

T.V.Arjunan
Professor
Qualifications

Centre/School/Special Centre: SoS Engg & Tech

Department: Mechanical Engineering

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:

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 24 years (Since 11.12.2019 as Professor in Guru

Ghasidas Vishwavidyalaya)

Awards and Honors

- Received "Best Paper Award-2021" from Guru Ghasidas Vishwavidyalaya, for the paper titled 'Thermal Performance of an Evacuated Tube Solar Collector with Inserted Baffles for Air Heating Applications' (published in the Solar Energy Journal (Elsevier Publications, Impact factor 7.188), Vol 215, Pages 131-143, presented at the Prize Distribution Ceremony of "Guru Ghasidas Jayanti" held on 18.12.2022.
- 2. 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, Kodiyat Road, Udaipur, Rajasthan on December 21, 2018
- 3. 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		Department			
	Tube Collectors with Inserted	162.63	of Science	Principal	Completed	
	Baffles for Direct Air Heating in	Lakhs	and	Investigator	Completed	
	Industrial Applications		Technology			

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.

List of Publications

Journals

- 1. Prashant Kumar Jangde, and **T.V. Arjunan**, (2022), Thermal Performance Assessment of the Coaxial Pipe Evacuated Tube Solar Air Heaterin Bilaspur Climatic Conditions, Part E: Journal of Process Mechanical Engineering (**Accepted for publication**) (**Sage Publications**) **Impact factor 1.822**.
- 2. Veeramanikandan , **T.V. Arjunan** and N Gunasekar, Rubesh Raja V (2022), Design optimization and experimental evaluation of novel photovoltaic modules in comparison with a conventional photovoltaic module, Energy Sources, Part A, Recovery, Utilization, and Environmental Effects, Volume 44, 2022 Issue 4 (Taylor & Francis) **Impact factor 2.902**
- 3. 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, Volume 367, article no 132941 (**Elsevier Publications**) **Impact Factor 11.071**
- 4. Venkatesh L, **T.V.Arjunan**, M.Arulraj, K.Ravikumar, (2022), Study on tribological behaviour of aluminium hybrid composites strengthened with novel groundnut shell ash and boron carbide, Part E: Journal of Process Mechanical Engineering (**Accepted for Publication**) (**Sage Publications**) **Impact factor 1.822.**
- 5. Thirumoorthy A, Arulraj M, **Arjunan.T.V**, G. Rajeshkumar, Kumaravelan R, Venkatesh L, (2022), Investigation of Mechanical and Wear Properties of Al6061/Si3N4/MgO hybrid Composite Fabricated by Stir casting method, Part E: Journal of Process Mechanical Engineering (**Published online**) (**Sage Publications**) **Impact factor 1.822.**

- 6. 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**
- 7. 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**,
- 8. T. G. Sakthivel, T. V. Arjunan, L. Natrayan, P. V. Arul Kumar, Pravin P. Patil, R. Manikandan, A. Muniappan, and Prabhu Paramasivam, (2022), Experimental Investigation on the Effectiveness of Solar Still and Its Effect on Adsorption with Various Dyes, Adsorption Science & Technology, (Hindawi Publications), Published online, Impact factor 4.373
- 9. D Dewangan, JP Ekka, **T.V. Arjunan**, (2022), Solar photovoltaic thermal system: a comprehensive review on recent design and development, applications and future prospects in research, International Journal of Ambient Energy, 1-25, (**Published online**) (**Taylor and Francis Publications**) (**Scopus Indexed**).
- 10. Veeramanikandan, **T.V. Arjunan** and N Gunasekar (2021), Numerical simulation and experimental validation of a novel sandwich glazed photovoltaic thermal (SGPV/T) water heating system, Energy Sources, Part A, Recovery, Utilization, and Environmental Effects, (Accepted for publication) (**Taylor & Francis**) Impact factor 2.902
- 11. 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, (**Published online**) (Elsevier Publications) Impact factor 7.188.
- 12. 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.**
- 13. Veerakumar A, **Arjunan T V**, Seenivasan D, Vijayan S and Venkatramanan R, (2021) 'Techno-Economic Evaluation of an Evacuated Tube Solar Air Collector with Inserted Baffles', Part E: Journal of Process Mechanical Engineering (**Published online**) (**Sage Publications**) **Impact factor – 1.822.**
- 14. V.Sureshkannan , **T.V. Arjunan** , D. Seenivasan , S.P. Anbuudayasankar , M. Arulraj , (2021) Parametric study on pressure-based packed bed adsorption system for air

