

UNIVERSITY OF PRETORIA

Department of Mechanical and Aeronautical Engineering

Suseel Jai Krishnan (CV) - Updated March 2022

<https://www.researchgate.net/profile/Suseel-Jai-Krishnan-S>

<http://www.researcherid.com/rid/W-8690-2018>



1. BIOGRAPHICAL SKETCH

1.1 GENERAL INFORMATION

First name	Suseel				Last name	Jai Krishnan			
Citizenship	Indian				Title	Dr.			
Place of birth	India								
Population group	Asian		Coloured		Indian		White	✓	
Marital status	Married				Fax No.	-			
Direct Telephone	-				E-mail	suseel.krishnan@up.ac.za ssjk.saec@gmail.com			
Residential address	Mogappair East, Chennai, Tamil Nadu India				Postal address	Dept. of Mech. and Aeronautical Eng. University of Pretoria Lynnwood Road Hatfield, 0002 Pretoria South Africa			

1.2 ACADEMIC QUALIFICATIONS

Degree/ Diploma	Field of study	University	Period	Year of registration	Distinctions
Ph.D.	Mechanical Engineering (Nanofluid Heat Transfer)	Anna University	7	2013	-
M.E.	Thermal Engineering	Anna University	3	2005	Yes
B.E.	Mechanical Engineering	Anna University	5	2001	Yes

1.3 MEMBERSHIP IN PROFESSIONAL BODIES		
Name of the Professional Body	Membership number	Valid from
Indian Society for Technical Education (ISTE)	LM110134	2016
Institution of Engineers India (IEI)	M1736390	2021
Indian Science Congress Association (ISCA)	L41304	2021

1.4 WORK EXPERIENCE TO DATE		
Name of employer	Capacity and/or type of work	Period
University of Pretoria	Postdoctoral Research Fellow	April 2021 – Present
S. A. Engineering College	Assistant Professor	June 2015 – Nov. 2019
Velammal Institute of Technology	Assistant Professor	July 2011 – April 2015
R. M. K. Engineering College	Assistant Professor	Dec. 2008 – May 2011
Cognizant Technology Solutions Pvt. Ltd.	Programmer Analyst	Dec. 2007 – Dec. 2008

2. TEACHING AND LECTURING DUTIES

2.1 CONFINED LECTURING

2.1.1 Courses/modules presented:					
Course	Level	Academic Institution	Degree/ Diploma	Compilation of study guides (Yes or No)	Curriculum design (Yes or No)
Basic Civil & Mechanical Engineering (GE2152 / GE6251)	1 st	RMKEC, VIT	B.E.	Yes	No
Engineering Graphics (GE2111 / GE6152 / GE8152)	1 st	RMKEC, VIT, SAEC	B.E.	Yes	No
Engineering Mechanics (GE6253 / GE8292)	1 st	SAEC	B.E.	Yes	No
Engineering Practices Laboratory (GE2116 / GE6162 / GE8261)	1 st	RMKEC, VIT, SAEC	B.E.	Yes	No

Fluid Mechanics and Machinery (CE6451)	2 nd	VIT	B.E.	Yes	No
Environmental Science and Engineering (GE6351 / GE8291)	2 nd	VIT, SAEC	B.E.	Yes	No
Fluid Mechanics and Machinery Laboratory (CE6451)	2 nd	VIT	B.E.	Yes	No
Heat and Mass Transfer (ME2251 / ME6502)	3 rd	RMKEC, VIT, SAEC	B.E.	Yes	No
Powerplant Engineering (ME2403 / EE2252 / ME6701)	3 rd	RMKEC, VIT, SAEC	B.E.	Yes	No
Automobile Engineering (ME6602)	3 rd	SAEC	B.E.	Yes	No
Thermal Engineering Laboratory – I (ME6412)	3 rd	SAEC	B.E.	Yes	No
Thermal Engineering Laboratory – II (ME6512)	3 rd	SAEC	B.E.	Yes	No
Advanced I.C. Engines (ME6016)	4 th	VIT, SAEC	B.E.	Yes	No
Design and Fabrication Project (ME6612)	4 th	SAEC	B.E.	Yes	No
Project Work (ME2453 / ME6811)	4 th	RMKEC, VIT, SAEC	B.E.	Yes	No

2.1.2 Study leader for design projects and research projects

Study leader for 12 design projects and research projects of third and final year undergraduate students in the Department of Mechanical Engineering since Dec. 2008.

