



Dr. S. SUYAMBAZHAHAN, M.E., Ph.D.,
Professor and Head
Department of Mechanical Engineering
SRMIST, Ramapuram Campus
Chennai – 600089.
Email: hod.mech.rmp@srmist.edu.in
Website: www.suyambazhahan.com

OVERVIEW

Prof. Dr. S. SUYAMBAZHAHAN obtained Doctoral Degree (PhD) from India's premier institution, the Indian Institute of Technology Madras (IITM) in March 2004. His area of Specialization is Computational Fluid Dynamics (CFD) and Heat Transfer (Thermo-Fluids) in the field of Mechanical Engineering. He has a total of **33+** years of experience (**post PhD: 19+ years and Pre PhD: 14.02 years**) in Academic, Research and Administration as of the date at NBA and NAAC Accredited Anna University Affiliated Engineering Colleges (AUAEC) and University. He continuously worked as a **Professor and Principal (Head of the Institution) for 14.02 years** in AICTE Approved Engineering Colleges (AUAEC) in Chennai, Tamil Nadu, India. Also, he worked as a Research Professor in ABET Accredited **International Universities for 4 years**. He received **5 awards** for "**Best Academic and Administrative Service**" from National bodies (AIAF, NIC, GAF, Who's Who and ESN Publications) and "**Best Researcher Award**" for "**best research publications**" from International Research Awards on Science, Health and Engineering (SHEN). He has Improved Anna University exam results from **57% to 82%** and enhanced the College's overall rank **from 157th rank to 20th rank** among 584 Colleges under Anna University by applying best practices in TLP. He is a recognized **Supervisor in 5 Universities** for guiding PhD and MS Research scholars. He obtained Anna University Recognized **Research Centre for 5** (Mech., ECE, EEE and CSE) Departments. He has received research grants and seminar grants for the worth of **INR. 3.94 Crore [558450 USD]** from 2012- 2015. He has Published **40+ articles** in reputed International Journals and Conferences. He is a reviewer for **5 international Journals** [IJHMT, IJNHT, ASME JHT, JTEN and Springer]. He has published **3 Australian and 1 Indian Patent** and 1 Indian patent is under review. Also, he has published **05 textbooks** [EP, BCM, PPE, HMT and LAP] with national and international publishers.

He has established **3 Engineering Colleges from scratch to shine** in Chennai, Tamil Nadu, India during Principal Service and his detailed contributions to the development/growth of those institutions are enlightened in the "**ADMIN**" menu for the benefit of the technical Institutions. He followed and implemented the **Principles of his role model, former President of India Dr APJ Abdul Kalam** in his career especially for the development of higher education Institutions/Universities and produced remarkable and commendable outcomes in all aspects/activities of the Institutions. He was **appreciated and awarded by his excellency Dr A P J Abdul Kalam in Aug 2014** for his dedicated professional service to the improvement of technical education in the **Higher Education Sectors and community service** for the benefit of students, staff, faculties, society and community across the world.