- dehumidification, Part E: Journal of Process Mechanical Engineering (**Published online**) (Sage Publications) Impact factor 1.822
- 15. Suresh kannan.V, **Arjunan.T.V**, Vijayan.S, (2021), Drying Characteristics of Mint Leaves (Mentha Arvensis) Dried in a Solid Desiccant Dehumidifier System, Journal of Food Science and Technology, Vol. 58(2), pp. 777–786 (**Springer Publications**) **Impact factor 3.177.**
- 16. Prashant Kumar Jangde, Anurag Singh and **T.V. Arjunan**, (2022) Efficient solar drying techniques A review, Environmental Science and Pollution Research, Vol 29, Pages 50970–50983 (**Springer Publication**) (**Impact factor 5.19**)
- 17. P.Michael Joseph Stalin , **T.V.Arjunan** , M.M.Matheswaran , P.Manoj Kumar , N. Sadanandam, (2021) Investigations on Thermal Properties of CeO2/Water Nanofluids for Heat Transfer Applications, Material Today Proceeding (**Published online**) (Elsevier Publications) (**Scopus Indexed**)
- 18. 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 11.072**)
- 19. P.Jidhesh, **T.V.Arjunan**, Gunasekaran N, M. Mohanraj (2020) Experimental thermodynamic performance analysis of semi-transparent photovoltaic-thermal hybrid collectors using nanofluids, Part E: Journal of Process Mechanical Engineering (**Published online**) (**Sage Publications**) **Impact factor 1.822**
- 20. Manikandan R, Mr T.V.Arjunan, (2021), Microstructure and Mechanical Characteristics of CDA–B4C Hybrid Metal Matrix Composites, Metals and Materials International, 27(5), pp. 885–899, (**Springer Publications**) **Impact factor 3.451.**
- 21. M. M. Matheswaran, **T. V. Arjunan**, Mukeshkumar (2021) Influence of twisted tape fins on heat transfer and friction factor characteristics for impinging jet solar air heater, Part E: Journal of Process Mechanical Engineering (**Published online**) (**Sage Publications**) **Impact factor 1.822.**
- 22. Veeramanikandan, **T.V. Arjunan** (2020), P. Jidhesh, Experimental investigation of sandwich glazed solar photovoltaic module, Materials Today: Proceedings, Volume 27, Part 1, Pages 136-139 (**Elsevier Publications, Scopus indexed**).
- 23. Suresh kannan.V, **Arjunan.T.V**, Vijayan.S, (2020) Experimental Investigation of Temperature Swing Adsorption System for Air Dehumidification, Journal of Heat and Mass Transfer, Volume 56, Pages :2093–2105, (**Springer Publications**) **Impact factor 2.325.**
- 24. 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)**.
- 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.
- 26. 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**).
- 27. Rajkumar V, **Arjunan T.V.**, Rajesh Kannan A, (2020) Investigations on hard facing and wear characteristics of nickel based inconel 625 overlaid welds over AISI 347 pipe, Journal of the Brazilian Society of Mechanical Sciences and Engineering, Vol 42, 12 (2020) (**Springer Publications**) **Impact factor 2.361**.
- 28. P.Michael Joseph Stalin, **T.V.Arjunan**, N. Sadanandam, H.Dolli, M. M. Matheswaran (2020), Energy, economic and environmental investigation of a flat plate solar collector with ceo2/ water nanofluid, Journal of Thermal Analysis and Calorimetry, Vol. 139, pages3219–3233 (**Springer Publications**) **Impact factor 4.755.**
- 29. P.Jidhesh, **T.V.Arjunan**, J.David Rathnaraj, (2021) Experimental investigation on heat transfer characteristics of phase change composite for thermal energy storage system, Material Today Proceeding, Volume 42, Part 2 Pages 618-625, (**Elsevier Publications**) (**Scopus Indexed**)
- 30. Manikandan R, Mr Akhil R Nath O P, **Mr T.V.Arjunan**, (2020) Studies on micro structural characteristics, mechanical and tribological behaviours of boron carbide and cow dung ash reinforced aluminium (Al 7075) hybrid metal matrix composite, Composites Part B Engineering, Volume 183, pages 107668 (**Elsevier Publications**) **Impact factor 11.322**.
- 31. Manikandan R and **T.V.Arjunan** (2020), "Experimental Investigations on Microstructural, Mechanical and Wear Behaviours of AL 7075 Boron Carbide Cow Dung Ash Hybrid Metal Matrix Composites" Journal of Chinese Society of Mechanical Engineers, Vol 41, Pages 503-51 **Impact factor 0.288 (SCI)**.
- 32. Manikandan R and **T.V.Arjunan** (2020) Mechanical and tribological behaviours of aluminium hybrid composites reinforced by CDA-B4C, Materials Research Express, Vol 7, pages 016584, **Impact factor 2.025**
- 33. A Thirumoorthy, **T.V. Arjunan**, M. Arulraj, R. Kumaravelan, T.C.R. Dinesh, (2020) "Parametric Optimization of High Speed Turning Operation of Hybrid Aluminium Composites Using Taguchi Based Grey Relational Analysis" International Journal of

