

# College of Engineering Adoor

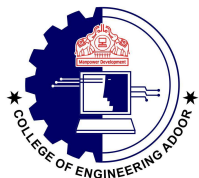
## Department of Mechanical Engineering

### B.Tech Mechanical Engineering

**Research Paper Publications by Faculty**

<b>Publications in International Journals/Conferences/Book Chapter etc.</b>			
<b>Academic year: 2022-23</b>			
Sl. No	Faculty	Title of the paper	Details of the journal/conference/book chapter
1	Dr. Venkitaraj K P	Phase change material application in heat sink: Microencapsulated PCM	Chapter 6, Phase Change Materials for Heat Transfer, Elsevier.(2022)
<b>Academic year: 2020-21</b>			
1	Dr. Venkitaraj K P	Low melt alloy blended polyalcohol as solid-solid phase change material for energy storage: An experimental study	Applied Thermal Engineering 175 (2020): 115362
2	Dr. Jose Mathew	Design and analysis of multi-legged robot for environment monitoring	EPRA International Journal of Research and Development
<b>Academic year: 2019-20</b>			
1	Dr. Venkitaraj K P	Effects of Al <sub>2</sub> O <sub>3</sub> , CuO and TiO <sub>2</sub> nanoparticles on thermal, phase transition and crystallization properties of solid-solid phase change material	Mechanics of Materials 128 (2019): 64-88
2	Dr. Venkitaraj K P	Experimental charging and discharging performance of alumina enhanced pentaerythritol using a shell and tube TES system	Sustainable Cities and Society 51 (2019): 101767

(Faculty-in-Charge)(Head of the Department)

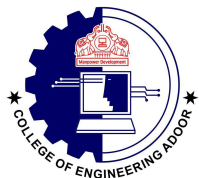


# College of Engineering Adoor

## Department of Mechanical Engineering

### B.Tech Mechanical Engineering

3	Mr. Madhu A K	Effect of Shroud Geometry on Power Augmentation of a Shrouded Wind Turbine	2nd International Mechanical Engineering Congress (IMEC2019), 29 November – 1 December 2019, National Institute of Technology, Tiruchirappalli, India.
4	Dr. Venkitaraj K P	Experimental study of heat transfer enhancement in a circular duct Experimental study of heat transfer enhancement in a using $Al_2O_3$ nanofluid and regularly paced helical screw tape inserts	2nd International Mechanical Engineering Congress (IMEC2019), 29 November – 1 December 2019, National Institute of Technology, Tiruchirappalli, India.
5	Dr. Venkitaraj K P	DSC Analysis of Nano-enhanced Monobasic and Binary Solid-Solid Phase Change Materials for Thermal Storage.	In: Suryan, A., Doh, D., Yaga, M., Zhang, G. (eds) Recent Asian Research on Thermal and Fluid Sciences. Lecture Notes in Mechanical Engineering. Springer, Singapore
<b>Academic year: 2018-19</b>			
1	Dr. Venkitaraj K P	Energy storage performance of pentaerythritol blended with indium in exhaust heat recovery application	Thermochimica Acta 680 (2019): 178343
2	Dr. Venkitaraj K P	Experimental thermal degradation analysis of pentaerythritol with alumina nano additives for thermal energy storage application.”	Journal of Energy Storage 22 (2019): 8-16
3	Dr. Venkitaraj K P	DSC Analysis of Nano-enhanced Monobasic and Binary Solid-Solid Phase Change Materials for Thermal Storage.	7th Asian Joint Workshop on Thermophysics and Fluid Science (AJWTF7 2018), 21-24 Nov 2018



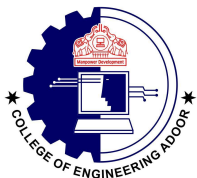
# College of Engineering Adoor

## Department of Mechanical Engineering

### B.Tech Mechanical Engineering

4	Dr. Venkitaraj K P	Thermal Stability and Thermal Properties of Nano-Enhanced Solid-Solid PCM as Energy Storage Materials	NCRTEMCE 2019, International Journal of Engineering Sciences & Research Technology (ISSN: 2277-9655)
<b>Academic year: 2017-18</b>			
1	Dr. Venkitaraj K P	Experimental study on the thermal performance of nano enhanced pentaerythritol in IC engine exhaust heat recovery application	Applied Thermal Engineering 137 (2018): 461-474
2	Dr. Venkitaraj K P	Experimental study on the thermal storage performance and non-isothermal crystallization kinetics of pentaerythritol blended with low melting metal	Thermochimica acta 662 (2018): 75-89
3	Dr. Venkitaraj K P	Experimental heat transfer analysis of macro packed neopentylglycol with CuO nano additives for building cooling applications	Journal of Energy Storage 17 (2018): 1-10
4	Dr. Venkitaraj K P	An experimental investigation on heat transfer enhancement in the laminar flow of water/TiO <sub>2</sub> nanofluid through a tube heat exchanger fitted with modified butterfly inserts	Heat and Mass Transfer 54 (2018): 813-829
5	Mr. Madhu A K	A molecular dynamics study of liquid layering and thermal conductivity enhancement in nanoparticle suspensions.	Heat and Mass Transfer 54 (2018): 785-791

(Faculty-in-Charge)(Head of the Department)



