

CURRICULUM VITAE

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➤ **Research Area:**

- Heat transfer
- Thermal engineering

➤ **Educational Qualifications:**

Qualification	College/University	Year of completion	Percentage	Class
Ph.D. (Heat transfer)	NIT, Trichy	2009	-	-
M.E. Thermal Engineering	Regional Engineering College, Tiruchirappalli,	1999	8.7 CGPA	FIRST CLASS
B.E.Mechanical Engineering	Coimbatore Institute of Technology	1996	80.67%	FIRST CLASS
Others	-	-	-	-

Experience: (chronological order)

Name of Company / Institutions	Designation of Post	From	To	Experience in Year
University College Of Engineering, Bit Campus,	Assistant Professor	2009	TILL DATE	14
Saranathan college of Engineering	Assistant Professor	January 2004	July 2007	4
PSNA college of Engineering and Technology	Lecturer	November 2002	December 2003	1
SASTRA, Thanjavur	Lecturer	September 1999	November 2002	3
SASTRA, Thanjavur	Lecturer	August 1996	September 1998	2

➤ **Awards / Honours Received:14**

1. Outstanding Reviewer Award (Elsevier)
2. Reviewer Recognition (Elsevier)
3. Member, Ist year B.E./B.Tech students admission committee, BIT, 2014-15
4. Deputy Director, Students Affairs, BIT campus, Trichy, July 2014- Feb 2016.
5. Member, Scrutiny committee for UG/PG student project for TEQIP II grant
6. Programme Coordinator, NBA, 2013-2017
7. Course coordinator, MTech (Energy Engineering)
8. Member, standing committee, Students Malpractice enquiry
9. Member, Inspection Committee, Research center Recognition
10. Member, Affiliation inspection committee
11. Member, 2017, Board of studies of Automobile Technology Programme, DDU-Kaushal Centre, Institute for entrepreneurship and career development, Bharathidasan University
12. Member, Board of studies, Department of Mechanical Engineering, Erode Sengunthar Engineering College, Perundurai.
13. Coordinator, Syllabus subcommittee, Syllabus revision under Regulations 2021 for affiliated colleges of Anna University
14. Member, Programme Advisory Committee, Review of scheme syllabus to be implemented from 2021-22, The Seshasayee Institute of Technology, Tiruchirappalli.

➤ **Additional / Academic Responsibilities at University:7**

1. Lab in charge
2. Class adviser/class coordinator
3. PG-coordinator
4. Seminar in charge
5. Class room projector in charge
6. Department library in charge
7. NBA, Programme Coordinator-Automobile Engineering

➤ **Membership of Scientific and Professional Societies:4**

1. MIE - Member of The Institute of Engineers (India)
2. ISHMT- Indian Society for Heat and Mass Transfer
3. ISTE - Indian Society for Technical Education
4. SAE - Society of Automotive Engineers

➤ **Completed PG/UG Projects: 75**

- a. Number of PG Projects Completed: 25
- b. Number of UG Project Completed: 50 batches

➤ **Research Guidance (M.S/Ph.D.) (Completed):3**

Sl. No	Name of the scholar	Title of the thesis	Year of registration	Date of viva voce
1	K. Karunamurthy	Studies on solar pond containing tube inserts and encapsulated phase material blended with nanoparticles	2010	Completed 2015
2	S. Rajkumar	Passive cooling of standalone photovoltaic panel	2013	Completed 2021
3	J. Charles Franklin	Some investigations on the passive techniques for performance improvement of PVT/air systems	2014	Completed 2021

➤ **Research Guidance (M.S/Ph.D.) (Ongoing):4**

Sl. No	Name of the scholar	Tentative Title of the thesis	Year of registration	Status
1.	M.Ganesh Karthikeyan	Enhancement of Solar dryer performance with waste heat recovery from outdoor unit of split air-conditioner	2018	Ongoing
2.	M. Manimaran	Passive cooling of flat solar Photovoltaic (PV) panel with compact heat exchanger	2020	Ongoing
3.	E. Sivaprakash	Effect of PV Panel Cooling on Hydrogen Production Rate	2022	Ongoing
4.	E. Selvan	Performance Of Passively Cooled Batteries For Electric Vehicle	2022	Ongoing

➤ **Publications:**

a. Books / book chapters:11

Sl.No.	Book Title	Chapter Title	Publisher
1	Nanofluids: Research, Development and Applications	Formulation and Thermophysical Property of Nanofluid	NOVA publishers, USA, 2013 ISBN: 978-1-62618-165-6
2	Plastic waste and recycling Environmental Impact, Societal Issues, Prevention, and Solutions	Conversion of plastic waste to fuel	Elsevier 2020 eBook ISBN 9780128178812
3	The Effects of Dust and Heat on Photovoltaic Modules: Impacts and Solutions	Cooling Approaches for solar PV panels	Springer 2022 eBook ISBN 978-3-030-84635-0
4	Reference Module in Earth Systems and Environmental Sciences	First Law Analysis on PCM Based Latent Heat Thermal Energy Storage System	Elsevier,2021 ISBN 9780124095489
5	Waste to Profit- Environmental Concerns and Sustainable Development	Conversion of Waste Plastics into Sustainable Fuel	CRC Press, 2023 eBook ISBN9781003334415 DOI: 10.1201/9781003334415-4

Subject Books by other local publishers with ISBN / ISSN numbers.