- Computational Materials Science and Surface Engineering, Vol 9, pp 261-270. (Inderscience Publishers) (Scopus Indexed).
- 34. Venkatesh L, **Arjunan T.V**, Ravikumar K, 2019, Microstructural characteristics and mechanical behaviour of aluminium hybrid composites reinforced with Groundnut shell ash and B4C, Brazilian society of Mechanical Sciences and Engineering, Vol 41, Pages 1-13 (**Springer Publications**) **Impact factor 2.361.**
- 35. V.Suresh kannan, **T.V.Arjunan** (2019), Optimization of process parameters of adsorption process in solid desiccant dehumidification system using genetic algorithm, Journal of Chinese Society of Mechanical Engineers, Vol 40, pages 543-553, **Impact factor 0.288** (SCI).
- 36. V.Rajkumar, **T.V, Arjunan**; Kannan A, Rajesh, (2019) Metallurgical and mechanical investigations of inconel 625 overlay welds produced by GMAW-hardfacing process on AISI 347 pipes, Materials Research Express, Volume 6, pp.076534,. **Impact factor 2.025**
- 37. V Rajkumar, **TV Arjunan**, A Vasan, KA Rajesh, (2019) Effect of Heat Input on Micro-Hardness and Shear Strength of Inconel 625 Hardfacing onto AISI 347 Steel pipes by GMAW Process, Journal of Physics: Conference Series 1355 (1), 012029 (**Scopus Indexed**)
- 38. T.G.Sakthivel and **T.V.Arjunan**, (2019), Thermodynamic performance comparison of single slope solar stills with and without cotton cloth energy storage medium, Journal of Thermal Analysis and Calorimetry, Volume 137, Issue 1, pp 351–360 (**Springer Publications**) **Impact factor 4.755.**
- 39. Suresh kannan.V, **Arjunan.T.V**, Vijayan.S, (2019) Low Temperature Drying Characteristics of Mint Leaves in a Continuous-dehumidified Air Drying System, Journal of Food Process Engineering, Vol 43, pages 1-15 (**John Willey publications**) **Impact factor 2.889.**
- 40. S. Kesavan, **T.V. Arjunan**, S. Vijayan, 2019, Thermodynamic analysis of a triple-pass solar dryer for drying potato slices, Journal of Thermal Analysis and Calorimetry, Volume 136, Issue 1, pp 159–171. (**Springer Publications**) **Impact factor 4.755**.
- 41. P.Michael Joseph Stalin, **T.V.Arjunan**, N. Sadanandam, M. Matheswaran (2019) Experimental and theoretical investigation on the effects of lower concentration ceo2/water nanofluid in flat plate solar collector, Journal of Thermal Analysis and Calorimetry, Vol. 135, pages29–44. (**Springer Publications**) **Impact factor 4.755**.
- 42. P.Michael Joseph Stalin, **T.V.Arjunan**, N. Sadanandam, M. M. Matheswaran (2019), Experimental investigation on the effect of CeO2/ water nanofluid on the efficiency of flat plate solar collector, Journal of Chinese Society of Mechanical Engineers, Vol 41, February 2020, Pages 75-83, **Impact factor 0.288 (SCI)**.

- 43. M. M. Matheswaran, **T. V. Arjunan**, D. Somasundaram, 2019, Energetic, exergetic and environmental economic analysis on jet plate solar air heater with artificial roughness, Journal of Thermal Analysis and Calorimetry, Volume 136, Issue 1, pp 5–19. (**Springer Publications**) **Impact factor 4.755**.
- 44. M. M. Matheswaran, **T. V. Arjunan**, D. Somasundaram, 2019, Analytical Investigation of Exergetic performance on Jet Impingement Solar Air Heater with Multiple Arc Protrusion Obstacles, Journal of Thermal Analysis and Calorimetry Volume 137, Issue 1, pp 253–266 (**Springer Publications**) **Impact factor 4.755.**
- 45. A. Thirumoorthy, **T.V. Arjunan**, K.L. Senthil Kumar, (2019), Experimental Investigation on Mechanical Properties of Reinforced Al6061 Composites and its Prediction Using KNN-ALO Algorithms, International Journal of Rapid Manufacturing, Inderscience, Vol. 8 (3), Pages 161-177 (**Scopus indexed**).
- 46. S.Kesavan and **T.V.Arjunan**, (2018), "Experimental study on triple pass solar air heater with thermal energy storage for drying mint leaves", International Journal of Energy Technology and Policy, Vol. 14, No. 1, pp. 34-48. (Inderscience Publications) (**Scopus indexed**)
- 47. D Seenivasan, V Selladurai and **T.V Arjunan** (2018), Experimental studies on the performance of dehumidifier using calcium chloride as a liquid desiccant", International journal of Energy Policy Technology, Vol.14, No.1, pp.49 63 (**Inderscience Publications**) (**Scopus indexed**).
- 48. A.Thirumoorthy, **T.V.Arjunan** and K.L.Senthilkumar (2018), "Latest Research Development in Aluminum Matrix with Particulate Reinforcement Composites A Review", Materials Today: Proceedings (**Elsevier Publications, Scopus indexed**), Vol. 5, Pages 1657–1665.
- 49. A.Thirumoorthy, **T.V.Arjunan** and K.L.Senthilkumar (2018), "Analysis of aluminium based hybrid composite and prediction of its wear rate using gaann approach" Journal of Chinese Society of Mechanical Engineers, Vol.39, No.6, pp.674 ~ 693. **Impact factor 0.228 (SCI)**.
- 50. T.G.Sakthivel, **T.V.Arjunan**, (2017), Performance enhancements of a solar still using cotton as regenerative medium, Journal of Thermal Sciences, Vol. 21, Suppl. 2, pp. S427-S434 (Vinča Institute of Nuclear Sciences Publications) **Impact factor 1.971**.
- 51. S.Vijayan, Anilkumar and **T.V.Arjunan** (2017) Thin layer drying characteristics of curry leaves (murraya koenigii) in an indirect solar dryer, Journal of Thermal Sciences, Vol. 21, Suppl. 2, pp. S359-S367 (Vinča Institute of Nuclear Sciences Publications) **Impact factor 1.971**.

