

# Curriculum Vitae

**Dr. Sudhanshu Dogra**

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## ACADEMIC PROFILE

Qualification	University/Board	Year	%age/CGPA
Ph. D (Mechanical Engineering)	Lovely Professional University, Punjab	2017-2021	9.22 CGPA
MBA (HR and Operation Management)	Lovely Professional University, Punjab	2024-2026	Pursuing
M.Tech (Thermal Engineering)	National Institute of Technology, Hamirpur	2010-2012	8.07 CGPA
B. Tech (Mechanical Engineering)	Jawahar Lal Nehru Government Engineering College, Sundernagar	2006-2010	73.67%
+2	Sainik School Sujanpur Tira (C.B.S.E)	2005	66%
10	Sainik School Sujanpur Tira (C.B.S.E)	2003	76.8%

## TEACHING EXPERIENCE

- Working as an **Associate Professor** in Department of Mechanical Engineering, Lovely Professional University, Phagwara, Punjab, India from 01/04/2023 onwards.
- Worked as an **Assistant Professor** in Department of Mechanical Engineering, Lovely Professional University, Phagwara, Punjab, India from 23/07/2012 to 31/03/2023.
- HOD Thermal Engineering** from February 2015-Present in Department of Mechanical Engineering, LPU.
- HOD Automobile Engineering** from June 2022-Present in Department of Mechanical Engineering, LPU.
- HOD Research** from August 2023-January 2024 in Department of Mechanical Engineering, LPU.

Subjects Taught: Thermodynamics, Fluid Mechanics, Heat Transfer, Applied Thermal Engineering, IC Engines, Automobile Engineering, Turbomachinery and Gas Dynamics.

Labs Taken: Thermal Engineering Lab, Heat Transfer Lab, Fluid Mechanics and Machinery Lab, I C Engine Lab.

## RESEARCH INTERESTS

- Renewable Energy
- Solar Energy Technology
- Convection Heat Transfer
- Solar Air Heaters

## Memberships

- ✚ Associate Member of ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) (Membership ID:8428840).
- ✚ Member of Indian Science Congress.

## RESEARCH PROJECTS UNDERTAKEN

### 1) Ph. D Topic: **An Experimental Investigation of a Double Pass Solar Air Heater with rectangular duct having artificial roughness on the absorber plate.**

**Abstract:** The world's population is rapidly rising at a rate for which the curve is seen more or less in exponential form. More population means more requirement and consumption of energy. The sources of energy which we are using nowadays are conventional energy sources and these sources as are exhaustible sources are depleting at a rate which is fast enough that they will get extinct in the years to come. By looking at the trends of increase in population, there is a need to develop or look for some other alternatives so that the energy need for humans must be fulfilled.

Till now, fossil fuels accounts for the majority among all the other energy sources but they are depleting at a very faster rate because of ever increasing demands of people. Due to this the need for renewable or non-conventional energy resources are taking an edge over other conventional sources. Nowadays every nation government is switching its focus towards these types of resources so to fulfil the needs of energy by the people. This is because of the fact that these resources are in plenty, in-exhaustible and the ease with which they are available in most of the places. One other and the most important factor of using these non-conventional sources of energy is that these are pollution free and will not cause any harm to the atmosphere. Some of these resources are Solar energy, Wind energy, Geothermal energy, Tidal energy, Ocean energy etc. Out of this Solar energy is considered to be the most important type of non-conventional energy resource among all the other resources due to its easily availability and ease of operation.

The Solar energy which we receive on the earth's surface is plenty and by proper harnessing of only a small amount of this energy can solve our purpose. One of the simplest and most effective way is to convert this solar energy into thermal energy and it is then be used for various purposes. Solar collectors are generally used for collecting the radiations which comes from Sun at some specified location. A solar collector is a device which is as designed so that it absorbs the radiations coming from the Sun and then convert this energy into thermal energy with the help of an absorbing surface and fluid flowing through the collectors. There are so many different types of collectors which can be used for this purpose but out of those concentrating type of collectors are the most efficient one as it can be very helpful in converting energy from the sun into thermal energy with an efficient way. There are so many applications of solar energy. One such application is using this solar energy in solar air heaters. These are the type of heaters which uses solar energy to heats up the air inside it and then this heated air can be used for various useful purposes like for drying crops or for space heating. Solar air heaters are generally of two types; Single pass and Double pass solar air heater. Various experiments have been conducted on single pass solar air heaters and double pass solar air heaters up-to now. Studies shows that Double pass solar air heaters are more efficient than single pass solar air heaters by some considerable extent. Also, experiments revealed that using artificial roughness over the absorber plates can further increase its efficiency.

The present study is based on double pass solar air heater having artificial roughness on the absorber plate in the discrete form. Various calculations were done to see the effect of Nusselt number, friction factor, Thermal efficiency and Thermohydraulic efficiency with Reynolds number. In order to get these values, an experimental set-up has been fabricated and a double pass solar air heater rectangular duct is designed to see these effects. The absorber plate used is of Galvanized-iron (GI) and the artificial roughness which is used is of the shape of discrete w-shaped ribs.