Sl.No.	Name of the Book	Publisher	Authors
1	Engineering Thermodynamics	Anna University of Technology Tiruchirappalli State University	Dr. M. Chandrasekar
2	Fluid Mechanics and Machinery	Shanlax publications, Madurai ISBN 938068485-4	Dr. T. Senthilkumar Dr. M. Chandrasekar
3	Advancements and futuristic trends in Mechanical Engineering	Research Publication House, Dindigul ISBN 978-81-921-1286-2	DR. T. Senthilkumar Dr. M. Chandrasekar P. Gopal B. Kumaragurubaran
4	Innovations in Engineering Design	Research Publication House Dindigul ISBN 978-81-921-1286-2	Dr. T. Senthilkumar Dr. M. Chandrasekar P. Gopal B. Kumaragurubaran
5	Recent Trends in Civil and Mechanical Engineering	Research Publication House ISBN 978-81-921-1286-2	Dr. T. Senthilkumar Dr. M. Chandrasekar P. Gopal B. Kumaragurubaran
6	Energy Efficient Technologies for Automobile	Journal of chemical and pharmaceutical Sciences JCPS ISSN0974-2115	Dr. T. Senthilkumar Dr. M. Chandrasekar P. Gopal B. Kumaragurubaran

b. International Journals:54

Sl. No	Authors	Title	Journal	Impact
1.	Chandrasekar, M., S. Suresh, R. Srinivasan, A. Chandra Bose	New Analytical Models to Investigate Thermal Conductivity of Nanofluids.	Journal of Nanoscience and Nanotechnology, 9 , 2009, 533–538.	1.339
2.	Chandrasekar, M., S. Suresh	A Review on the Mechanisms of Heat Transport in Nanofluids	Heat Transfer Engineering, 14 , 1136-1150.	0.898
3.	Chandrasekar, M., S. Suresh	Determination of Heat Transport Mechanism in Aqueous Nanofluids using Regime Diagram	Chinese Physics Letters, 26 (12), 124401.	0.924
4.	Chandrasekar, M., S. Suresh	Lower and upper bounds for thermal conductivity of nanofluids	Nanotrends, 7 (1), 12-18.	Indexed
5.	Chandrasekar, M., S.Suresh A. Chandra Bose	Experimental studies on heat transfer and friction factor characteristics of Al ₂ O ₃ /water nanofluid in a circular pipe under laminar flow with wire coil inserts	Experimental Thermal and Fluid Science, 34 (2), 122-130.	2.08
6.	Chandrasekar, M., S.Suresh A. Chandra Bose	Experimental investigations and theoretical determination of thermal conductivity and viscosity of Al ₂ O ₃ /water nanofluid,	Experimental Thermal and Fluid Science, 34 (2), 210-216.	2.08
7.	Chandrasekar, M., S. Suresh	Limits for thermal conductivity of nanofluids,	Thermal Science 14 (1), 2010, 65-71	0.962

8.	Chandrasekar, M., S. Suresh, A. Chandra Bose S. Jaishankar	Comparison of Heat transfer and pressure drop characteristics in circular tubes with water, nanofluid and twisted tape using empirical correlations	International Journal of Nanosystems 1(1) , 57-66.	Indexed
9.	Chandrasekar, M., S. Suresh A. Chandra Bose	Experimental studies on heat transfer and friction factor characteristics of Al ₂ O ₃ /water nanofluid in a circular pipe under transition flow with wire coil inserts	Heat Transfer Engineering, 32 (6) , 485-496	0.898
10.	Daniel Sagayaraj, S. Suresh M. Chandrasekar	Experimental studies on the erosion rate of different heat treated carbon steel economizer tubes of power boilers by fly ash particles	International Journal of Minerals, Metallurgy and Materials, 16(5) , 534-539	0.8
11.	Daniel Sagayaraj, S. Suresh M. Chandrasekar	Experimental studies on erosion rate of carbon steel economizer tubes of power boilers by fly ash particles	International Journal of Material Science 4(2) , 141-149	Indexed
12.	S. Suresh, M. Chandrasekar, S. Chandra Sekhar,	<u>Experimental studies on heat transfer and friction factor characteristics of CuO/water nanofluid under turbulent flow in a helically dimpled tube</u>	Experimental Thermal and Fluid Science, 35 (3) 2011, 542-549	2.08
13.	M. Chandrasekar S. Suresh	Experiments to Explore the Mechanisms of Heat Transfer in Nanocrystalline Alumina/Water Nanofluid under Laminar and Turbulent Flow Conditions,	Experimental Heat Transfer <u>Volume 24, Issue 3</u> , 2011, 234-256	0.7
14.	S. Suresh, K.P. Venkitaraj, P. Selvakumar, M. Chandrasekar	Synthesis of Al ₂ O ₃ -Cu/water hybrid nanofluids using two step method and its thermo physical properties	Colloids and Surfaces A: Physicochemical and Engineering Aspects 388 , 1-3, 2011, 41-48.	2.354
15.	T. Senthilkumar, D.B. Sivakumar,	Performance evaluation of a single cylinder diesel engine fuelled with rice bran oil as alternate fuel,	International Journal of Environmental Pollution Control and Management, 1(2)	Indexed