Publications in National / International Journals					
S.No	Author(s)	Title	Reference Journal	Status/Volume	JIF
1.	S.Suyambazhahan, T.Sundararajan & Sarit K Das	Hydrodynamic and Thermal oscillations in a non-isothermal laminar jet	<i>International Journal of Heat and Mass Transfer</i>	Vol. 47 pp.3957-3969, 10.01.2004	2.522 WoS
2.	S.Suyambazhahan, Sarit K Das & T.Sundararajan	Numerical study of Flow and Thermal Oscillation in two-dimensional buoyant twin jets	<i>Int. Communications in Heat and Mass Transfer</i>	Vol.34 (2), pp.248-258, 06.11.2006	2.124 WoS
3.	S.Suyambazhahan, Sarit K Das & T.Sundararajan	Numerical simulation of flow and thermal oscillations in non-isothermal laminar impinging Jet	<i>International Journal of Heat and Technology</i>	Vol. 25 (2), pp. 65-73, 22.07.2007	1.240 Scopus
4.	S.Suyambazhahan, Sarit K Das & T.Sundararajan	The effect of buoyancy on flow oscillations for a horizontal plane jet in low-speed applications	<i>Int. J. Experimental Thermal and Fluid Science</i>	Vol. 33 (7) pp. 1119-1127, 19.06.2009	1.595 WoS
5.	S.Suyambazhahan, T.Sundararajan Sarit K Das & K.Velusamy	A computational study of flow maldistribution on the thermal-hydraulic perform. of an IHX in LMFBF	<i>Journal of Nuclear Science and Technology</i>	Vol. 51 (6) pp. 845-857, 15.04.2014	1.452 WoS
6.	Anita A. Nene & S.Suyambazhahan	Performance Characterization of Scheffler solar concentrator and prim. feasibility analysis of perform. imp. using comb. system of Scheffler with flat	<i>International Journal of Applied Engineering Research</i>	Vol. 10, No 9 pp. 22563-22569 (2015)	1.823 Scopus
7.	Anita A. Nene S.Suyambazhahan & S Ramachandran	Comparative analysis of the performance of two Scheffler solar concentrators having different	<i>Int. Journal of Engineering and Technology</i>	Vol. 9, No. 2 pp. 704-709 (Apr 2017)	2.635 Scopus
8.	Anita A. Nene S Ramachandran & S.Suyambazhahan	Effect of wind flow on convective heat losses from Scheffler solar concentrator receivers	<i>Journal of The Inst. of Engineers Series C Springer</i>	Vol 100, Issue 5, pp.737-745 (Apr 2018)	3.476 Scopus
9.	S.Suyambazhahan	Experimental study of coconut shell Fluidized bed gasification for production of Fuel Gas for end-use applications	<i>Int. J. of Applied Engineering Research</i>	Vol 13, No 20 pp14682-14688 [Aug 2018]	1.823 Scopus
10.	Suyambazhahan S, Fahad Al-Mufadi & Abdulaziz S Alaboodi	Numerical Investigation of fire inside the compartment with the effect of ventilation	<i>Int. Journal of Engineering Science Invention</i>	Vol 7, No 10 pp17-28 [Oct 2018]	1.857 Scopus
11.	Mohamed Saleh Alshitawi S.Suyambazhahan & Abdulaziz S Alaboodi	CFD simulation of the breathing zone of a human using a personalized air curtain	<i>Journal of Advances in Mechanical Engineering</i>	Vol. 11, pp. 01-13 Jan 2019	1.161 WoS
12.	S.Suyambazhahan	Experimental Study of Performance and Exhaust Emissions of Fuel Blends in 4 Stroke Direct Injection Compression Ignition (DICI) Engines	<i>International Journal of Recent Technology and Engineering</i>	Vol-8 Issue-1 May 2019	1.11 Scopus
13.	Anita A. Nene S Ramachandran & S.Suyambazhahan	Design and Analysis of solar thermal energy storage system for Scheffler solar concentrator	<i>Comptes rendus de l'Académie des Sciences [France]</i>	Vol 72, No.10, pp.1321-1325 23.06.2019	Elsevier 1.079 WoS
14.	Kole, A.A., Nene, A.A., Ramachandran, S. and Suyambazhahan, S.	Overview of liquid desiccant based indirect evaporative cooling system	<i>International Journal of Scientific and Technology Research</i>	8(8), pp. 991-997 Aug 2019	Scopus 1.475
15.	Ramachandran S Anita A Nene, and Suyambahahan S	Studies on Scheffler solar concentrator to optimize thermal efficiency	<i>International Journal of Ambient Energy Taylor & Francis</i>	https://doi.org/10.1080/01430750.2020.1805357 17.08.2020	2.33 WoS
16.	Ramachandran S Anita A Nene, and Suyambahahan S	An integrated system of flat plate collector and Scheffler solar concentrator for enhancing thermal efficiency and steam generation rate	<i>International Journal of Ambient Energy Taylor & Francis</i>	https://doi.org/10.1080/01430750.2020.1811764 30.08.2020	2.33 WoS
17.	P.Senthil Kumar, S Suyambazhahan P R Suresh & R Velraj	Enhancement of heat transfer performance in an aluminium heat sink using different Nanocoatings	<i>Journal of Enhanced Heat Transfer</i>	Vol. 28 (3) pp 41-61 10.03.2021	2.8 WoS