- 52. S.Kesavan, S.Vijayan and **T.V.Arjunan** (2017) Drying of carrot slices in a triple pass solar dryer, Journal of Thermal Sciences, Vol. 21, Suppl. 2, pp. S389-S398 (Vinča Institute of Nuclear Sciences Publications) **Impact factor 1.971**.
- 53. P.Michael Joseph Stalin, **T.V.Arjunan**, N. Sadanandam (2017) An experimental study of the mass flow rates on the performance of flat-plate solar water heater using al2o3/water nanofluid, Journal of Thermal Sciences, Vol. 21, Suppl. 2, pp. S379-S388 (Vinča Institute of Nuclear Sciences Publications) **Impact factor 1.971**.
- 54. Matheswaran M, **T.V.Arjunan**, Somasundaram (2017), Analytical Investigation of Solar Air Heater with Jet Impingement using Energy and Exergy Analysis, Solar Energy Volume 161, February 2018, Pages 25-37 (**Elsevier Publications**) **Impact factor 7.188**.
- 55. S.Vijayan and **T.V.Arjunan**, Anilkumar (2016), Mathematical modeling and performance analysis of thin layer drying of bitter gourd in sensible storage based indirect solar dryer, Innovative Food Science & Emerging Technologies, Volume 36, Pages 59–67. (**Elsevier Publications**) **Impact factor 7.104.**
- 56. **Arjunan T.V.**, Aybar H.S. and Nedunchezhian N., (2016) 'Experimental study on enhancing the productivity of solar still using locally available material as a storage medium' Journal of Institute of Engineers Series C, Volume 98, No.2, pp.191–196. (**Springer Publications**) (**Scopus indexed**).
- 57. G, Murali, K, Mayilsamy and **T.V.Arjunan**, (2015) An Experimental Study of PCM incorporated Thermosyphon Solar Water heating System, International Journal of Green Energy. Volume 12, Issue 9, Pages 978-986. (**Taylor & Francis**) **Impact factor 3.206.**
- 58. P.Ravichandran and **T.V.Arjunan**, (2014), Investigation on Mg and Sc co-doped Ceria electrolyte for IT-SOFC, International Journal of Engineering and Technology, Vol 6, No 3, Pages 1432- 1440 (**Scopus indexed**).
- 59. **Arjunan T.V.**, Aybar H.S., Neelakrishnan S, Saratchandran B, Sadagopan P and Nedunchezhian N, (2014) "Effect of Energy Storage Materials on the Performance of Simple Solar Still", Energy Sources, Part A, Recovery, Utilization, and Environmental Effects, Volume 36, Issue 2, pages 131-141. (**Taylor & Francis**) **Impact factor –3.447**
- 60. Sampathkumar K, Arjunan T.V., Senthilkumar P, (2013), 'Thermal modeling of a solar still coupled with evacuated tube collector under natural circulation mode An experimental validation', Energy Sources, Part A, Recovery, Utilization, and Environmental Effects, Volume 35, Issue 15,Pages 1441-1455. (Taylor & Francis) Impact factor 3.447
- 61. Sampathkumar K, Arjunan T.V., Senthilkumar P, (2013), 'Experimental investigation of solar still coupled with evacuated tube collector', Energy Sources, Part A, Recovery, Utilization, and Environmental Effects, Volume 35, Issue 3, pages 261-270. (Taylor & Francis) Impact factor 3.447

- 62. **Arjunan T.V.** and T.S.Senthil, (2013) "Review: Dye sensitised solar cells" Materials Technology: Advanced Performance Materials, Volume 28, Numbers 1-2, pp. 9-14. (**Taylor & Francis**) **Impact factor 3.297.**
- 63. **Arjunan T.V.**, Aybar H.S., Neelakrishnan S, Sampath Kumar K, Shaik Amjad, Subramanian R and Nedunchezhian N, (2012) "Effect of Sponge Liner Colors on the Performance of Simple Solar Still", Energy Sources, Part A, Recovery, Utilization, and Environmental Effects, Vol. 34: pp. 1984–1994. (**Taylor & Francis**) **Impact factor 3.447**
- 64. **T.V. Arjunan**, HŞ Aybar, N Nedunchezhian, (2011), The effect of sponge liner on the performance of simple solar still, International Journal of Renewable Energy Technology, Vol 2., Pages 169-192 (**Inderscience Publishers**).
- 65. Shaik Amjad, R. Rudramoorthy, S. Neelakrishnan, K. Sri Raja Varman, **T.V. Arjunan**, (2011) "Impact of Real World Driving Pattern and All-Electric Range on Battery Sizing and Cost of Plug-in Hybrid Electric Two-Wheeler" Journal of Power Sources, Vol. 196 3371–3377. (**Elsevier Publications**) **Impact factor 9.794.**
- 66. Shaik Amjad, R. Rudramoorthy, S. Neelakrishnan, K. Sri Raja Varman, **T.V. Arjunan**, (2011), 'Evaluation of Energy Requirements for All-Electric Range of Plug-in Hybrid Electric Two-Wheeler' The Journal of Energy, Vol. 36, 1623-1629. (**Elsevier Publications**) **Impact factor 8.857.**
- 67. K.Sampathkumar, **T.V.Arjunan** and P.Senthilkumar, (2011) "Single Basin Solar Still Coupled with Evacuated Tubes Thermal Modeling and Experimental Validation", International Energy journal, Volume 12, Issue 1. **Impact factor 0.21.**
- 68. **Arjunan T.V.**, Aybar H.S. and Nedunchezhian N., (2011) 'Effect of sponge liner on the on the internal heat transfer coefficients' The International Journal Desalination and Water Treatment, Vol 29, 271–284. (**Taylor & Francis**) **Impact factor 1.273.**
- 69. Sampathkumar K, **Arjunan T.V.**, Pitchandi P, Senthilkumar P (2010), 'Active Solar distillation A detailed review', Renewable and Sustainable Energy reviews, Volume 14, Issue 6, Pages 1503-1526. (**Elsevier Publications**) **Impact factor 16.799.**
- 70. **Arjunan T.V.**, Aybar H.S. and Nedunchezhian N. (2009), 'Status of Solar Desalination in India', Renewable and Sustainable Energy reviews, Vol. 13, pp. 2408-2418. (**Elsevier Publications**) **Impact factor 16.799.**