	D. Mala, M. Chandrasekar , T. Elango,		2009 69-81	
16.	S. Suresh, K.P.Venkitaraj, P. Selvakumar, M. Chandrasekar	Effect of Al ₂ O ₃ -Cu /water hybrid nanofluid in heat transfer,	Experimental Thermal and Fluid Science 38, 2012, 54-60	2.08
17.	R. Srinivasan, M. Chandrasekar , S. Suresh, A. Chandra Bose	Factorial Design To Investigate various factors affecting the grain size of SnO ₂ nanoparticles	International Journal of Nanomaterials and Technology, 1(2), 2010, 29-32	0.175
18.	S. Suresh, M. Chandrasekar , P. Selvakumar	Experimental studies on heat transfer and friction factor characteristics of CuO/water nanofluid under laminar flow in a helically dimpled tube	Heat Mass Transfer, DOI 10.1007/s00231- 011-0917-2	0.9283
19.	S. Suresh, M. Chandrasekar , P. Selvakumar, Tom Page	Experimental Studies on Heat Transfer and Friction Factor Characteristics of Al ₂ O ₃ /Water Nanofluid Under Laminar Flow With Spiraled Rod Inserts	International Journal of Nanoparticles, 5(1), 2012, 37-55.	0.6
20.	S. Suresh, P. Selvakumar, M. Chandrasekar , V. Srinivasa Raman	Experimental Studies on Heat Transfer And Friction Factor Characteristics Of Al ₂ O ₃ /Water Nanofluid Under Turbulent Flow With Spiraled Rod Inserts	Engineering and Processing,doi:10.101 6/j.cep.2011.12.013	1.959
21.	S. Suresh, K.P. Venkitaraj, P. Selvakumar, M. Chandrasekar	A comparison of thermal characteristics of Al ₂ O ₃ /water and CuO/water nanofluids in transition flow through a straight circular duct fitted with helical screw tape inserts	Experimental Thermal and Fluid Science, 39, 2012, 37-44	2.08
22.	M. Chandrasekar ,	Measurement of Thermal Conductivity and Viscosity of Al ₂ O ₃ /Water Nanofluid to	Nanotrends 12(1),2012,11-21.	Indexed

	S. Suresh	Assess Its Merit as Enhanced Coolant		
23.	M. Chandrasekar, S. Suresh, T. Senthilkumar	Mechanisms proposed through experimental investigations on thermophysical properties and forced convective heat transfer characteristics of various nanofluids –A review	Renewable and sustainable energy reviews, 16(6), 2012, 3917-3938.	5.5
24.	M.Chandrasekar P Gopal	Thermal management of non-concentrating photovoltaic panels under extreme ambient conditions,	Int. J. Renewable Energy Technology, Vol. 3, No. 4, 2012, 372-385.	Indexed
25.	P. Gopal, T. Senthilkumar, M. Chandrasekar, C Ramesh Kumar	Investigations on the effect of vortex generator in utility vehicle for reducing drag	Archives Des Sciences Vol 65, No. 8; 2012, 114-129	Indexed
26.	M. Chandrasekar, S. Suresh, T. Senthilkumar, M. Ganesh karthikeyan	Passive cooling of standalone flat PV module with cotton wick structures, Energy Conversion and Management	Energy Conversion and Management 71 (2013) 43–50.	3.59
27.	P. Gopal, M. Chandrasekar, J. Mohana jaiganesh	Experimental Analysis of Heat Transfer and Pressure Drop Characteristics of Aluminum Oxide Nanofluid in Tube with Meshes	Nano Trends, Volume 16, 2014, 19-25	Indexed
28.	M. Chandrasekar, S. Rajkumar	A review on the thermal regulation techniques for non integrated flat PV modules mounted on building top	Energy and Buildings Volume 86, 2015, 692–697	2.465
29	M. Chandrasekar, T. Senthilkumar	Experimental demonstration of enhanced solar energy utilization in flat PV (photovoltaic) modules cooled by heat spreaders in conjunction with cotton wick	Energy Available online 14 July 2015	4.84