18	Nand Jee Kanu Suresh Guluwadi Vivek Pandey and Suyambazhahan S	Experimental investigation of emission characteristics on Can-Combustor using Jatropha Based Bio-derived Synthetic Paraffinic Kerosene	<i>Smart Science (TSMA)</i> Taylor & Francis	https://doi.org/10.1080/23080477.2021.1938503 21.06.2021	2.3 WoS
19	Radwan A. Almasri Nidal H. Abu-Hamdeh Khaled Khodary Esmaeil & S Suyambazhahan	Thermal Solar Sorption Cooling Systems- A Review of Principle, Technology, and Applications	<i>Alexandria Engineering Journal</i>	Review Article Vol 61 (1), pp. 367-402 24.06.2021	4.38 WoS
20	Suyambazhahan S S Narayan, Sakthivel R, Ivan G and Nadica S	Comparative study of residual stress prediction methods in Additive Manufacturing processes	<i>Scientific Letters of the University of Žilina</i>	Review Article https://doi.org/10.26552/com.C.2022.2.B99-B105 02.12.2021	1.4 Scopus
21	S Suyambazhahan Tatek Temesgen Anita A Nene and Ramachandran S	Energy saving in an air-conditioning system using interdisciplinary energy conversion approach	<i>Smart Science (TSMA)</i> Taylor & Francis	https://doi.org/10.1080/23080477.2021.2012324 26.12.2021	2.3 WoS
22	S Suyambazhahan T G Sakthivel and Vivek Pandey and P Mohanram	Experimental Analysis of Performance Improvement of a Modified Vapour Absorption System (VAS-GAX) for Cooling Applications	<i>International Journal of Heat and Technology</i>	Vol. 39, No. 6, pp. 1878-1886 27.12.2021	1.33 WoS Scopus
23	Hiwot Berhanu Bayu Addisu Bekele V Chandraprabu and S Suyambazhahan	Enhancement of heat transfer performance of an electric injera baking mitad using copper powder as additive material	<i>Journal of Energy for Sustainable Development</i>	Vol. 68 pp. 242-257 14.04.2022	3.61 WoS
24	S.Suyambazhahan T.Sundararajan and Sarit K Das	Computational Analysis of Thermal Striping in Primary Sodium System of Liquid Metal Fast Breeder Reactor (LMFBR) using FVM	<i>Nuclear Science and Engineering</i>	https://doi.org/10.1080/00295639.2022.2116380 19.08.2022	1.460 WoS
25	S.Suyambazhahan T.Sundararajan and Sarit K Das	CFD analysis of primary and secondary sodium flows and associated heat transfer on performance of an intermediate heat exchanger in LMFBR	<i>International Journal of Nuclear Energy Science & Technology</i>	Vol. 15, Nos. 3/4, pp 201-223 01.10.2022	1.556 Scopus
26	C.V.Mathusuthana Rao S.Suyambazhahan & Cherinet Girma Dunbushe	Characterization of 0-3 Piezoelectric Polymer Composites for Ultrasonic Transducers using FEM Approach	<i>Materials Science and Engineering B</i>	Under Review 24.07.2022 MSB-S-22-01385	1.863 WoS
27	S. Suyambazhahan S Sathyanarayanan and S.P Asok and K V Narayanan	CFD Analysis of effects of flow and thermal oscillations in heat transfer of impinging jet	<i>Heat Transfer Journal</i>	Accepted HTJ-07-2023- OA-0567 30.08.2023	2.431 WoS
28	S Sathyanarayanan S. Suyambazhahan, D Gopinath and K. Gopi Kannan	Comparative evaluation of commercial catalytic converter and modified catalytic converter: Combined application of response surface methodology & artificial neural network	<i>International Journal of Environmental Science and Technology</i>	Under Review 04.04.2023 JEST-D-23-01458	6.609 WoS
29	S. Suyambazhahan, Sankara Narayan V, Mohamed Saahil A and Manimaran S	CFD analysis of combustion chamber of rotary detonation engine for performance enhancement of propulsion system	<i>Aerospace Science and Technology</i>	Under Review 19.04.2023 AESCTE-S-23- 01405	5.457 WoS

