

## Curriculum Vitae



**Dr.P. Vijayakumar,**  
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### **Objective:**

To succeed in an environment of growth and excellence and earn a job which provides me job Satisfaction and self-development and help me achieve personal as well as organization goals.

### **Summary of Skills:**

- Excellent academic records and experience in teaching Thermal Engineering.
- Outstanding experience of assisting and mentoring students.
- Ability to prepare syllabus, deliver lecture, and hold group conversation onrelated-topic with students.

### **Work Experience:**

#### **Assistant Professor**

Department of Mechanical Engineering,  
KSR Institute for Engg & Technology,  
Tiruchengode.

**03.06.2013 – 05.11.2014**

**Experience: 1 Year 5 Months 2 Days**

#### **Assistant Professor**

Department of Mechanical Engineering,  
M.Kumarasamy college of engineering,  
Karur.

**10.12.2014 – 27.04.2017**

**Experience: 2 Years 4 Months 17 Days**

#### **Assistant Professor**

Department of Mechanical Engineering,  
Sri Shakthi Institute of Engg & Technology,  
Coimbatore.

**10.05.2017 – 30.04.2023**

**Experience: 5 Years 11 Months 20 Days**

#### **Assistant Professor (SG)**

Department of Aeronautical Engineering  
Nehru Institute of Technology,  
Coimbatore.

**19.06.2023 – Till Date**

**Experience : till date**

**Total Experience : 9 Years 10 Months 17 Days**

**Education qualification:**

<b>Ph.D., Mechanical Engineering</b> Bannari Amman Institute of Technology	-	<b>Jan 2023</b>
<b>M.E., Thermal Engineering</b> Jayam College of Engg & Technology,	<b>8.58 CGPA</b> (Anna University II rank Holder)	<b>2013</b>
<b>B.E., Aeronautical Engineering</b> Hindusthan College of Engg & Technology.	<b>75 %</b>	<b>2010</b>
<b>Diploma – Mechanical Engineering</b> K.S.R. Institute of Technology,	<b>85 %</b>	<b>2007</b>
<b>HSc</b> Sengunthar Mahajana Hr. Sec. School,	<b>64 %</b>	<b>2005</b>
<b>SSLC</b> Sengunthar Mahajana Hr. Sec. School,	<b>79 %</b>	<b>2003</b>

**Technical Skills:**

CAD/CAM : ANSYS, Solid Works, AutoCAD, Tracepro

**Teaching Skills:**

Engineering Thermodynamics	Heat & Mass Transfer
Thermal Engineering	Gas Dynamics & Jet Propulsion
Manufacturing Technology-1	Engineering Graphics
Basic Civil & Mechanical Engineering	Maintenance Engineering
Powerplant Engineering	Automobile Engineering
Automotive Air-Conditioning	Optimization Techniques in Design

**Project work:****PhD:**

**“Performance Analysis and Optimization of a Solar Collector Integrated with Pulsating Heat Pipe and Compound Parabolic Concentrator”**

**Post-Graduation:**

**“Optimization & Analysis of Fins to enhance the performance of I.C. Engines”**

**Under Graduation:**

**“Design and Analysis of the Thermal Protection System on Space Shuttle”**

**Areas of interest:**

- Thermal Engineering
- Solar Energy
- Heat pipe Technology

### **Achievements:**

- # 100 Percentile Attendance during Third Year in DME in KSR Institute of technology.
- # **Second Rank Holder in Thermal Engineering in Anna University**, Chennai for the Academic Year, 2011-2013.
- # Produced 95 percentile of results in Heat & Mass Transfer during the year 2013.
- # Awarded Reviewer recognition by Materials Today Proceedings in July 2020.

### **Patent Published:**

- Published a Patent under the title of “Development of Robot for Pipe line Inspection” at 04.04.2020. Application Number: 202041014971.
- Published a Patent under the title of “Development of Solar based Compound Parabolic Concentrator for Agriculture Fields” at 17.06.2020. Application Number: 202041025460.