These ribs are placed on both the sides of the absorber plate with the upper side painted black as to absorb more radiations. Also, various other devices, like U-tube manometer for measuring pressure difference, a calibrated orifice-meter, Thermocouples for measuring temperatures of the absorber plate, temperature at inlet and outlet temperature, a plenum used to store the heated air, solar simulator and a suction blower with control valves are also assembled with the fabricated rectangular duct to get the readings. Various operating parameters were taken for the experimentation. The experiments were done under quasi-steady process and it is ensured that the duct is leak-proof so to minimize the losses and get the maximum possible results. Various systems were used to make the whole system leak-proof in the form of gaskets etc.

The parameters taken were, angle of attack ( $\alpha$ ) ranging from  $45^\circ$ - $75^\circ$ , relative roughness pitch ( $p/e$ ) ranging from 5-20, relative gap width ( $g/e$ ) ranging from 0.5-2.0. The rib height is taken as 2 mm. The detailed parameters used for the experimentation has been given below in the table.

Range of parameters in tabular form

PARAMETER	RANGE
Angle of attack ( $\alpha$ )	45°,60° and 75°
Relative roughness pitch (p/e)	5, 10 and 20
Relative gap width (g/e)	0.5, 1.0 and 2.0
Relative roughness height (e/D <sub>h</sub> )	0.044
Reynolds number (Re)	4000-18000

The experimentations have been done on a total of twenty-eight plates including a smooth plate. Through experiments, it has been concluded that the Nusselt number and friction factor get to its maximum value at relative roughness pitch of 10, angle of attack of 60° and relative gap width of 1.0.

Also, the Thermal performance has been calculated by finding Thermal and Thermohydraulic efficiency through the duct and it also comes out to be maximum at the above same range written for Nusselt number and friction factor. It is also concluded from the experiments that the discrete ribs have an upper edge than the continuous ribs over the absorber plate in terms of all the calculated parameters.

The correlations of both the Nusselt number and Friction factor were developed at the end for the configuration used.

2) M. Tech Topic: **An experimental investigation of a double pass solar air heater having inclined and transverse ribs on the absorber plate.**

3) B. Tech Project: **Designing of Gear Box.**

RESEARCH PUBLICATIONS

1. Prateek Minhas, Kumari Ambe Verma, **Sudhanshu Dogra**, Nitin Chauhan, “Study of solar air heater having different geometries on both sides of absorber plate”, International Journal of Mechanical Engineering and Technology (IJMET) Volume 8, Issue 7, July 2017, pp. 1299–1310 (**Scopus Indexed**).
2. **Sudhanshu Dogra**, Ravindra D Jilte, Aashish Sharma, “Study of Performance Enhancement of Single and Double Pass Solar Air Heater with Change in Surface Roughness” Journal of Physics: Conference Series, 1531 (2020) 012091, doi:10.1088/1742-6596/1531/1/012091 (**Scopus Indexed**).
3. Aashish Sharma, Ravindra D. Jilte, and **Sudhanshu Dogra**, “Performance evaluation of ground heat exchanger using novel spirally corrugated pipe geometry—A CFD approach”, AIP Conference Proceedings 2281, 020020 (2020); <https://doi.org/10.1063/5.0026240> Published Online: 15 October 2020 (**Scopus Indexed**).
4. **Sudhanshu Dogra**, Ravindra Jilte, “Analysis of thermal performance and heat transfer characteristics of discrete w-shaped ribs in a double pass solar air heater”, AIP Conference Proceedings 2281, 020016 (2020); <https://doi.org/10.1063/5.0026206> Published Online: 15 October 2020 (**Scopus Indexed**).
5. Samish Mahendra Fale, **Sudhanshu Dogra**, “A review of the use of nanoparticles on performance of solar stills”, IOP Conference Proceeding, 2021, Article in Press (**Scopus Indexed**).
6. **Sudhanshu Dogra**, Gaurav Bhardwaj, “Heat transfer and friction factor correlations for rectangular double/two pass solar air heater with inclined and transverse ribs as roughness elements”, Materials Today: Proceedings, 2021, Article in Press (**Scopus Indexed**).
7. Gaurav Bharadwaj, **Sudhanshu Dogra**, “Exergetic performance evaluation of SAH with inclined ribs used as coarseness in triangular duct”, Materials Today: Proceedings 62 (2022) 4455–4462 (**Scopus Indexed**)