International Conferences

1. **Arjunan T.V**, Aybar H.S, Nedunchezhian N, (2003) "Design and Performance Evaluation of a Solar still" Twenty sixth national Renewable Energy convention of the Solar Energy Society of India and International Conference on New Millennium – Alternative Energy Solutions for Sustainable Development, Jan 17-19, 2003, conducted by PSG College of Technology.

- 2. **Arjunan T.V**,.Aybar H.S,.Nedunchezhian N, (2008) "Experimental study of the enhancement parameters on solar still productivity" Renewable Energy Asia 2008 An International Conference & 4th SEE Forum Meeting, 11 13 December, 2008, IIT Delhi.
- 3. **Arjunan T.V**, Aybar H.S, Nedunchezhian N, "External and internal heat transfer analysis of single basin solar still" International Conference on Recent Trends in Materials and Mechanical Engineering (ICMME 2008), 18-20 December 2008, Dr. Mahalingam College of Engineering and Technology, Pollachi.
- 4. **Arjunan T.V**,.Aybar H.S,.Nedunchezhian N, (2010) "An Experimental Study on the Effect of the Energy Storage Materials in Solar Still" 9th ISHMT-ASME Heat and Mass Transfer Conference, Jan. 4-6, 2010, IIT, Mumbai, India.
- 5. Thirumoorthy, A & **Arjunan, TV** (2012), 'Thermal analysis of aluminium composite brake disc" in the International Conference on Science Engineering and Technology, VIT University, Vellore, pp. 278-284.
- 6. A. Thirumoorthy, **T. V. Arjunan**, S. Prakasam, (2012) "Aluminium Matrix Composites for Automobile Applications A Review" International Conference, Futuristic Automation & Control Engineering FACE 2012 in association with Victoria University, Melbourne, Autralia on 14th Dec 2012 organized by Dhanalakshmi Srinivasan College of Engineering, Coimbatore.
- 7. Thirumoorthy, A & **Arjunan, TV** (2013), 'Analysis of temperature distribution in automobile disc brake using FEA', in the International Conference on 28th Indian Engineering Congress, Chennai, pp-1184-1192.
- 8. P.Ravichandran and **T.V.Arjunan**, (2014), Synthesis and Characterization of Mg or Sc doped Ceria as an Electrolyte for IT-SOFC, 2nd International conference on science, Engineering and management, organised by Srinivasan Engineering college, Tamil Nadu, India, March 28-29,2014.
- 9. S.Kesavan and **T.V.Arjunan**, (2014), "Experimental study on triple pass solar air heater with thermal energy storage for drying mint leaves", TEQIP sponsored Three Days International Conference on "Energy and Sustainability in Engineering Systems" conducted by Coimbatore Institute of Technology on 16 th to 18 th Dec 2014.
- 10. S.Vijayan and **T.V.Arjunan**, (2014), "Experimental investigation of an indirect forced convection solar dryer for mint leaves", TEQIP sponsored Three Days International Conference on "Energy and Sustainability in Engineering Systems" conducted by Coimbatore Institute of Technology on 16 th to 18 th Dec 2014.
- 11. A.Thirumoorthy and **T.V.Arjunan**, (2014), "Characterization of A356 Alloy with Nano Silicon Carbide For Automobile Applications", TEQIP sponsored Three Days