### **Patent Filled:**

- Filled a Patent under the title of “IoT based Autonomous Fire Extinguisher Robot” on 07.07.2023. Application Number: 202341045901.
- Filled a Patent under the title of “Investigation on Emission Reduction Potential of Nickel and Zinc Coated Catalytic Converters” on 13.07.2023. Application Number: 202341047372.
- Filled a Patent under the title of “Investigation on Performance of Air Duct System Based IC Engine” on 24.07.2023. Application Number: 202341049602.

### **Conference Presented:**

- Presented a paper under the title of “Optimization and Analysis of Fins to enhance the Performance of IC Engines” in the international level conference on “Futuristic Trends in Aeronautical Engineering” held on 02.03.2013 at Thiruvalluvar College of Engineering and technology, Vandhavasi.
- Presented a paper under the title of “Optimization and Analysis of Fins to Enhance the Performance of I.C Engines” TAME – 2013, held on 08.02.2013 & 09.02.2013 Organized by Selvam College of Technology, Namakkal.
- Presented a paper under the title of “Optimization and Analysis of Fins to Enhance the Performance of I.C Engines” ICMOR – 2013, held on 5<sup>th</sup> April, 2013 Organized by Dhana Lakshmi Srinivasan Engineering College, Perambalur.
- Presented a Paper under the title of “Solar Tracking Systems using in Solar Collector”, International Conference in Futuristic Innovations in Mechanical Engineering and Manufacturing Management – 17 on 30 and 31<sup>st</sup> March 2017 at M. Kumarasamy College of Engineering, Karur.
- Presented a paper under the title of “Experimental Study on Flat plate Solar Collector with Twisted Tape Inserts for Improving Performances”, National Conference on Advancements in Mechanical, Manufacturing & Civil Engineering (NCAMMCE – 18) held at M. Kumarasamy College of Engineering on 9<sup>th</sup> March 2018
- Presented a Paper titled “Experimental Study on Effect of Wick Structures on Thermal Performance Enhancement of Cylindrical Heat Pipes” in the International Conference on “Thermal Analysis and Energy Systems” held on 12.04.2018 and 13.04.2018.
- Presented a paper under the title of “Performance Analysis of Compound Parabolic

Concentrator with Heat Pipe”, 3<sup>rd</sup> International Conference on Advances in Science, Engineering and Management 2k19, held at Jai Shriram Engineering College, Avinashpalayam on 7<sup>th</sup> March, 2019.

- Presented a paper under the title of “Experimental Investigation on Flat plate Solar Collector with Twisted Tape Inserts for improving performances “, National Conference on “Emerging Trends in Engineering and Technology”, held at Nandha College of Technology, Erode on 16<sup>th</sup> March, 2019.