		structures		
30	M. Chandrasekar, T. Senthilkumar	Passive thermal regulation of flat PV modules by coupling the mechanisms of evaporative and fin cooling	Heat and mass transfer Availableonline: 18 August 2015 July 2016, Volume 52, Issue 7, pp 1381–139	0.946
31	Karpanai Selvan., M.Chandrasekar, N.Jaya and S.John Vennison	Production of Marine Microalgal Biomass for Biodiesel and Study the Efficiency of its Blends in Diesel Engines	ElixirRenewable Energy 102 44246 (2017) 44246-44250	
32	T. Mathimani , T. Senthil Kumar M. Chandrasekar , L. Uma , D. Prabakaran	Assessment of fuel properties, engine performance and emission characteristics of outdoor grown marine Chlorella vulgaris BDUG 91771 biodiesel	Renewable Energy 105 (2017) 6371646	4.5
33	C. Mohanraj, T. Senthilkumar and M. Chandrasekar	A review on conversion techniques of liquid fuel from waste plastic materials	Int. J. Energy Res. (2017) DOI: 10.1002/er.3720	1.5
34	M. Chandrasekar, T. Senthilkumar, B.Kumaragurubaran, J. Peter Fernandes	Experimental investigation on a solar dryer integrated with condenser unit of split air conditioner (A/C) for enhancing drying rate	Renewable Energy 122 (2018) 375-381	4.5
35	<i>Sridharan M.;</i> <i>Jayaprakash G.;</i> Chandrasekar M.; <i>Vigneshwar P.;</i> <i>Paramaguru S.;</i> <i>Amarnath K.</i>	<u>Prediction of Solar Photovoltaic/Thermal (PV/T) Collector Power Output Using Fuzzy Logic</u>	J. Sol. Energy Eng. 2018; SOL-17-1473 doi: 10.1115/1.4040757	1.4

36	M. Chandrasekar <i>C. Kirthi Priyan</i>	Thermal Management of Flat Photovoltaic Panels using Serrated Fins to Increase Electrical Output	Journal of Technology Innovations in Renewable Energy7 (2018) 27-34. DOI: https://doi.org/10.6000/1929-6002.2018.07.04	Indexed
37	Preethivasani T.R, T. Senthilkumar, M. Chandrasekar,	Refuse-derived fuel for diesel engine utilizing waste transformer oil	Bio Fuels (2019)DOI: 10.1080/17597269.2018.1532755	0.784
38	J. Charles Franklin, M. Chandrasekar	Performance enhancement of a single pass solar photovoltaic thermal system using staves in the trailing portion of the air channel	Renewable Energy 135 (2019) 248-258 0960-1481	6.274
39	T. R. Preethivasani,T. Senthilkumar & M. Chandrasekar	Refuse-derived fuel for diesel engine utilizing waste transformer oil	Biofuels, 2019, 1-13, DOI: 10.1080/17597269.2018.1532755	0.784
40	M. Chandrasekar T. Senthilkumar	Performance of pole mounted flat photovoltaic panel under varying ambient parameters	International Journal of Ambient Energy, 2019, DOI: 10.1080/01430750.2018.1563813	ISSN: 0143-0750 Indexed
41	Mohanraj. C, Senthilkumar, T. & Chandrasekar, M	Characterization studies: waste plastic oil and its blends	Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, DOI: 10.1080/15567036.2019.1587074	0.555
42	Mohanraj. C, Senthilkumar, T. & Chandrasekar, M	Investigation of the performance, combustion Parameters, and emissions analysis on di engine using Two staged distilled waste	Thermal Science: 2018, Vol. 22, No. 3, pp. 1469-1480	1.45

		plastic oil-diesel blends		
43	Karunamurthy, K., Manimaran, R., Chandrasekar, M	Prediction of solar pond performance parameters using artificial neural network	International Journal of Computer Aided Engineering and Technology 2019, Vol.11 No.2, pp.141 - 150	0.54
44	Rajkumar S Chandrasekar M Senthilkumar T Dhobarathy J	Enhancement of wind speed using converging duct for cooling off-grid mast-mounted flat solar PV panels to improve its power generation	IET Renewable Power Generation Volume 14, Issue 2, 2020, p. 263 – 269	3.605
45	Charles Franklin, M. Chandrasekar, D. Ansalam Mattius	Development of cost effective data acquisition system to evaluate the performance of solar photovoltaic thermal systems	ASME Journal of Solar Energy Engineering 143(1) 2021 : 011003	1.19
46	Reuben Raj, C., Suresh, S., Vasudevan, S., M.Chandrasekar Kumar Singh, V., Bhavsar, R.R.	Thermal performance of nano-enriched form-stable PCM implanted in a pin finned wall-less heat sink for thermal management application	Energy Conversion and Management, 2020, 226, 113466	8.2
47	Charles Franklin, M. Chandrasekar, M. Sridharan	Performance of downstream finned solar photovoltaic thermal air (PVTa) system	Jornal of Thermal Science and Engineering Applications https://doi.org/10.1115/1.4049426	1.544
48	Mohanraj C, Senthilkumar T, Chandrasekar M	Numerical simulation of diesel engine using waste plastic oil blends	SN Applied Sciences 2 (9), 1-11	---
49	CR Raj, S Suresh, VK Singh, RR Bhavsar, M Chandrasekar,	Life cycle assessment of nanoalloy enhanced layered perovskite solid-solid phase change material till 10000 thermal cycles for energy	Journal of Energy Storage 35, 102220	6.583