- International Conference on "Energy and Sustainability in Engineering Systems" conducted by Coimbatore Institute of Technology on 16 th to 18 th Dec 2014.
- 12. P.Michael Joseph Stalin and **T.V.Arjunan**, (2014), "An experimental investigation of twin mode natural convection flat plate solar water heating systems", TEQIP sponsored Three Days International Conference on "Energy and Sustainability in Engineering Systems" conducted by Coimbatore Institute of Technology on 16 th to 18 th Dec 2014.
- 13. T.G.Sakthivel, S.Senthil kumar and **T.V.Arjunan** (2015), "The effect of cotton cloths on the performance of the solar still" International Conference on Sustainable Energy Resources, Materials and Technologies, organized by SSN college of Engineering, Chennai on 08th and 9th Jan 2015.
- 14. A.Thirumoorthy, **T.V.Arjunan** and K.L.Senthilkumar (2016), "Latest Research Development in Aluminum Matrix with Particulate Reinforcement Composites A Review", International Conference on Processing of Materials, Minerals and Energy (July 29th 30th) 2016, Ongole, Andhra Pradesh, India.
- 15. Thirumoorthy, A and **Arjunan, TV**, (2015), 'Study of mechanical behavior of aluminium steel flakes', in the International Conference on Modern, Intelligent and Green 7 Manufacturing, Erode Sengunthar Engineering College, Erode, pp. 34-38.
- 16. Veeramanikandan M, P.Jidhesh, **T.V.Arjunan**, "Experimental Investigation on Geometrically Modified Solar Photovoltaic Module Comparatively", ICRAMEK 2017, Government College of Engineering Salem, 2-3rd March 2017.
- 17. Thirumoorthy, A & **Arjunan, TV** (2016), 'Study of mechanical behaviour of A356 and nano composite material', in the International Conference on Emerging Trends in Science, Engineering and Technology, Nandha College of Technology, Erode, pp. 61-65.
- 18. M. Veeramanikandan, **T.V, Arjunan**, P.Jithesh. (2017), Experimental investigation on sandwich glazed photovoltaic—thermal (PV/T) system, International conference on renewable and sustainable energy 2017, conducted by Hindusthan College of Engineering and Technology, Coimbatore on 12.04.2017 and 13.04.2017.
- 19. S. Vijayan, **T.V. Arjunan** (2017), Experimental Investigation on Thin Layer Drying of Curry Leaves in Indirect Solar Dryer, International conference on renewable and sustainable energy 2017, conducted by Hindusthan College of Engineering and Technology, Coimbatore on 12.04.2017 and 13.04.2017
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- 23. L.Venkatesh, **T.V.Arjunan** (2018), "Wear Characteristics of B4C Agro waste reinforced with Al metal matrix composites", 2nd International conference on advances in Science, Engineering and Management, Conducted by Jay Shriram Group of Institutions, Tirupur on 6 and 7th April 2018.
- 24. R.Manikandan, **T.V.Arjunan** (2018), "Investigation on micro structure and mechanical properties of Al-B4C-Agro ash hybrid metal matrix composite", 2nd International conference on advances in Science, Engineering and Management, Conducted by Jay Shriram Group of Institutions, Tirupur on 6 and 7th April 2018.
- 25. M. M. Matheswaran, **T. V. Arjunan**, D. Somasundaram, (2018), Energetic, exergetic and environmental economic analysis on jet plate solar air heater, International Conference on Thermal Analysis and Energy Systems 2018 (ICTAES-2018), conducted by Hindusthan College of Engineering and Technology, Coimbatore on 12.04.2018 and 13.04.2018.
- 26. S. Kesavan, **T.V. Arjunan**, S. Vijayan, (2018), An experimental investigation on drying of potato slices in a triple pass solar dryer, International Conference on Thermal Analysis and Energy Systems 2018 (ICTAES-2018), conducted by Hindusthan College of Engineering and Technology, Coimbatore on 12.04.2018 and 13.04.2018.
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- 30. Prashant Kumar Jangde, Anurag Singh, **T.V. Arjunan**, Efficient Solar Drying Techniques: A Review, International Conference on Energy and Environment (ICEE 2021), Organized by Jyothi Engineering College, Thrissur, Kerala, April 09-10, 2021.
- 31. Disha Dewangan, Poonam Ekka and **T.V. Arjunan**, Performance Enhancement Study of Solar PVT Collector A Comprehensive Review, International Conference on Energy and Environment (ICEE 2021), Organized by Jyothi Engineering College, Thrissur, Kerala, April 09-10, 2021.

National conferences

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- 2. **Arjunan T.V.**,.Nedunchezhian N, Venkatachalam. P, "Effect of water depth on performance of a single slope solar still" National Conference On Applications of FEM in Mechanical Engineering FEM-08, 24-25, March 2008, The Oxford College Of Engineering, Bangalore.
- 3. **Arjunan T.V.,** Senthil kumar. K, Sivasubramanian. R, Seeralan. K, "Thermal Performance Of A Single Slope Solar Still " National Conference on "Energy & Nanotechnology: Strategy for the Future" (NCENSF-09) 14-15 February, 2009 Organized by Department of Electronics & Mechanical Engineering Jaipur Engineering College, Kukas, Jaipur-303101 (Rajasthan).
- 4. Natesamurthy C, Balusamy T, **Arjunan T.V.**, "Effect of internal and external heat transfer on performance of the solar distillation system" A National Conference on Emerging Trends in Engineering Technology and Application (NCETETA-2009), organized by Department of Mechanical Engineering, Shridi Sai Engineering College, Anekal, Bangalore, 29-30 April 2009.
- 5. **Arjunan T.V.**, Seeralan. K, Narasingamuoorthy. G, Sivasubramanian. R, , "Heat Transfer and Performance analysis of a Single Slope Single Basin Solar Still" National conference on "Recent Trends in Mechanical Engineering RDME 09" March 05-06 2009, Mechanical Engineering Department Sree Chitra Thirunal College of Engineering Pappanamcode, Thiruvananthapuram 695018.
- 6. **Arjunan T.V.,** Senthil kumar. K, Sivasubramanian. R, Senthilathipan. A, "Evaluating Heat Transfer And Performance Analysis Of A Single Slope Basin Type Solar Still" National Conference On Evolving Trends in Mechanical Engineering- ETME-09, 13-14, March 2009, The Oxford College Of Engineering, Bangalore.