### **Paper Published :**

- Kumaresan, G., Vijayakumar, P., Ravikumar, M., Kamatchi, R., & Selvakumar, P. (2019). Experimental study on effect of wick structures on thermal performance enhancement of cylindrical heat pipes. *Journal of Thermal Analysis and Calorimetry*, 136, 389-400.
- S.Vignesh, P. Vijayakumar, & B. Anbarasan (2019), Review on Finite Element Method in Biomedical Engineering, *Jour of Adv Research in Dynamical & Control Systems*, Vol. 11, 07- Special Issue.
- Vijayakumar, P., Kumaresan, G., Faizal, U. M., Chandran, G. V., & Adharsh, K. V. (2019, September). Performance evaluation of compound parabolic concentrator with evacuated tube heat pipe. In *IOP Conference Series: Earth and Environmental Science* (Vol. 312, No. 1, p. 012008). IOP Publishing.
- Vijayakumar, P., Kumaresan, G., Sudhagar, S., Chandran, G. V., & Adharsh, K. V. (2019, September). Development of Solar Oven employed with Parabolic Concentrator. In *IOP Conference Series: Earth and Environmental Science* (Vol. 312, No. 1, p. 012009). IOP Publishing.
- Faizal, U. M., Jayachitra, R., Vijayakumar, P., & Rajasekar, M. (2021). Optimization of inbound vehicle routes in the collection of bio-medical wastes. *Materials Today: Proceedings*, 45, 692-699.
- Rajasekar, M., Faizal, U. M., Sudhagar, S., & Vijayakumar, P. (2021). Influence of heat treatment on tribological behavior of Al/ZrO<sub>2</sub>/fly ash hybrid composite. *Materials Today: Proceedings*, 45, 774-779.
- Vijay, R., Vijayakumar, P., Kumaresan, G., & Kumar, S. G. (2021). Performance study of FPSC integrated with twisted tape inserts. *Materials Today: Proceedings*, 45, 1222-1226.
- Vijayakumar, P., Kumaresan, G., Kumar, S. G., & Eswaran, M. (2021). A review on applications of nanofluid in evacuated tube heat pipe integrated with compound parabolic concentrator. *Materials Today: Proceedings*, 45, 1227-1232.
- Gokul Karthik, A., Saravanakumar, R., & Vijayakumar, P. (2021). Bald eagle search optimization on dual fueled reactivity controlled combustion ignition based engine characteristics by altering low reactive fuels. *Environmental Progress & Sustainable Energy*, 40(6), e13683.
- Palanivel, V., Govindasamy, K., & Arunachalam, G. K. (2022). Optimization and prediction of pulsating heat pipe compound parabolic solar collector performances by hybrid deep belief network based bald eagle search optimizer. *Environmental Progress & Sustainable Energy*, 41(2), e13740.
- Vijay, R., Govindasamy, K., Vijayakumar, P., & Lazarus, G. A. (2022). Experimental investigation on productivity enhancement of a solar still modified with the evacuated tube heat pipe using paraffin wax. *PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART C-JOURNAL OF MECHANICAL ENGINEERING SCIENCE*, 236(21), 10865-10876.

- Arun Negemiya Arulsamy, Bakkiyaraj Murugesan, Samson Jerold Samuel Chelladurai, Mohanraj Kishnan Selvaraj, Vijayakumar Palanivel, Gizachew Balcha, Experimental Investigation on Microstructure and Mechanical Properties of Friction Welded Dissimilar Alloys, Advances in Materials Science and Engineering,2022.
- Vijayakumar.P,Gokul Karthik.A & Kumaresan.G, Performance Optimization of Pulsating Heat Pipe Integrated Compound Parabolic Solar Collector Using Hybrid Red Fox Optimizer based DNN (DNN-Rdfx)" , Solar Energy – Under Review.

### **Publication Summary:**

- International Journals: 13 (SCIE: 05; SCOPUS: 07)
- Under Review: 01
- Total Number of Citations: 90
- h-index: 6
- i10-index: 2
- Google Scholar: <https://scholar.google.co.in/citations?user=Wndi-58AAAAJ&hl=en>

### **Programmes Attended:**

- Participated One day Workshop on “Lean Manufacturing with hands on training” Organized by Roots Industries, Coimbatore at 17<sup>th</sup> November 2017.
- Participated in Three Days Hands on Training in Cloud Based Digital Manufacturing Software” Organized by Sri Shakthi Institute of Engineering and Technology, Coimbatore during 8<sup>th</sup> December 2017 – 10<sup>th</sup> December 2017.
- Attended One day workshop on “Intellectual Property Rights and Innovation” organized by Sri Shakthi Institute of Engineering and Technology, Coimbatore at 10.02.2018.
- Attended One day National Workshop on “Challenges and Opportunities in Solar and Thermal Energy Systems” held at Bannari Amman Institute of Technology, Sathyamangalam at 02.03.2018.
- Participated in one day hands on training programme on “Finite Element Analysis using ANSYS” Organized by M. Kumarasamy College of Engineering, Thalavapalayam on 16<sup>th</sup> March 2018.
- Attended the two days Faculty Development programme on “Recent Advances in Mechanical Engineering” held at Karpagam Academy of Higher Education on 22<sup>nd</sup> and 23<sup>rd</sup> November,2019.
- Participated in a One-day National Level Seminar on “Engineering Materials and Metallurgy” organized by Karpagam Academy of Higher Education, Coimbatore held on 30.01.2020.
- Participated in National Level Online Faculty Development Programme on “Effective Research – Tools, Funding and IPR” from 07.09.2020 to 10.09.2020 organized by Hindusthan College of Engineering and Technology, Coimbatore.
- Participated a International Webinar on “Space Exploration” organized by Nehru College of Engineering and Technology, Coimbatore on 29.09.2020.
- Participated in the AICTE-ISTE Sponsored Induction/Refresher Programme (Phase-I) on "Outcome Based Education" organized by Department of Mechanical Engineering, Government College of Engineering, Bargur held from 28.12.2020 to 02.01.2021.