BOOK PUBLICATIONS

S N	Title of the book	Publisher(s)	Place & year	Remarks
1.	Engineering Practices	PHI Learning Ltd	New Delhi, 2008	Published
2.	Numerical and Experimental Study of free & impinging jets	Lambert Academic Pub	Germany, 2012	ISBN:978-38433-8002-7 Published
3.	Basic Civil & Mechanical Engineering	Laxmi Publications Ltd	New Delhi, 2013	Published
4.	Power Plant Engineering	Laxmi Publications Ltd	New Delhi, 2013	Published
5.	Heat and Mass Transfer	Scitech Publication Ltd	New Delhi, 2017	Published

Publications in National / International Conferences:

S.No	Author(s)	Year	Title	Name and place of Conference(s)	Status/PP
1.	S.Suyambazhahan Sarit K Das & T.Sundararajan	2002	Numerical simulation of flow and heat transfer in a 2D low speed hot impinging Jet	<i>2nd International Conference on Fluid Mechanics and Fluid Power, Dec' 12 - 14, IIT Roorkee</i>	Published pp. 453 – 463
2.	S.Suyambazhahan T.Sundararajan & Sarit K Das	2004	Numerical simulation of flow and thermal oscillations in non-iso turbulent multiple	<i>ISHMT/ASME Heat and Mass Transfer Conference, January 5-7, HMT-C019, Kalpakkam.</i>	Published pp. 110 – 116
3.	S.Suyambazhahan Sarit K Das & T.Sundararajan	2005	Experimental investigation of velocity oscillations in 2D free jets	<i>6th world Conference on Experimental Heat Transfer, FM & Thermodynamics, Japan.</i>	Published pp.316-317 April 17-21
4.	R.S.V.Prasad, A.M.Junaidbasha & S.Suyambazhahan	2005	Numerical simulation of flow distribution in the aircraft filter assembly	<i>International Conference on Fluid Power Technology Nov' 24-27, Chennai Trade Centre.</i>	Published pp. 181-186
5.	S.Suyambazhahan Sarit K Das & T.Sundararajan	2006	Numerical Prediction of Effect on orient. to flow and thermal Oscillations in buoyant jet	<i>18th National and 7th ISHMT-ASME Heat and Mass Transfer Conf., IIT Guwahati, Jan 4-6.</i>	Published pp. 504-510
6.	K.Rajan, N.V.Mahalakshmi, R.Suresh Kumar & S.Suyambazhahan	2006	Investigation of flow and heat transfer characteristics of Diesel spray impinging on the flat wall	<i>Proceedings of 3rd International Conference on Fluid Mechanics and Fluid Power (FMFP) Dec 7-9</i>	Published
7.	R.Aravind Krishnan D.Madhesh & S.Suyambazhahan	2006	Numerical Simulation of flow and thermal characteristics of isothermal & non- iso. free jet.	<i>Proceedings of 3rd Int. Conference on Fluid Mech and Fluid Power Dec 7-9</i>	Published
8.	K.Velusamy T.Sundararajan & S.Suyambazhahan	2006	CFD Studies in the prediction of thermal striping in an LMFBFR	<i>CFD4NRS, Garching, Munich, Germany, 5-7 Sept 2006</i>	Published pp. 253- 263
9.	S.Suyambazhahan Sarit K Das & T.Sundararajan	2008	Investigation of Thermal Striping in LMFBFR components	<i>XIX National and VIII ISHMT/ASME Heat and Mass Transfer Conference, Jan 3-5</i>	published
10.	R. Suresh Kumar, R.Velraj & S.Suyambazhahan	2009	Hydrodynamic and Thermal Oscillations in an Axi-sym. Imp. Jet on a Flat Plate	<i>7th International Conference on Heat Transfer, Fluid Mech & Thermodynamics, Turkey.</i>	Published Paper No.719
11.	S.Suyambazhahan	2011	Experimental Study of Regenerative brakes System used in an Automobile Engine	<i>38th National Conference on Fluid Mechanics and Fluid Power Dec 15 -17</i>	Published
12.	Anita A Nane & S.Suyambazhahan	2012	Thermal Efficiency optimization applied to Scheffler Solar Concentrator	<i>International Conf. on Control System & Power Electronics CSPE 2012, Dec 3-4</i>	Published ELSEVIER PP.593-598
13.	P.K.Nagarajan, J.Subramani & S.Suyambazhahan	2014	Nanofluids for solar collector applications-A Review	<i>6th International Conference on Applied Energy -ICAE2014</i>	Published ELSEVIER
14.	C.V.Mathusuthana Rao & S.Suyambazhahan	2014	Simulation Study of 0-3 Piezoelectric Polymer Composites for Ultras. Trans.	<i>National Conference on Materials for Modern World NCMMW-2014 Sept 10-11</i>	Published ISBN:978-81-89-843-63-2
15.	Anita A. Nene S Suyambazhahan S and S Ramachandran	2017	Developing an empirical correlation for the perform. of a Scheffler solar concentrator using dimensional analysis	<i>Proceedings of 68th IRF International Conference, 29th January 2017, Pune, India,</i>	Published ISBN: 978-93-86291-94-3 pp. 10-14
16	Karky. A.E, Badrinath. R.G, Ezhilarasan T and Suyambazhahan S	2023	Experimental analysis of performance of diesel engine with camphor oil Biodiesel	International Conference in inteligence in Industrial Automation (ICIIA2023), 5 th April 2023.	Published MECHICIIA1051