	V Archita	storage applications		
50	M Chandrasekar, P Gopal, CR Kumar, VE Geo	Effect of solar photovoltaic and various photovoltaic air thermal systems on hydrogen generation by water electrolysis	International Journal of Hydrogen Energy Available online 3 June 2021	5.816
51	M.Chandrasekar T.Senthilkumar	Five decades of evolution of solar photovoltaic thermal (PVT) technology – A critical insight on review articles	Journal of Cleaner Production Available online 20 September 2021, 128997	9.3
52	B. Karpanai Selvan, Soni Das, M. Chandrasekar, R. Girija, S. John Vennison, N. Jaya, P. Saravanan, M. Rajasimman, Yasser Vasseghian, N. Rajamohan	Utilization of biodiesel blended fuel in a diesel engine – Combustion engine performance and emission characteristics study	Fuel, https://doi.org/10.1016/j.fuel.2021.122621	6.61
53	M. Chandrasekar, S. Rajkumar M. Varatharajulu	Improvement in electrical energy efficiency of solar photovoltaic panel by passive refrigeration cooling system	International Journal of Energy and Water Resources, https://doi.org/10.1007/s42108-021-00175-9	Indexed
54	M. Chandrasekar	Building-integrated solar photovoltaic thermal (BIPVT) technology: a review on the design innovations, aesthetic values, performance limits, storage options and policies	Advances in Building Energy Research, 17:2, 223-254, DOI: 10.1080/17512549.2023.2185675	0.936

c. National Journals: 26

1. **Chandrasekar, M.,**S. Suresh and A. Chandra Bose, Investigation on the effects of particle Size, concentration and temperature on viscosity of Al₂O₃-Water nanofluids, International Conference on Emerging Technologies and Applications in Engineering, Technology and Sciences (ICETAE 2008), Jan 13-14, Saurashtra University, Rajkot.
2. **Chandrasekar, M.,**S. Suresh and A. Chandra Bose, A critical review on the preparation and characterization of nanofluids, National Conference on Frontiers of Chemistry (NCFC 2008), Jan 24-25, SRM University, Chennai.
3. **Chandrasekar, M.,** S. Suresh and A. Chandra Bose, Factorial design to investigate various factors affecting the viscosity of Al₂O₃ /water nanofluids, International Conference on Material Science Research and Nanotechnology (ICMSRN 2008), Feb 27-29, Mother Teresa University, Kodaikanal.
4. **Chandrasekar, M.,** S. Suresh and A. Chandra Bose, Factorial design to investigate the various factors affecting the thermal conductivity of Al₂O₃/water nanofluids, IISc Centenary-International Conference on Advances in Mechanical Engineering (IC-ICAME 2008), July 2-4, IISc, Bangalore.
5. **Chandrasekar, M.** and S. Suresh, Analysis of thermal conductivity and viscosity data of water containing dispersed Al₂O₃ nanoparticles, International Conference on Active/ Smart materials (ICASM 2009), Jan 7-9, TCE, Madurai.
6. **Chandrasekar, M.,** S. Suresh and A. Chandra Bose, Factorial design to investigate the various factors affecting the thermal conductivity and viscosity of Al₂O₃/water nanofluids, International Conference on Active/ Smart materials (ICASM 2009), Jan 7-9, TCE, Madurai.
7. **Chandrasekar, M.,** S. Suresh and A. Chandra Bose, Correlation for Thermal Conductivity of Al₂O₃/water Nanofluid, International conference on *Emerging Research and Advances in Mechanical Engineering (ERA 2009)*, March 19-21, Velammal Engineering College, Chennai.
8. Suresh, S. and **M.Chandrasekar**, Use of nanofluids for energy efficient heat exchangers International conference on *Emerging Research and Advances in Mechanical Engineering (ERA 2009)*, March 19-21, Velammal Engineering College, Chennai.
9. **M. Chandrasekar**, Investigation of Thread Tight Problem in Servo Input Rod of Braking System, Recent Trends in Automobile Technology and its Future Prospects, School of Engineering and Technology, Bharathidasan University, Trichy, 20-21 January 2006.
10. **M. Chandrasekar** and V. Sivaramakrisnan, Study on the role of Phtytoplankton in sustainable water quality management, The challenges and strategies for the sustainability of safe drinking water, Gandhigram Rural University, Dindigul, 25-27 October 2006.
11. **M. Chandrasekar** and V.Sivaramakrisnan, CFD Technique of capturing Normal shock waves in Flow through Nozzles, Recent Trends in Thermal engineering, competitive manufacturing and management, St. Joseph's College of Engineering, Chennai, 30 January 2007.
12. **M.Chandrasekar**, T.Senthilkumar, S.Suresh, Mysteries of Nanofluids, Recent Trends in Civil and Mechanical Engineering, Anna University of Technology Tiruchirappalli, Tiruchirappalli, 9 and 10 April 2011.
13. **M. Chandrasekar**, S. Suresh, Anirudh Nandhan, C. Rameshkumar, Mechanisms proposed