- participated & completed successfully AICTE Training And Learning (ATAL) Academy Online FDP on "Energy Storage" from 2021-2-1 to 2021-2-5 at Gandhi Institute of Technology and Management.
- Participated & completed successfully AICTE Training And Learning (ATAL) Academy Online FDP on "Energy Storage" from 2021-2-1 to 2021-2-5 at Gandhi Institute of Technology and Management.
- Attended the one-day online workshop on "Fundamentals of Conventional Machining" organized under 'CSIR Integrated Skill Initiative' programme by CSIR-Central Scientific Instruments Organization (CSIR-CSIO), Chandigarh on 4<sup>th</sup> June, 2021.
- participated & completed successfully AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "Applications of Artificial Intelligence in Mechanical Engineering" from 2021-8-2 to 2021-8-6 at K. Ramakrishnan College of Engineering.
- Participated in the National Online Short Term Training Programme on "Entrepreneurship Skill Development (a journey to be a successful entrepreneur)" organized by the Department of Mechanical Engineering from 21.02.2022 to 25.02.2022.
- Participated in One Day National Level Seminar on Innovation and IPR Organized by Department of Mechanical Engineering, Department of Basic Science and Humanities in association with IIC Cell & IQAC Cell & ED Cell, Sri Venkateswara College of Engineering, Bengaluru on 30.06.2023.
- participated in the Faculty Development Programme on "Research Funding Opportunities" by Dr. Shivaprasad, Scientist - R & D Infrastructure Division, Department of Science and Technology (DST), New Delhi, India held on 23rd June, 2023 organized by the Department of Physics, SRM TRP Engineering College, Tiruchirappalli.
- Participated in Five Days Faculty Induction Programme organized by Centre for staff affairs and Institution Governance, Nehru Institute of Technology, Coimbatore from 17.07.2023 - 23.07.2023.

### **Course Completed:**

- Completed the course under the title of "Additive Manufacturing" at the level of Associate conducted by Dassault Systems at 13.12.2019.
- Completed the course under the title of "Sustainable Design" at the level of Associate (CSWA) conducted by Dassault Systems at 17.12.2019.
- Completed the course under the title of "Mechanical Design" at the level of Associate (CSWA) conducted by Dassault Systems at 18.12.2019.

### **Membership in Professional bodies:**

- Life Time Member in Indian Society for Technical Education (MISTE), M.No: LM 92699

### **Responsibilities:**

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|-----------------------------------------------|--------------------------------------------|
| ➤ Faculty Class Advisor                       | ➤ AU Affiliation Department Coordinator    |
| ➤ Project Coordinator                         | ➤ AICTE Department Coordinator             |
| ➤ Association President                       | ➤ AISHE Department Coordinator             |
| ➤ In charge of Thermal Engineering laboratory | ➤ NAAC - 4 Criteria Department Coordinator |
| ➤ EDC Cell Department Coordinator             | ➤ NBA -5 Criteria Coordinator              |

**Personal details:**

Father's Name	:	S. Palanivel
Date of Birth	:	20.06.1988
Gender	:	Male
Martial status	:	Married
Linguistic Fluency	:	Tamil & English

**Reference:**

**Dr.G.Kumaresan**

Associate Professor

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Bannari Amman Institute of Technology  
Sathy,Erode

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Associate Professor

Department of Mechanical Engineering  
Sri Shakthi Institute of Engineering & Technology  
Coimbatore

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**Declaration:**

I hereby declare that all the information furnished above are true and correct to the best of my knowledge and belief. I undertake to submit to you the entire original certificates for the purpose of your verification, when called upon to do so.

Place: Coimbatore  
Date :28.07.2023



Yours sincerely,  
**(VIJAYAKUMAR P)**