PATENTS:

1. Development of Solar Powered Insecticide Sprayer, 202141019175, Granted: 07.05.2021
2. An automated system for controlling turn indicators in Automobiles-AU2021104546-Granted-30.03.2022
3. A portable air conditioning system and setup for Automotive- AU2021105737-Granted:17.11.2021
4. A portable apparatus for preparation of beverages – AU2021106453-Granted:17.11.2021
5. Development of a prototype GAX absorption system for cooling Applications-202141046633-Published 21.04.2023
6. Solar Powered Camera based kit for Lead Irons detection in water employing H₂S gas-202321025271-03.04.2023

RESEARCH PROJECTS COMPLETED:

Project(s) Title & Sanction No	Duration	Sponsor	Value	Investigators
Thermal-Hydraulic Investigations of Thermal Striping in the Hot and Cold pools of LMFBR Senior Project Officer – MEE9900133IGCATSUN Date: 06.01.2000 to 02.05.2001	2 Years	DAE IGCAR Kalpakam	Rs.7.5 Lakhs	Dr.T. Sundararajan, Sarit K Das, C.Balaji & Dr.S.Suyambazhahan
Thermal-Hydraulic Analysis of Intermediate Heat Exchanger Senior Project Officer – MEE0102148IGCATSUN Date: 03.05.2001 to 30.04.2003	1.5 Years	DAE IGCAR Kalpakam	Rs.6.0 Lakhs	Dr.T. Sundararajan Dr.Sarit K Das Dr.B.V.S.S. Prasad & Dr.S.Suyambazhahan
Fabricating and experimentally analysing the performance of GAX absorption system for cooling applications 8023/RID/RPS-59/2010-11, DOS: 31.03.2011	2 Years	AICTE-RPS New Delhi	12.0 Lakhs	Dr.S.Suyambazhahan Principal Investigator-PI
Simulation, Fabrication and Characterization of PZT- PVDF Piezoelectric Composites for Ultrasonic Transducers, SERB/F/2133/2014-15,27.06.2014	2 Years	DST-SERB New Delhi	Rs.8.89 Lakhs	Dr.V.Madhusudhana Rao & Dr.S.Suyambazhahan Co-PI
FIST Programme of Department of Science and Technology, New Delhi SR/FIST/College-239/2014, DOS:21.11.2014	5 Years	DST-FIST Bombay	40 Lakhs	Dr.S.Suyambazhahan & (Principal Co-ordinator) Dr M.Subramainam
Recognition of Institute as Business Incubation (BI)/Host Institution(HI) for Implementation of the scheme “Support for Entrepreneurial & Managerial Development of SME’s through Incubators” 3(2)/2014/INC/13th Meeting, DOS:21.11.2014	5 Years	MSME Bombay	2.5 Cr	Dr.S.Suyambazhahan & (Principal Co-ordinator) Dr L.Vijay