- for enhancement in forced convective heat transfer with nanofluids-A Review, Jan 09 - 11 2nd International Conference on Advances in Mechanical, Manufacturing and Building Sciences (ICAMB - 2012), VIT Vellore, 09-11 Jan 2012.
- 14.S. Rajkumar, **M. Chandrasekar**, Experimental Investigation and analysis of a new type capillary pumped loop, 2nd International Conference on Advances in Engineering and Technology (ICAET 2012), EGS Pillay Engineering College, Nagappatinam, 28-29 March 2012.
 - 15.**M. Chandrasekar**, T. Senthilkumar, Mechanism of Forced Convective Heat Transfer in Al₂O₃/Water Nanofluid under Laminar and Turbulent Flow, Planetary Scientific Research Center, Singapore, 28-29 April 2012.
 - 16.T. Senthilkumar, **M. Chandrasekar**, The Evaluation of blend of Waste Plastic Oil-Diesel fuel for use as alternate fuel for transportation, Planetary Scientific Research Center, Singapore, 28-29 April 2012.
 - 17.R. Rajbharathi, **M. Chandrasekar**, Passive cooling of PV panel by submerging in shallow depth of water, National Conference on latest techniques in Mechanical Engineering, K. Ramakrishnan college of Engineering Tiruchirappalli, 18th March 2014
 - 18.J. Gayathri, **M. Chandrasekar**, Analysis of concrete slab solar water heating system, National Conference on latest techniques in Mechanical Engineering, K. Ramakrishnan college of Engineering Tiruchirappalli, 18th March 2014.
 - 19.M. Vinoth and **M. Chandrasekar**, Thermal Regulation of Flat PV Module by using Converging Duct, 23rd National and 1st ISHMT-ASTFE Heat and Mass Transfer Conference-2015, 17-19 December 2015, ISRO Trivandrum.
 - 20.**M. Chandrasekar** and Vijayakumar, Serrated fins in heat recovery steam generator for heat transfer improvement, National conference on Smart Energy Systems for Sustainable Development Organized by VIT Chennai Campus during March 3-4, 2017.
 - 21.**M. Chandrasekar** and A. Suganya, Experimental Investigation on the effect of dust accumulation on the power output of the PV panels, National conference on Smart Energy Systems for Sustainable Development Organized by VIT Chennai Campus during March 3-4, 2017.
 - 22.**M. Chandrasekar** and Dhobarathy, Effect of Wind velocity on the cooling of flat PV panel, National conference on Smart Energy Systems for Sustainable Development Organized by VIT Chennai Campus during March 3-4, 2017.
 - 23.**M. Chandrasekar** and Maharaja, Investigation of no load performance index (NLPI) of a solar dryer with A/C exhaust air, National conference on Smart Energy Systems for Sustainable Development Organized by VIT Chennai Campus during March 3-4, 2017.
 - 24.S. Marimuthu, R.Rajkumar and **M. Chandrasekar**, Experimental Investigation on the quality of open solar dried and AC exhaust dried pumpkin slices, National conference on Ideas and Innovations in Mechanical Engineering (NCIIME), 6-7th April 2018, TRP Engineering College, Tiruchirappalli.
 - 25.B. Hemalatha, S. Nanthini and **M. Chandrasekar**, Experimental Validation of drying behavior of AC exhaust dried pumpkin slices, National conference on Ideas and Innovations in Mechanical Engineering (NCIIME), 6-7th April 2018, TRP Engineering College, Tiruchirappalli
 - 26.J. Charles Franklin, **M. Chandrasekar**, M. Manimaran, Literature Summary on the

applications of Fuzzy logics in the field of solar energy research, Virtual Conference on Artificial Intelligence in Mechanical and Civil Engineering, 4th July 2020, SRM TRP Engineering College, Tiruchirappalli

➤ **Patents:1**

Sl.No.	Title of the Patent	Agency	Application No.	Status
1	Flat Photovoltaic cooling with duct opening changing with wind direction	Intellectual Property India	201841002594	Published – Feb 2018

➤ **Sponsored Research Projects: 6**

1.Principal Investigator

Sl.No	Name of the project	Funding agency	Project value (Rs.)	Duration	Status
1	Passive cooling of standalone flat PV module with heat spreaders in conjunction with cotton wick structure	CTDT, Anna University Chennai	Rs. 0.5 lakhs	July 2013- July 2014	Completed
2	Effect of wind velocity and humidity on the performance of standalone flat PV module cooled with heat spreaders in conjunction with cotton wick structure	CTDT, Anna University Chennai	Rs. 1 lakhs	September 2015- August 2016	Completed
3	Use of Solid-Solid PCM to recover heat from air conditioner outdoor unit and its application for continuous drying in solar dryer	TNSCST, Tamilnadu	Rs. 7, 500	June 2019- April 2020	Completed

2.Co-Investigator

Sl.No	Name of the project	Funding agency	Project value (Rs.)	Duration
1	Transmission Test Facility Equipment	CVRDE, DRDO, Avadi	Rs. 8.75 lakhs	Completed
2	Investigations on Fatigue behaviour of Friction Stir Welded Age Hardenable High Strength Aluminium Alloy	Council of Scientific and Industrial Research (CSIR)	Rs. 13.85 lakhs	Completed
3	Experimental investigation on heat transfer characteristics of hybrid PCM in Thermal storage system (TES) for solar applications	Solar Energy Research Imitative (SERI), DST	Rs.58 lakhs	Completed