2.2 GUEST LECTURING

2.2.1 Lecturing to other audiences

1. Guest speaker for a One Day International Seminar on Multifunctional Materials and its Applications at Sacred Heart College (Autonomous), Tirupattur during November 2021
2. Guest lecturer during a Faculty Development Programme on Powerplant Engineering at Velammal Institute of Technology during May 2018.
3. Guest lecturer during a Faculty Development Programme on Thermal Engineering at Mailam Engineering College during April 2016.
4. Guest lecturer during a Faculty Development Programme on Engineering Thermodynamics at Velammal Institute of Technology during June 2014

3. ADMINISTRATIVE DUTIES

Roles	Academic Institution	Level	Period
Class In-charge	RMKEC, VIT, SAEC	Department	10 Years
Students Mentor	RMKEC, VIT, SAEC	Department	10 Years
SAE India Coordinator	VIT, SAEC	Department	2 Years
Placement & Higher Education coordinator	RMKEC, VIT,	Department	3 Years
Alumni Coordinator	SAEC	Department	3 Years
Accreditation Coordinator – Criteria I & III	SAEC	Department & Institution	2 Years
Research Coordinator	VIT	Department	2 Years
Literary Activities coordinator	RMKEC, VIT, SAEC	Department	2 Years
BEC trainer	RMKEC	Department & Institution	2 Years
Academic coordinator	VIT	Department	1 Year
Subject Expertise member	VIT	Department	1 Year
Discipline coordinator	SAEC	Institution	1 Year

4. RESEARCH

RESEARCH FIELD:

- Nanopowder synthesis
- Material characterization
- Nanofluids
- Nanofuels
- Nanotribology
- Nanocoolants

4.1 RESEARCH OUTPUT

4.1.1. Articles Published in refereed accredited journals:

1. Suresh K, Karuppasamy P, Palani S, **Suseel Jai Krishnan S**, Maridurai T (2022), Effect of Silane Treated Wheat Husk Biosilica (WHB) Deionised Water Dielectric on EDM Drilling of Ti-6Al-4V Alloy, Silicon, 10.1007/s12633-021-01526-1
2. Khetib Y, Alahmadi A, Alzaed A, **Suseel Jai Krishnan S**, Mohsen Sharifpur, Cheraghian G (2021), Application of Cylindrical Fin to Improve Heat Transfer Rate in Micro Heat Exchangers Containing Nanofluid under Magnetic Field, Processes 9, 10.3390/pr9081278
3. Sivalingam A, Balusamy T, **Suseel Jai Krishnan S**, Nagarajan P K (2021), Evaluating the potential of Azadirachta indica assisted zinc oxide particles as efficacious nanofluids by convective experiments with twisted tape annexed circular tube, Biomass Conversion and Biorefinery, 10.1007/s13399-021-01344-w
4. Karthigairajan M, Umanath K, **Suseel Jai Krishnan S** (2021), Investigating the conjugate heat transfer phenomena on various ducts for aircraft environmental control system, Materials Today: Proceedings 46, pp. 3631-3638, 10.1016/j.matpr.2021.01.651
5. Dhanesh C, Venkatesan J, **Suseel Jai Krishnan S**, Sankaranarayanan G (2020), Role of combustion derived magnesia nanoflakes on the combustion, emission and functional characteristics of diesel engine susceptible to palm oil biodiesel-diesel blend, Journal of Thermal Science and Technology 16, 10.1299/jtst.2021jtst0025
6. **Suseel Jai Krishnan S** & Nagarajan P K (2019), Influence of stability and particle shape effects for an entropy generation based optimized selection of magnesia nanofluid for convective heat flow applications, Applied Surface Science 489, pp.560-575, 10.1016/j.apsusc.2019.06.038
7. Prabakar, K.S., Nagarajan P K. & **Suseel Jai Krishnan S** (2019), Comparative evaluation over the convective thermal effects on deionized (DI) water based Al₂O₃ and TiO₂ nanofluids flowing through a triangular duct, Journal of the Balkan Tribological Association 25, pp. 882-898
8. **Suseel Jai Krishnan S** & Nagarajan P K (2019), Convective performance and particle effect analysis on aqua-antifreeze based Oxomagnesium nanofluids whilst flowing through a micro-fin tube with twisted tapes, Journal of Thermal Analysis and Calorimetry 138, pp. 1175-1191, 10.1007/s10973-019-08336-z
9. **Suseel Jai Krishnan S** & Nagarajan P K (2018), Convective thermal performance and entropy generation analysis on Solution Combustion synthesis derived magnesia nano-dispersion flow susceptible by a micro-fin tube, Experimental Thermal and Fluid Science 101, pp. 1-15, 10.1016/j.expthermflusci.2018.10.002
10. **Suseel Jai Krishnan S**, Nagarajan P K, Mamat R, Vimaladevi L & Ravishankar S (2017), Synthesis, Characterization and Thermo-physical investigations on Magnesia nanoparticles dispersed in Ethylene Glycol-DI water [50:50], Micro & Nano Letters 13, pp. 335-340, 10.1049/mnl.2017.0484
11. Magesh Babu D, Nagarajan P K, Ravishankar S & **Suseel Jai Krishnan S** (2016), Enhancing the thermal performance of Al₂O₃/DI Water Nanofluids in Micro-Fin Tube equipped with Straight and Left-Right Twisted-Tapes in Turbulent Flow Regime, Experimental Heat Transfer 30, pp. 267-283, 10.1080/08916152.2016.1238857

