Technology, Tiruchirappalli, Tamil Nadu, India.	Apr 2018	Present
Post-doctoral research fellow	King Abdullah University of Science and Technology, Saudi Arabia	May 2015	Sep 2017
Associate Professor	Kalasalingam University, Tamil Nadu, India.	Sep 2014	Mar 2015
Supplier Quality Engineer	AVTEC Limited, Madhya Pradesh, India	Jul 2008	Nov 2009

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

Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D.	National University of Singapore	2014		Mechanical Engineering
B.E.	Anna University	2008	First class with distinction	Mechanical Engineering
HSC	Tamil Nadu State Board	2004	First class	Maths/Biology
SSLC	Matriculation	2002	First class	

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

Date (s)	Title of Activity	Level of Event (International/ National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)	Event Organized by	Venue
April 2017	SAE World Congress meeting	International	Paper Presenter	Society of Automotive Engineers	Detroit, USA
March 2017	New Combustion Concepts workshop	International	Participant	Clean Combustion Research Centre, King Abdullah University of Science and Technology	Jeddah, Saudi Arabia
October 2016	SAE Fuels and Lubricants meeting	International	Paper Presenter	Society of Automotive Engineers	Baltimore, USA
October 2016	ASME Internal Combustion Engine Fall Technical Conference	International	Paper Presenter	American Society of Mechanical Engineers.	South Carolina, USA
March 2016	Future Fuel Workshop	International	Participant	Clean Combustion Research Centre, King Abdullah University of Science and Technology	Jeddah, Saudi Arabia
August 2013	International Conference on Sustainable Energy Technologies.	International	Paper Presenter	Hong Kong Polytechnic University	Hong Kong
June 2013	International Conference on Applied Energy	International	Paper Presenter	Applied Energy	Pretoria, South Africa

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10. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor (Optional)
Journal Papers						
Vallinayagam, R., Vedharaj, S. , Naser, N., Roberts, W. L., Dibble, R. W., & Sarathy, S. M.	Terpineol as a novel octane booster for extending the knock limit of gasoline	Fuel	187	9-15	2017	4.601
Vallinayagam, R., Vedharaj, S. , Roberts, W. L., Dibble, R. W., & Sarathy, S. M	Performance and emissions of gasoline blended with terpineol as an octane booster	Renewable Energy	101	1087-1093	2017	4.357
Vedharaj, S. , Vallinayagam, R., Yang, W. M., Saravanan, C. G., & Roberts, W. L.	Synthesis and utilization of catalytically cracked cashew nut shell liquid in a diesel engine.	Experimental Thermal and Fluid Science,	70	316-324	2016	2.830
Vedharaj, S. , Vallinayagam, R., Yang, W. M., Chou, S. K., Chua, K. J. E., & Lee, P. S	Performance emission and economic analysis of preheated CNSL biodiesel as an alternate fuel for a diesel engine.	International Journal of Green Energy	12(4)	359-367	2015	1.454
Vedharaj, S. , Vallinayagam, R., Yang, W. M., Saravanan, C. G., & Lee, P. S.	Optimization of combustion bowl geometry for the operation of kapok biodiesel–Diesel blends in a stationary diesel engine.	Fuel	139	561-567	2015	4.601

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Vallinayagam, R., Vedharaj, S. , Yang, W. M., Roberts, W. L., & Dibble, R. W.	Feasibility of using less viscous and lower cetane (LVLC) fuels in a diesel engine: A review.	Renewable and Sustainable Energy Reviews	51	1166- 1190.	2015	8.050
Muthukumar, N., Saravanan, C. G., Yadav, S. P. R., Vallinayagam, R., Vedharaj, S. , & Roberts, W. L.	Synthesis of cracked Calophyllum inophyllum oil using fly ash catalyst for diesel engine application.	Fuel	155	68-76	2015	4.601
Yadav, S. P. R., Saravanan, C. G., Vallinayagam, R., Vedharaj, S. , & Roberts, W. L.	Fuel and engine characterization study of catalytically cracked waste transformer oil.	Energy Conversion and Management,	96	490-498	2015	5.589
Vedharaj, S. , Vallinayagam, R., Yang, W. M., Chou, S. K., Chua, K. J. E., & Lee, P. S.	Experimental and finite element analysis of a coated diesel engine fueled by cashew nut shell liquid biodiesel.	Experimental Thermal and Fluid Science	53	259-268	2014	2.830
Vedharaj, S. , Vallinayagam, R., Yang, W. M., Saravanan, C. G., Chou, S. K., Chua, K. J. E., & Lee, P. S.	Reduction of harmful emissions from a diesel engine fueled by kapok methyl ester using combined coating and SNCR technology.	Energy Conversion and Management	79	581-589	2014	5.589
Vedharaj, S. , Vallinayagam, R., Yang, W. M., Chou, S. K., & Lee, P. S.	Effect of adding 1, 4-Dioxane with kapok biodiesel on the characteristics of a diesel engine.	Applied Energy	136	1166- 1173	2014	7.182
Vallinayagam, R.,	Pine oil–	Applied	130	466-473	2014	7.182