➤ **List of Seminar / Short Term Course /FDP/ Workshop organized: 31**

1. Three day Workshop on “Emerging Trends in Thermal Power Plant Design” organized by Shanmugha college of Engineering, Thanjavur during 27-29 January 2000.
2. Three day National Workshop on “Appropriate Technology for Sustainable Development” organized by Shanmugha college of Engineering, Thanjavur during 26-28 April 2001.
3. Two day Workshop on “Renewable Sources of Energy” organized by Sri Sam Ram Engineering college, Chennai during 19-18 December 2001.
4. Faculty development programme on “Engineering Mechanics” organized at Bannari Amman Institute of Technolgy, Erode, during 3-5 February 2005.
5. Faculty development programme on “Professional Ethics” organized at Kongu Engineering College, Erode, during 9-14 May 2005.
6. One day Workshop on “Accreditation- A Quality Education” organized by SSM College of Engineering , Komarapalayam, on 29 September 2006.
7. One day Training Programme on “Instrumental Methods of Thermal Analysis and Data Interpretation” organized by NIT, Trichy, on 25 November 2006.
8. Two day Workshop on “Computational Fluid Dynamics” organized by NIT, Trichy during 17-18 September 2007.
9. Three day Workshop on “Recent Trends in Alternative Fuels and Emission control Technologies in Internal Combustion Engines” organized by NIT, Trichy during 19-20 December 2007.
10. Two day Workshop on “Advanced Fluid Dynamics” organized by NIT, Trichy during 4-5 January 2008.
11. Three day Workshop on “Metal Forming and Powder Metallurgy” organized by NIT, Trichy during 28-30 January 2008.
12. Two day Training Programme on “Motivation Programme for Success” organized by NIT, Trichy, from 14-15 February 2008.
13. Short term course on “Recent Trends in Advanced Manufacturing” organized by NIT, Trichy, from 18-22 March 2008.
14. ISTE Workshop on Computational Fluid Dynamics conducted by IIT Bombay from 12-22 June 2012
15. TEQIP sponsored FDP on “Research Avenues in Welding Technology” University college of Engineering, BIT Tiruchirappalli from 1-8 August 2013
16. TEQIP sponsored FDP on “ Numerical method and optimization techniques in Mechanical Engineering” University college of Engineering, BIT Tiruchirappalli from 19-25 August 2013
17. Two day workshop on “Training of resource persons on outcome based accreditation process” organized by Jeyam College of Engineering and Technology, Dharmapuri from 23-24 August 2013
18. Three day workshop on “Quality Initiatives in Technical and Higher Educational Institutions” from 22.10.2013 to 24.10.2013 at Engineering Staff College of India ESCI Campus, Gochi Bowli, Hyderabad.

19. NBA workshop on “Training on Outcome based Accreditation” at Thiagarajar College of Engineering, Madurai from 6, 18-10 Jan 2014.
20. ISTE Workshop on “Fluid Mechanics” conducted by IIT Bombay from 20-30th May 2014.
21. TEQIP sponsored FDP on “Role of Renewable Energy in Indian Power Sector” organized by Department of EEE from 21.9.2015 to 27.9.2015.
22. Centre for Faculty Development, Anna University Chennai Sponsored Faculty development training programme on “Automotive Pollution and Control” 1– 8th June, 2016.
23. TEQIP sponsored FDP on “Advanced manufacturing Methods and materials” organized by Department of Mechanical Engineering from 23.6.2016 to 6.7.2016.
24. TEQIP sponsored FDP on “Numerical methods and Statistical tools in Engineering” organized by Department of Automobile Engineering from 9.6.2016 to 22.6.2016.
25. ISTE Sponsored National Workshop on “Quality Management in Technical Education”, 16-18th March 2017, Port Blair, Andaman.
26. AICTE sponsored Faculty Development Programme on “Smart Materials and Fuel Efficient Technologies for Automotives”, 11-24th December 2017, Annamalai University, Chidambaram.
27. Faculty development training programme on “Dynamics of Machines” 06th–11th May 2019 Sponsored by Centre for Faculty Development, Anna University.
28. AICTE online workshop on Universal Human Values on the theme “Inculcating Universal Human Values in Technical Education” during 11-15 May, 2020 organized by All India Council for Technical Education (AICTE).
29. AICTE STTP on “Energy Storage Characteristics, Surface Treatment, Durability, Sustainability and Micro structural Evaluation of smart and phase change materials and its applications” during 27.07.2020 to 01.08.2020 organized by Sri Sai Ram Institute of Technology Chennai.
30. 2 Week MeITy Govt. of India sponsored FDP on “ICT Tools for Teaching, Learning Process & Institutes” during 10.08.2021 to 21.08.2021 organized by IITDM Jabalpur.
31. AICTE STTP on “Finite Element Analysis using ANSYS” during 23.11.2020 to 28.11.2020 organized by Department of Mechanical Engineering at UCE BIT campus Tiruchirappalli

➤ **National / International Conferences organized / Participated: 11**

1. National conference on Recent Trends in Civil and Mechanical Engineering 25-26th March 2011, Anna University of Technology Tiruchirappalli
2. Faculty development training programme on “Heat and mass transfer” 17th– 24th December, 2012 Sponsored by Centre for Faculty Development, Anna University Chennai.
3. Workshop on “Thrust areas for research and student projects” 17-18th October 2013 Sponsored by TEQIP, University college of Engineering, BIT Campus Trichy.
4. Faculty development training programme on “Engineering Thermodynamics” 24th June-1st July, 2014 Sponsored by Centre for Faculty Development, Anna University Chennai.