4.1.2. Articles Published in conferences:

1. Dhanesh S, Venkatesan J, **Suseel Jai Krishnan S** (2020), Experimental studies on the combustion derived Zinc Oxide nanoparticles as fuel additives to evaluate the emission characteristics of a diesel engine, SMETI 2020, AICTE sponsored International Conference, Sri Venkateswara College of Engineering, Sriperumbudur, India
2. **Suseel Jai Krishnan S**, Nagarajan, P K, Venkatesan J (2020), Predicting the iso-electric point of aqua-antifreeze fluid dispersed with combustion derived Magnesium Oxide nanoparticles, SMETI 2020, AICTE sponsored International Conference, Sri Venkateswara College of Engineering, Sriperumbudur, India
3. **Suseel Jai Krishnan S** & Nagarajan P K (2019), Convective heat transfer and entropy generation studies on the Solution Combustion derived Magnesia based nano-dispersion flow through a twisted tape equipped circular pipe, 5th International Conference on Nanoscience and Nanotechnology (ICONN), SRM Institute of Science and Technology, Chennai, India
4. **Suseel Jai Krishnan S** & Nagarajan P K (2017), Experimental study on thermal conductivity of solution combustion synthesized MgO nanoparticles dispersed in water and ethylene glycol (50:50) binary mixture, 61st Department of Atomic Energy-Solid State Physics Symposium (DAE-SSPS), AIP Proceedings, 10.1063/1.4980307

4.2 OTHER SCHOLARLY RESEARCH-BASED CONTRIBUTIONS

1. Peer reviewer for the Journal of Thermal Analysis and Calorimetry, Micro and Nano Letters, International Journal of Heat and Mass Transfer

5. CONTINUOUS LEARNING ACTIVITIES

1. Scored 76 in PTE Academic at the first attempt (test date: 28th August 2020)
2. Have attended 11 Faculty Development Programmes, 15 Workshops and Seminars, 20 Webinars

6. AWARDS

1. Best Paper Award in Mechanical Engineering stream published in the SMETI 2020 AICTE sponsored International Conference at Sri Venkateswara College of Engineering, Chennai, India
2. Best Paper Award in Automobile Engineering stream published in the SMETI 2020 AICTE sponsored International Conference at Sri Venkateswara College of Engineering, Chennai, India
3. Best project award awarded by The Institution of Engineers India, at Adhiyaman College of Engineering, Hosur, India