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Vedharaj, S., Yang, W. M., Lee, P. S., Chua, K. J. E., & Chou, S. K.	biodiesel blends: A double biofuel strategy to completely eliminate the use of diesel in a diesel engine.	Energy				
Vallinayagam, R., Vedharaj, S., Yang, W. M., Saravanan, C. G., Lee, P. S., Chua, K. J. E., & Chou, S. K.	Impact of pine oil biofuel fumigation on gaseous emissions from a diesel engine.	Fuel Processing Technology	124	44-53	2014	3.752
Vallinayagam, R., Vedharaj, S., Yang, W. M., Raghavan, V., Saravanan, C. G., Lee, P. S., Chua, K. J. E., & Chou, S. K.	Investigation of evaporation and engine characteristics of pine oil biofuel fumigated in the inlet manifold of a diesel engine.	Applied Energy	115	514-524	2014	7.182
Vallinayagam, R., Vedharaj, S., Yang, W. M., Saravanan, C. G., Lee, P. S., Chua, K. J. E., & Chou, S. K.	Impact of ignition promoting additives on the characteristics of a diesel engine powered by pine oil–diesel blend.	Fuel	117	278-285	2014	4.601
Mohan, B., Yang, W., Raman, V., Sivasankaralingam, V., & Chou, S. K.	Optimization of biodiesel fueled engine to meet emission standards through varying nozzle opening pressure and static injection timing.	Applied Energy	130	450-457	2014	7.182
Vedharaj, S., Vallinayagam, R., Yang, W. M., Chou, S. K., Chua, K. J. E.,	Experimental investigation of kapok (Ceiba pentandra) oil	Energy Conversion and Management	75	773-779	2013	5.589

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& Lee, P. S.	biodiesel as an alternate fuel for diesel engine.					
Vallinayagam, R., Vedharaj, S. , Yang, W. M., Saravanan, C. G., Lee, P. S., Chua, K. J. E., & Chou, S. K.	Emission reduction from a diesel engine fueled by pine oil biofuel using SCR and catalytic converter.	Atmospheric environment	80	190-197	2013	3.629
Vallinayagam, R., Vedharaj, S. , Yang, W. M., Lee, P. S., Chua, K. J. E., & Chou, S. K.	Combustion performance and emission characteristics study of pine oil in a diesel engine.	Energy	57	344-351	2013	4.520
Yang, W. M., An, H., Chou, S. K., Chua, K. J., Mohan, B., Sivasankaralingam, V. , Raman, V., Maghbouli, A., & Li, J.	Impact of emulsion fuel with nano-organic additives on the performance of diesel engine.	Applied energy	112	1206-1212	2013	7.182
Yang, W. M., An, H., Chou, S. K., Vedharaj, S. , Vallinayagam, R., Balaji, M., Mohammad, F.E.A., & Chua, K. J. E.	Emulsion fuel with novel nano-organic additives for diesel engine application.	Fuel	104	726-731	2013	4.601
SAE PAPERS						
Vedharaj, S. , Vallinayagam, R., An, Y., Dawood, A., Najafabadi, M. I., Somers, B., Chang, J., & Johansson, B.	Fuel Effect on Combustion Stratification in Partially Premixed Combustion	SAE Technical Paper	2017-24-0089		2017	0.36
Vedharaj, S. , Vallinayagam, R., An, Y., Najafabadi, M. I., Somers, B.,	Combustion Homogeneity and Emission Analysis during	SAE Technical Paper	2017-01-2263		2017	0.36

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Chang, J., & Johansson, B	the Transition from CI to HCCI for FACE I Gasoline				
Vallinayagam, R., Vedharaj, S. , An, Y., Dawood, A., Izadi Najafabadi, M., Somers, B., & Johansson, B.,	Combustion Stratification for Naphtha from CI Combustion to PPC	SAE Technical Paper	2017-01-0745	2017	0.36
Mubarak Ali, M., Hernandez Perez, F., Vedharaj, S. , Vallinayagam, R., Dibble, R. W., & Im, H.	Effect of Timing and Location of Hotspot on Super Knock during Pre-ignition	SAE Technical Paper	2017-01-0686	2017	0.36
Mubarak ali, M., Hernandez Perez, F., Vallinayagam, R., Vedharaj, S. , Johansson, B., & Im, H.	A Computational Study of Stratified Combustion in an Optical Diesel Engine	SAE Technical Paper	2017-01-0573	2017	0.36
An, Y., Vallinayagam, R., Vedharaj, S. , Masurier, J. B., Dawood, A., Najafabadi, M. I., Somers, B., & Johansson, B	Analysis of Transition from HCCI to CI via PPC with Low Octane Gasoline Fuels using Optical Diagnostics and Soot Particle Analysis	SAE Technical Paper	2017-01-2403	2017	0.36
An, Y., Vedharaj, S. , Vallinayagam, R., Dawood, A., Masurier, J. B., Najafabadi, M. I., Somers, B., & Johansson, B.	Effect of Aromatics on Combustion Stratification and Particulate Emissions from Low Octane Gasoline Fuels in PPC and HCCI Mode	SAE Technical Paper	2017-24-0086	2017	0.36
Vallinayagam, R., Vedharaj, S. , An, Y., Dawood, A.,	Compression Ignition of Light Naphtha and Its	SAE Technical Paper	2017-24-0078	2017	0.36

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Najafabadi, M. I., Somers, B., Chang, J., Sarathy, S. M., & Johansson, B	Multicomponent Surrogate under Partially Premixed Conditions				
Sivasankaralingam, V. , Raman, V., Ali, M. J. M., Alfazazi, A., Lu, T., Im, H., Sarathy, S. M., & Dibble, R. W.	Experimental and Numerical Investigation of Ethanol/Diethyl Ether Mixtures in a CI Engine	SAE Technical Paper	2016-01-2180	2016	0.36
Raman, V., Sivasankaralingam, V. , Dibble, R., & Sarathy, S. M.	Pinene-A High Energy Density Biofuel for SI Engine Application	SAE Technical Paper	2016-01-2171	2016	0.36