His areas of Research include

- CFD & Heat Transfer (Thermo-fluids)
- Flow and thermal oscillations in Jet flows
- Nano-Fluids for solar collectors
- Thermal Solar Sorption Cooling Systems-
- Characterization of Sheffler solar concentrator
- solar thermal energy storage system
- Passive cooling
- Alternate fuels in IC Engines
- Thermal striping in LMFBR
- Flow maldistribution in thermal hydraulic performance of Heat Exchangers
- Vapour Absorption System for cooling applications
- Residual stress prediction in Additive Manufacturing

He has received the research grant for the worth of **INR. 3.94 Crores [558450 USD]** from various Indian funding agencies like **AICTE, DST, DRDO, MSME, DAE, ISRO, etc.** He has published **40+ Research Articles** in International Journals & Conferences, **6 Patents** (Australian - 3, and Indian – 3) and **7+ textbooks** of Mechanical Engineering Courses. There are 42 B Tech and 27 M Tech and 2 PhD scholars were successfully completed under my guidance.

INTERNATIONAL JOURNAL REVIEWER:

- *International Journal of Heat and Mass Transfer*
- *International Journal of Numerical Heat Transfer*
- *ASME Journal of Heat Transfer*
- *Journal of Waste and Biomass Valorization- Springer and*
- *Journal of Thermal Engineering*

MEMBER OF BOARD OF STUDIES, SELECTION & RESEARCH BOARD:

- ❖ Board of Studies in Faculty of Mechanical Engineering, Anna University Chennai
- ❖ Bombay Science & Research Education Institute, Bombay
- ❖ Sri Vidya College of Engineering & Technology, Virudhunagar.
- ❖ Member of the Result Passing Board- Anna University Chennai
- ❖ Member of the paper scrutinizing board - Annamalai University, Chidambaram
- ❖ Panel member of selection of faculty members in various Engineering Colleges
- ❖ Member of Expert Committee for Inspection for affiliation and Accreditation
- ❖ Member of PhD Curriculum Setting Committee, Adama Science and Technology University

AWARDS

- School First Rank in H.S.C. (+2) Examination – Government Higher Secondary School – 1985.
- Awarded First Mark in “Advanced Heat Transfer” course - M.E. Degree – 1997.
- University First Rank and Distinction Award by Vice-Chancellor Annamalai University – Nov 1998
- **SHIKSHA BHARTI PURASKAR AWARD** - All India Achievers Foundation - 30.09.2010
- **EMINENT EDUCATIONIST AWARD** - National & International Compendium - 09.12.2010
- **BEST PRINCIPAL PERFORMANCE AWARD** - Global Achievers Foundation - 05.02.2015
- **ALBERT NELSON MARQUIS LIFETIME ACHIEVEMENT AWARD** - Marquis Who's Who 29.04.2017
- **PILLARS OF INDIA 2021** - ESN Publications, Tamil Nadu, India - 26.05.2021
- **BEST RESEARCHER AWARD**, International Research Awards on Science Health & Engineering 27.12.2021

Membership with professional bodies:

ISTE, ISHMT, CE (I), IIPPE, CI (IS), AeSI, NSFMP, FIE, IEEE, CSI-NM, FPSI, MMA, SAE (I), EFUAI, ASME, FISME, AASCIT and PE (I)

LinkedIn Profile Link: <https://www.linkedin.com/in/dr-suyambazhahan-s-1a72881b/>

Google Scholar: <https://scholar.google.co.in/citations?user=iXqmfyMAAAAJ&hl=en>