



Dr. T.V.Arjunan

Professor

Centre/School/Special Centre: SoS Engg & Tech

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Qualifications

:

B.E. (Mechanical Engineering) from Bharathiyar University

M.E. (Thermal Engineering) from Bharathiyar University

Ph.D. (Mechanical Engineering) from Anna University

Area of Interest/Specialization

: Solar Thermal, Heat Transfer, Composite materials

Experience

: **Total 23 years** (Since 11.12.2019 as Professor in Guru Ghasidas Vishwavidyalaya)

Awards and Honors

1. Received “K F Antia Memorial Award” from The Institution of Engineers (India), for the paper titled ‘Experimental Study on Enhancing the Productivity of Solar Still Using Locally Available Material as a Storage Medium’ (published in the Series ‘C’ Journal of IEI, Vol. 98, Issue 2), presented at the Prize Distribution Ceremony of the 33rd Indian Engineering Congress held at Hotel Ananta, Kodyat Road, Udaipur, Rajasthan on December 21, 2018
2. Received Certificate of Recognition from ZF Wind power Coimbatore Ltd, for contributing in bearing information system proof concept development.

Research Projects

S.No	Title of the Project	Amount (Lakhs)	Funding Agency	Role in the Project	Status
1	Development of Solar Evacuated Tube Collectors with Inserted Baffles for Direct Air Heating in Industrial Applications	162.63 Lakhs	Department of Science and Technology	Principal Investigator	On going

International Collaboration/Consultancy

1. Signed MOU with Riga Technical University, Latvia (Europe) on 25.05.2017 with the following objectives (i) The two institutions link together for educational research cooperation and (ii) Share experiences in the research field of solar thermal energy conversion.

Best Peer Reviewed Publication (up-to 10)

1. R. Venkatramanan, **T.V. Arjunan**, D. Seenivasan, A. Veera Kumar, Parametric Study of Evacuated Tube Collector Solar Air Heater with Inserted Baffles on Thermal Network for Low-Temperature Applications (2022), Journal of Cleaner Production (**Published online**) (**Elsevier Publications**) **Impact Factor – 11.071**
2. Prakasam Michael Joseph stalin, **T.V. Arjunan**, Mohammed Abdulrahman Almeshaal, P.Murugesan B. Prabu , P. Manoj Kumar, (2022) Utilization of Zinc-Ferrite/ Water Hybrid Nanofluids on Thermal Performance of a Flat Plate Solar Collector –A Thermal Modeling Approach, Environmental Science and Pollution Research, (**Springer Publications**) **Impact factor – 5.19, (Published online).**
3. M.M. Matheswaran, **T.V.Arjunan**, S.Muthusamy, L.Natrayan, Hitesh Panchal S.Subramaniam, Nitin K.Khedkar, A.S.El-Shafayh Chandrakanat Sonawane, (2022), A case study on thermo-hydraulic performance of jet plate solar air heater using response surface methodology, Case Studies in Thermal Engineering, Volume 34, (**Elsevier Publications**) **Impact factor – 6.268,**
4. Veerakumar A, **Arjunan T V**, Seenivasan D, Vijayan S, M.M.Matheswaran and Venkatramanan R, (2021) ‘Influence of Twisted Tape Inserts on Energy and Exergy Performance of an Evacuated Tube-based Solar air Collector’, Solar Energy, Volume 225, 1 September 2021, Pages 892-904 (**Elsevier Publications**) **Impact factor – 7.188.**
5. P.Jidhesh, **T.V.Arjunan**, Gunasekaran N, M. Mohanraj (2021), Thermal Modeling and Experimental Validation of Semitransparent Photovoltaic- Thermal Hybrid Collector using CuO Nanofluid, Journal of Cleaner production, Volume 316, 20 September 2021, Pages – 128360 (**Elsevier Publications**) (**Impact factor – 11.071**)
6. Veerakumar A, **Arjunan T V**, Seenivasan D, Vijayan S and Venkatramanan R, (2021) ‘Thermal Performance of an Evacuated Tube Solar Collector with Inserted Baffles for Air Heating Applications’, Solar Energy, Vol 215, Pages 131-143 (**Elsevier Publications**) **Impact factor – 7.188.**
7. Prashant Kumar Jangde, Anurag Singh and **T.V. Arjunan** (2021), Efficient solar drying techniques – A review, Environmental Science and Pollution Research (**Published online**) (**Springer Publication**) (**Impact factor – 5.19**)
8. Sivakandhan C, **T.V.Arjunan**, Matheswaran M.M, (2020), Thermohydraulic Performance Enhancement of a New Hybrid Duct Solar Air Heater with Inclined Rib Roughness, Renewable Energy, Volume 147, Pages 2345-2357 **Impact factor – 8.634, (Elsevier Publications).**

9. S.Vijayan, **T.V.Arjunan** and Anilkumar (2020) Exergo-environmental analysis of an indirect forced convection solar dryer for drying bitter gourd slices, Renewable Energy, Volume 146, February 2020, Pages 2210-2223, **Impact factor – 8.634, (Elsevier Publications)**.
10. S.Vijayan, **T.V.Arjunan** and Anilkumar, Matheswaran M (2020), Experimental and thermal performance investigations on sensible storage based solar air heater, Journal of Energy Storage, Volume 31, pages – 101620 (**Elsevier Publications, Published online**). **Impact factor – 8.907**.

Recent Books/Book Chapters/Monographs etc.