- 7. Suresh. M, **Arjunan T.V.,** Arulpraksh.M, "Desalination Technologies: An overview" National Conference On Evolving Trends in Mechanical Engineering- ETME-09, 13-14, March 2009, The Oxford College Of Engineering, Bangalore.
- 8. **Arjunan T.V.,** Senthil kumar. K, Seeralan. K, Sivasubramanian. R, Narasingamuoorthy. G "Effect of black granite (storage medium) on the Performance of a Single Slope Solar Still "National Conference on Energy Security for Rural Development [ESRD-2009], March 26, 2009, Organized by Rural Energy Centre Gandhigram Rural University, Gandhigram, Dindigul 624 302.
- 9. **Arjunan T.V.,** Senthil kumar. K Narasingamuoorthy. G, Radha krishnan. G Seeralan. K, , "Effect of pebbles (storage medium) on the Performance of a Single Slope Solar Still" National conference on "Advances in Mechanical Sciences (AIMS -09)" March 26-27, 2009, organized by department of Mechanical Engineering, Kumaraguru College of Technology, Coimbatore 641 006.
- 10. **Arjunan T.V.,** Senthil kumar. K Seeralan. K Sivasubramanian. R Radha krishnan. G, , "Effect of Internal Reflector on the Performance of a Single Slope Solar Still" National conference on Evolving Challenges in Renewable Energy Sources, 16th April 2009, Organized by, Renewale Energy Club, Adhiparasakthi Engineering College, Melmaruvatur, Kancheepuram district, Tamilnadu.
- 11. **Arjunan T.V.**, Narasingamuoorthy. G Radha krishnan. G, Seeralan. K "Solar Distillation: An Alternative Source Of Fresh Water Production With Free Energy And Simple Technology" National conference on Evolving Challenges in Renewable Energy Sources, 16th April 2009, Organized by, Renewale Energy Club, Adhiparasakthi Engineering College, Melmaruvatur, Kancheepuram district, Tamilnadu..
- 12. **Arjunan T.V.,** Aybar H.S., Nedunchezhian N., "Effect of blue metal stones on the Performance of a Single Slope Solar Still" National conference on Recent Trends in Mechanical Engineering, Organized by the department of Mechanical Engineering, Paavai Engineering College, Namakkal, 24 25 April 2009.
- 13. S.Kesavan, **T.V.Arjunan** (2014), "Recent performance enhancement techniques of solar thermal energy in drying system for agriculture procedure", National conference on advances in Mechanical Engineering, Conducted by Coimbatore Institute of Engineering and Technology, Coimbatore on 26 March 2014. Page No 8.
- 14. R.Manikandan, **T.V.Arjunan** (2014), "Study of AC2A/20 Vol. %AI2O3 friction stir welded joints", National conference on advances in Mechanical Engineering, Conducted by Coimbatore Institute of Engineering and Technology, Coimbatore on 26 March 2014. Page No 9.
- 15. S.Vijayan, **T.V.Arjunan** (2014), "Opportunities and challenges: Solar air heater", National conference on advances in Mechanical Engineering, Conducted by Coimbatore Institute of Engineering and Technology, Coimbatore on 26 March 2014. Page No 10.
- 16. R.Manikandan, **T.V.Arjunan** (2014), "Effect of applied pressure and mechanical properties of LM6 AI alloy SiC-AI2O3 made by infiltration squeeze casting process",