# College of Engineering Adoor

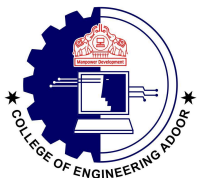
## Department of Mechanical Engineering

### B.Tech Mechanical Engineering

6	Dr. Venkitaraj K P	Study on thermal conductivity of nano enhanced monobasic and binary phase materials for thermal energy storage	National Conference on Latest trends in Mechanical Engineering (NCLTME 18), NSS College of Engineering, Palakkad.
7	Dr. Venkitaraj K P	Experimental study of the kinetics of thermal decomposition of nano-enhanced binary phase change material,	ICAME-2018, 22-24 March 2018, Dept. of ME, SRM Institute of Science and Technology, Tamilnadu, India.
8	Dr. Venkitaraj K P	Study On Degradation Kinetics Of Nanoenhanced TAM PCM for Thermal Energy Storage Applications,	ICAME-2018, 22-24 March 2018, Dept. of ME, SRM Institute of Science and Technology, Tamilnadu, India.
9	Dr. Venkitaraj K P	Thermal Cycling Characterization Of Neopentyl Glycol Added With Alumina Nano Additives Using DSC And TGA,	ICAME-2018, 22-24 March 2018, Dept. of ME, SRM Institute of Science and Technology, Tamilnadu, India.
10	Dr. Venkitaraj K P	Experimental Investigation On Thermal Energy Storage Performance Of Nano Enhanced Solid- Solid Organic PCM	ICAME-2018, 22-24 March 2018, Dept. of ME, SRM Institute of Science and Technology, Tamilnadu, India.
11	Dr. Jose Mathew	Numerical investigation of performance of centrifugal blower with modified fan ribs	National Conference on Latest trends in Mechanical Engineering (NCLTME 18), NSS College of Engineering, Palakkad.

**PhD guidance by the faculty**

(Faculty-in-Charge)(Head of the Department)



# College of Engineering Adoor

## Department of Mechanical Engineering

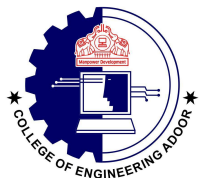
### B.Tech Mechanical Engineering

Sl. No	Faculty	Student		Year of enrollment	Area of research	University
		PhD awarded	PhD ongoing			
1	Dr. Venkitaraj K P	-	Mr. Anu Nair P	2021	Heat transfer	KTU
2	Dr. Venkitaraj K P	-	Mr. Biju Chacko	2021	Heat transfer	KTU
3	Dr. Jose Mathew	-	Mrs. Deepa T R	2019	Robotics	KTU
4	Dr. Jose Mathew	-	Mr. Rajaneesh R Chandran	2017	Robotics	KTU

**Faculty awarded & pursuing PhD**

Faculty awarded PhD				
Sl. No	Faculty	Year of awarding	Area of research	Centre of research
1	Dr. Venkitaraj K P	2019-20	Thermal Energy Storage	NIT, Trichy
2	Dr. Binulal B R	2017-18	Fluid structure interactions	Kerala University
Faculty pursuing PhD				
Sl. No	Faculty	Year of enrollment	Area of research	Centre of research
1	Mr. Madhu A K	2015	Nano scale heat transfer	NIT Calicut
2	Mr. Baiju V			CUSAT

(Faculty-in-Charge)(Head of the Department)



# College of Engineering Adoor

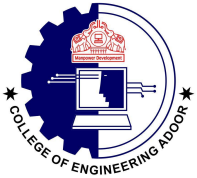
## Department of Mechanical Engineering

### B.Tech Mechanical Engineering

□ **Details of funded projects**

Sl. No	Faculty	Project Title	Funding agency	Amount (Rs.)	Duration	
1	Dr. Venkitaraj K P	Thermal management of photovoltaic cell using PCM for improved efficiency and power output	CERD, Trivandrum (student project scheme)	50000	2021-22	1 year
2	Dr. Venkitaraj K P	Thermal performance evaluation of microencapsulated and nano-enhanced PCM for energy storage in building applications	KSCSTE, Trivandrum (student project scheme)	10000	2019-20	6 months
3	Dr. Venkitaraj K P	Experimental investigation of heat transfer and pressure drop characteristics $Al_2O_3$ nanofluid in the flow through a circular tube fitted with alternate axis twisted tape inserts with triangular cuts.	KSCSTE, Trivandrum (student project scheme)	10000	2019-20	6 months
4	Dr. Venkitaraj K P	Thermal cycle testing of nano enhanced polyalcohols as possible PCM for latent heat storage	CERD, Trivandrum (Faculty seed money)	200000	2017-20	3 year
5	Dr. Venkitaraj K P	Increasing the energy Efficiency of solar cell by Integrating PCM and solar Selective coating	CERD, Trivandrum (student)	50000	2017-18	1 year

(Faculty-in-Charge)(Head of the Department)



# College of Engineering Adoor

## Department of Mechanical Engineering

### B.Tech Mechanical Engineering

			project scheme)			
--	--	--	--------------------	--	--	--

**Honorary Consultancy from Central/ state/ Local Government Organizations**

Sl. No	Faculty	Organization	Year	Description of consultancy work
1	Mr. Manuraj R	Govt. General Hospital, Adoor	2022-23	As technical expert for the condemnation of the old equipment
2	Mr. Santhosh T	Govt. General Hospital, Adoor	2021-22	As technical expert for the condemnation of the old equipment
3	Dr. Shine U P	Kerala State Road Transport Corporation (KSRTC), Chadayamangalam Depot.	2021-22	As technical expert for the inspection of the old buses
4	Mr. Praveen A	Govt. General Hospital, Pathanamthitta	2021-22	As technical expert for the condemnation of the old equipment

(Faculty-in-Charge)(Head of the Department)