1. P.Michael Joseph Stalin, **T.V.Arjunan**, M. M. Matheswaran, P.Manojkumar, N.Sadanandan (2020), Influence of various nanofluids on the performance of solar water heaters, Solar Water Heating: Fundamentals and Applications', **Nova Science Publishers, Inc, USA**.
2. **T.V.Arjunan**, H.S.Ayber, Jamel Orfc, S.Vijayan, (2018), Performance Analysis of Solar Desalination Systems, Solar Desalination Technology: Concept, Design, Testing, Modeling, Economics and Environment, Chapter 5, ISBN 978-981-13-6887-5, **Springer Singapore, Springer Nature Singapore Pte Ltd**.

Research Supervision

S.No	Name of the candidate	Date of Viva-voce examination	Title of Thesis / Area of Research	Status
1	Mr.P.Ravichnadrán	03.02.2017	Experimental investigation on co-doped ceria electrolyte materials for intermediate temperature solid oxide fuel cell	Awarded
2	Mr.S.Vijayan	04.12.2018	Performance Evaluation of Solar Dryer with Sensible Heat Storage for Agricultural Products	Awarded
3	Mr.P.Michael Joseph Stalin	11.01.2019	Experimental Investigation on the effects of CeO ₂ /water nano fluid in a flat plate solar water heater.	Awarded
4	Mr.A.Thirumurthy	24.10.2019	Tribological Characterization of Hybrid Aluminium Composites and Optimization of Machining Process Parameters	Awarded
5	Mr.T.G.Sakthivel	01.11.2019	Performance Enhancement Study of Simple Solar Still using Cotton Cloth as Regenerative Medium	Awarded
6	Mr.S.Kesavan	15.07.2020	Performance studies on triple pass solar dryer with sensible heat storage for agricultural products	Awarded
7	Mr.R.Manikandan	17.07.2020	Investigation on mechanical and tribological characteristics of cow	Awarded

			dung ash-boron carbide reinforced aluminium hybrid composites	
8	Mr.L.Venkatesh	16.07.2020	Studies on mechanical and tribological behaviour of aluminium hybrid composites reinforced with groundnut shell ash and boron carbide	Awarded
9	Mr.M.M.Matheswaran	05.08.2020	Analytical and experimental investigation on jet impingement solar air heater	Awarded
10	Mr.V.Rajkumar	03.02.2021	Investigation on metallurgical and mechanical behaviours of inconel 625 overlaid on aisi 347 stainless steel	Awarded
11	Mr.V.Sureshkannan	05.03.2021	Studies on Solid Desiccant system for air dehumidification.	Awarded
12	Mr.Jidhesh	30.12.2021	Experimental investigation on semitransparent photovoltaic-thermal hybrid collector using nanofluids	Awarded
13	Mr.M.Veeramanikandan	14.06.2022	Performance study of sandwich glazed photovoltaic thermal collector	Awarded
14	Mr.R.Venkatramanan	pursuing	Solar Air heater	Registration confirmed

Administrative Responsibilities

Dean (SoS Engg & Tech)

Head (Dept of Mechanical Engg)

Member of Academic Council

Chairman, BoS, Mechanical Engineering

Chairman, DRC, Mechanical Engineering

Convener, MoU/Collaboration Monitoring Committee

Convener, Overall Supervision & Monitoring of DST-FIST in GGV

DRC Member for IPE

Member, NEP 2020 Taskforce committee

AQAR 2019-20 – Criteria II Coordinator

Additional Information

Patent

	Application No	Title	Date of Filing / Publication	National / International	Status
1	202041049838	Device for heating air using evacuated tube	16.11.2020 / 27.11.2020	National	Awaiting Examination
2	2020104031	Twisted micro-fins evacuated tube solar air heater	12.12.2020	International	Granted
3	202021054885	Evacuated tube solar air heater with jet impingement system	17.12.2020 / 22.01.2021	National	Awaiting Examination
4	2021100087	Longitudinal fins evacuated tube solar air heater	07.01.2021	International	Granted
5	202121001111	Evacuated solar tube embedded with pierced twisted tape system for heating air	11.01.2021/ 29.01.2021	National	Awaiting Examination

Funded Workshops / Seminars organized:

S.No	Title of the Workshop / Seminar	Amount (Rs)	Funding Agency	Role in the Workshop / Seminar	Status
1	A Two day National workshop on “ Recent Developments in Alternate Fuels ”	30000	CSIR	Coordinator	Completed (January 24 th and 25 th 2012)
2	One day National workshop on “ Opportunities and Challenges for Fuel cell in India ”	30000	CSIR	Coordinator	Completed (January 21 st , 2013)
3	One day National workshop on “ Advances in laser ignition systems in IC engine applications ”	25000	CSIR	Coordinator	Completed (March 21 st , 2014)
4	Two week workshop on “ Fluid Mechanics ”	176444	ISTE & IITK	Coordinator	Completed (20.05.2014 to 30.05.2014)
5	Technical Seminar on “ Recent trends in Finite Element Simulation for concurrent design and manufacture of light weight ”	50000	CSIR	Coordinator	Completed (April 1 st , 2017)

	materials used in automotives”				
6	National Workshop on “ Current trends in sequential micro-machining processes on a single machine tool ”	30000	CSIR	Coordinator	Completed (23.08.2017)
7	One Day National Level Workshop on “ Composite Manufacturing Processes, Analyses, Modeling & Simulation ”	20000	CSIR	Coordinator	Completed (04.01.2019)
8	One Day National Level Workshop on “ Cloud Manufacturing ”	30000	CSIR	Coordinator	Completed (25.01.2019)
9	Two weeks FDP on “ Recent developments of carbon nanotubes in renewable energy conversion and storage ”	536000	AICTE	Coordinator	12.06.2019 to 25.06.2019
		937444			

Professional Society Membership

1. SAE
2. ISTE (Life member)
3. Bio Energy Forum (Life member)
4. Solar Energy Society of India (Life member)