- National conference on advances in Mechanical Engineering, Conducted by Coimbatore Institute of Engineering and Technology, Coimbatore on 26 March 2014. Page No 10.
- 17. V.Sureshkannan, **T.V.Arjunan** (2014), "Studies on solar drying of agricultural products using regenerated desiccant materials", National conference on advances in Mechanical Engineering, Conducted by Coimbatore Institute of Engineering and Technology, Coimbatore on 26 March 2014. Page No 11.
- 18. M.Ram Kumar, S.Vijayan, **T.V.Arjunan** (2014), "Heat transfer enhancement study of flate plate solar air heater using CFD", National conference on advances in Mechanical Engineering, Conducted by Coimbatore Institute of Engineering and Technology, Coimbatore on 26 March 2014. Page No 13.
- 19. L.Venkatesh, **T.V.Arjunan** (2014), "Characterization of mechanical properties of friction stir welded AI-SiC metal matrix compostics", National conference on advances in Mechanical Engineering, Conducted by Coimbatore Institute of Engineering and Technology, Coimbatore on 26 March 2014. Page No 15.
- 20. P.Ravichandran, P.Micheal Joseph Stalin, **T.V.Arjunan** (2014), "Analysing the properties of glass fiber reinforced polymer composites adding filler (SiC & AI2O3)", National conference on advances in Mechanical Engineering, Conducted by Coimbatore Institute of Engineering and Technology, Coimbatore on 26 March 2014. Page No 19.
- 21. R.Mohanraj, C.Manikandan, **T.V.Arjunan** (2014), "Design and analysis of convergent base bleed in automotive structure", National conference on advances in Mechanical Engineering, Conducted by Coimbatore Institute of Engineering and Technology, Coimbatore on 26 March 2014. Page No 20.
- 22. P.Prabhakaran, N.Sadanandam, **T.V.Arjunan** (2014), "Design and analysis of vertical blade movement mechanism in bridge type granite cutting machine", National conference on advances in Mechanical Engineering, Conducted by Coimbatore Institute of Engineering and Technology, Coimbatore on 26 March 2014. Page No 21.
- 23. L.Venkatesh, **T.V.Arjunan**, (2014), "Experimental study on the effect of squeeze casting parameters on the quality of thin walled components", National conference on advances in Mechanical Engineering, Conducted by Coimbatore Institute of Engineering and Technology, Coimbatore on 26 March 2014. Page No 23.
- 24. S.Selvaganapathy, C.N.Sibi, S.Sridhar, V.Sureshkannan, **T.V.Arjunan** (2014), "Design and fabrication of air dehumidifier unit for drying application", National conference on advances in Mechanical Engineering, Conducted by Coimbatore Institute of Engineering and Technology, Coimbatore on 26 March 2014. Page No 36.
- 25. P.Michael joseph stalin, **T.V.Arjunan** (2014), "A review of the applications of nanoflids in solar water heating systems", National conference on advances in Mechanical Engineering, Conducted by Coimbatore Institute of Engineering and Technology, Coimbatore on 26 March 2014. Page No 43.
- 26. M.Santhosh kumar, M.Sharan, S.Sukumar, C.Prabhuraj, **T.V.Arjunan** (2014), "Design and Development of flat-plate type solar heat collector with an integrated heat pipe",

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- 27. P.Michael joseph stalin, **T.V.Arjunan** (2014), "Design and Development of heat exchanger type solar water heating system using nanofluids", National conference on advances in Mechanical Engineering, Conducted by Coimbatore Institute of Engineering and Technology, Coimbatore on 26 March 2014. Page No 45.
- 28. R.Karthick, P.Karthikeyan, R.Karthikeyan, A.Kasiviswanathan, S.Vijayan, **T.V.Arjunan** (2014), "Design and fabrication of solar flate plate air collector", National conference on advances in Mechanical Engineering, Conducted by Coimbatore Institute of Engineering and Technology, Coimbatore on 26 March 2014. Page No 46.
- 29. M.Aravindh, S.Balaji, M.Joe alphonse, P.Parthiban, P.Michael joseph stalin, **T.V.Arjunan** (2014), "Performance Enhancements of concentric heat exchanger type solar water heating system using AL2O3 nanofluids", National conference on advances in Mechanical Engineering, Conducted by Coimbatore Institute of Engineering and Technology, Coimbatore on 26 March 2014. Page No 47.
- 30. S.Selvaganapathy, C.N.Sibi, S.Sridhar, V.Sureshkannan, **T.V.Arjunan** (2014), "Design and fabrication of air dehumidifier unit for drying application", National conference on advances in Mechanical Engineering, Conducted by Coimbatore Institute of Engineering and Technology, Coimbatore on 26 March 2014. Page No 48.
- 31. T.E.Arun balaji, D.Ashok, P.Logaprakash, V.Suntharaseelan, V.Sureshkannan, **T.V.Arjunan** (2014), "Design and fabrication of air dehumidifier unit for drying agricultural products", National conference on advances in Mechanical Engineering, Conducted by Coimbatore Institute of Engineering and Technology, Coimbatore on 26 March 2014. Page No 49.

Recent Books/Book Chapters/Monographs etc.

- 1. Sampathkumar K, **Arjunan T.V.**, Senthilkumar P, (2012), "Water Desalination by Solar Energy", Chapter no 11, Wastewater Reuse and Management, Springer Science+Business Media Dordrecht 2012, ISBN 978-94-007-4942-9, **Springer Singapore, Springer Nature Singapore Pte Ltd.**
- 2. S. Vijayan, **T.V. Arjunan**, and Anil Kumar,(2017) "Fundamental Concepts of Drying", Solar Drying Technology, Chapter 1, ISBN 978-981-10-3833-4, **Springer Singapore**, **Springer Nature Singapore Pte Ltd.**
- 3. **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.

4. 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.

Research Supervision

S.No	Name of the candidate	Date of Viva-	Title of Thesis / Area of Research	Status
		voce examination		
1	Mr.P.Ravichnadran	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 CeO2/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 dung ash-boron carbide reinforced aluminium hybrid composites	Awarded
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 overlaids 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-	Awarded
			thermal hybrid collector using nanofluids	
			Halloffulus	
13	Mr.M.Veeramanikandan	14.06.2022	Performance study of sandwich	Awarded
			glazed photovoltaic thermal	
			collector	
14	Mr.R.Venkatramanan	pursuing	Studies on evacuated tube collector	Thesis
			solar air heater for industrial	Submitted
			process heating applications	

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 21st, 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 materials used in automotives"	50000	CSIR	Coordinator	Completed (April 1 st , 2017)
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)