5. Faculty development training programme on “Thermal Engineering Applications for sustainable Improvement” 15th June - 30th June, 2015 Sponsored by TEQIP, University college of Engineering, BIT Campus Trichy
6. International conference on "Energy efficient Technologies for Automobile EETA'15" 20-21st March 2015, Sponsored by TEQIP II, University college of Engineering, BIT Campus Trichy
7. International conference on "Sustainable energy systems and energy management SESEM'15" 4-5th June 2015, Sponsored by TEQIP II, University college of Engineering, BIT Campus Trichy
8. National conference on Engineering Design and Analysis (NCEDA 16), 2-3rd september 2016 Sponsored by TEQIP II, University college of Engineering, BIT Campus Trichy.
9. “Quiz on Metals and Materials”, held on 6.8.2017 sponsored by the Indian Institute of Metals (IIM) Tiruchirappalli chapter, University college of Engineering, BIT Campus Trichy
10. Faculty development training programme on “Vehicle Dynamics” 04th– 10th December, 2017 Sponsored by Centre for Faculty Development, Anna University Chennai.
11. 5 days AICTE Training and Learning (ATAL) Academy sponsored online Faculty Development (FDP) on “Alternate Fuels” during 8.12.2020 to 12.12.2020

➤ **Professional recognitions: (details, reviewer, editor)**

1. Renewable & Sustainable Energy Reviews (Elsevier)
2. Colloids and Surfaces A: Physicochemical and Engineering Aspects (Elsevier)
3. Applied Energy (Elsevier)
4. Heat Transfer Engineering (Taylor and Francis)
5. Thermal Science -International Scientific Journal (Vinča Institute of Nuclear Sciences, Belgrade, Serbia)
6. International Journal of heat and mass transfer (Elsevier)
7. Journal of heat and mass transfer (Springer)
8. Journal of Renewable and Sustainable energy (American Institute of Physics (AIP))
9. Energy and Buildings (Elsevier)
10. Energy (Elsevier)
11. Solar Energy (Elsevier)
12. Heat and Mass Transfer (Elsevier)
13. Applied Thermal Engineering (Elsevier)
14. Thermal Science and Engineering Progress (Elsevier)

(A) Chairperson for conferences / Seminar / Technical symposia: NIL

(B) Guest lectures delivered: 12

SI. No	Topic	Title of the program	Date	Venue
1	CLAUSIUS INEQUALITY AND CONCEPT OF ENTROPY	FDP ON ENGINEERING THERMODYNAMICS	29.08.2023	CARE COLLEGE OF ENGINEERING TIRUCHIRAPPALLI
2	COOLING OF SOLAR PV CELLS	STATE GOVERNMENT SPONSORED ONE WEEK ONLINE FDP	15-05-2023	MSPC,KILAKARAI
3	THERMAL MANAGEMENT OF SOLAR PHOTOVOLTAIC CELLS	GUEST LECTURE	03.04.2023	M.I.E.T. ENGINEERING COLLEGE, TIRUCHIRAPPALLI
4	ADVANCEMENT IN CONCENTRATOR PHOTOVOLTAIC SYSTEM AND ITS THERMAL MANAGEMENT	"INDO-JAPAN" WORKSHOP	19.03.2022	NIT TIRUCIRAPPALLI
5	FUTURE PERSPECTIVE AND CHALLENGES OF CLEAN ENERGY UTILIZATION IN INDIA	THERMAL MANAGEMENT STRATEGIES FOR FLAT ROOF TOP PV SYSTEMS	01-02-2021	PSNA COLLEGE OF ENGINEERING AND TECHNOLOGY
6	RESEARCH METHODOLOGY AND THERMAL MANAGMENT OF FLAT PV PANEL	CUTTING EDGE TECHMNOLOGY AND CONTEMPORARY RESERACH IN MECHANICAL ENGINEERING	10-06-2019	SARANATHAN COLLEGE OF ENGINEERING TRICHY
7	LAWS OF THERMODYNAMICS	FDP ON ENGINEERING THERMODYNAMICS	29-05-2017	ANJALAI AMMAL ENGG COLLEGE TIRUVARUR
8	PROJECTION AND SECTION OF SOLIDS	WORKSHOP ON ENGG GRAPHICS	07-06-2017	TRP ENGG COLLEGE TRICHY
9	APPLICATION OF HEAT TRANSFER PRINCIPLES FOR PV CELLS	SEMINAR	09-09-2016	TRP ENGINEERING COLLEGE
10	HEAT TRANSFER ENHANCEMENT USING NANOFLUIDS	APPLICATIONS OF NANOTECHNOLOGY	01-11-2014	NIT TRICHY
11	TRANSIENT HEAT TRANSFER AND MASS TRANSFER	FDP HEAT AND MASS TRANSFER	21-12-2013	SARANATHAN ENGG COLLEGE TRICHY
12	BOILING HEAT TRANSFER	FDP ON HEAT AND MASS TRASNFER	07-12-2012	SURDHARSAN ENGG COLLEGE PUDUKKOTAI