8. Samish M Fale and **Sudhanshu Dogra**, “A review of the use of nanoparticles on performance of solar stills”, IOP Publishing , Journal of Physics: Conference Series, 2264(2022)012121 (**Scopus Indexed**).
9. Samish M Fale and **Sudhanshu Dogra**, “An Experimental Investigation on an Inclined Solar Distiller with a Stepped-Corrugated Absorber and Evacuated Tubes”, International journal of Renewable Energy Research, Vol.13, No.3, September 2023(**Scopus Indexed**).
- 10 Sudev Dutta, **Sudhanshu Dogra**, Sumit Sharma, “Revolutionizing smart textiles: a comprehensive review of conductive ink printing for sustainable and adaptive wearable applications”, Research Journal of Textile and Apparel ISSN: 1560-6074, 18 Nov 2024 (**ESCI and Scopus Indexed**) (Q2).
11. **Sudhanshu Dogra** and Gaurav Bharadwaj, “Thermal Performance Analysis of a Double-Pass Solar Air Heater with Discontinuous W-Shaped Ribs”, Advances in Heat Transfer and Fluid Dynamics. AHTFD 2022. Lecture Notes in Mechanical Engineering. Springer, Singapore. [https://doi.org/10.1007/978-981-99-7213-5\\_33](https://doi.org/10.1007/978-981-99-7213-5_33), February 2024 (**Scopus Indexed**).
12. Gaurav Bharadwaj and **Sudhanshu Dogra**, “Thermal conductivity of hybrid nanofluids and their application in heat transfer augmentation”, 3rd International Conference on Functional Materials, Manufacturing, and Performances AIP Conf. Proc. 2986, 030003-1–030003-7, February 2024 (**Scopus Indexed**).
13. Manmeet Singh, **Sudhanshu Dogra**, Ravindra Jilte, “Experimental Investigation of Temperature Homogeneity and Peak Temperature in a Battery Pack of Cylindrical Li-ion Cells Under Free and Forced Convection”, Journal of Advanced Research in Fluid Mechanics and Thermal Sciences 125, Issue 1 (2025) 42-56 (**Scopus Indexed**) (Q3).
14. Saurabh Singh, Rajesh Singh, Anita Gehlot, Shaik Vaseem Akram, Amit Kumar Thakur, **Sudhanshu Dogra**, “Adoption of Digitalization and Sustainable Services for Legal Practice 4.0: A Comprehensive Review”, Asian J. Interdiscip. Res, 8(2) (2025), 21-34 | 22 (**Scopus Indexed**) (Q3).

## PATENTS PUBLISHED

1. Amphibious UAV with rotatable propulsion system.  
Application No.: 202311050881 A.
2. An electromagnetic sensor shoe for astronauts in spacecraft.  
Application No.: 202311078777 A
3. Gas turbine cooling blade system.  
Application No.: 202311079842 A
4. Gas Turbine blades with cooling holes.  
Application No.: 202411004127 A
5. A Novel Design for retro-fit acoustic liner for noise.  
Application No.: 202411004128 A
6. Stealthy Med Transporter: Remote Controlled Battery Powered Vtol For Hilly Terrain  
Application No.202411052646 A

7. Thruster System

Application No.202411052035 A

8. Rotating Detonation Engine

Application No.202411052037 A

9. Design and analysis of stable and sustainable pulse detonation engine

Application No. 202411077828 A

10. Design of soil ramming machine with varying impact load

Application No. 202411084409 A

11. Innovative aerospike system for drag reduction in hypersonic vehicles for aerospace industry

Application No.202411085252 A

12. Method of enhancing performance of a hydraulic ram

Application No.202411085807 A

13. Method for operating a solar-powered refrigeration system

Application No.202411085928 A

14. Solar-powered refrigeration system

Application No.202411085959 A

15. Chainless bicycle

Application No.202411086388 A

16. Pulse detonation engine with bluff body wake stabilizer and enhanced deflagration to detonation transition device

Application No.202411103490 A

17. A drone-based system for visual inspection of aircraft surfaces

Application No.202411103499 A

18. Unmanned aerial vehicle (UAV) with modified fuselage construction for turbulent flow reconnaissance

Application No.202411103497 A

## COPYRIGHTS

Solar desalination using evacuated tube and nanoparticles.

Application No.: 24093/2022-CO/L.

## CONFERENCES

1. Member of Organizing committee in International Conference (ICRAME-2017) held in School of Mechanical Engineering, LPU in year 2017.
2. Member of Organizing committee, International Conference on Composite Materials: Manufacturing, Experimental Techniques, Modeling and Simulation (ICMMEMS) 2018 held in School of Mechanical Engineering, LPU.
3. Member of Organizing committee, International Conference on Advances in Sustainable Technologies ICAST-2020, held in School of Mechanical Engineering, LPU.

4. Member of Organizing committee in 2nd International Conference on functional materials, manufacturing and performance ICFMMP-2021 held in School of Mechanical Engineering, LPU in year 2021.
5. **Convenor** of conference, International Conference on Recent Advances in Energy and Materials for Sustainable Development (RAEM-2023).

## ONLINE COURSES/CERTIFICATIONS

- ✚ NPTEL Course on Heat Transfer conducted by IIT Bombay with **Elite Silver topper** certificate held between Jan 2025-April 2025.
- ✚ Honour code certificate on **“English for oral communication”** by IITB CDEEP held from 19<sup>th</sup> Feb 2019- 17<sup>th</sup> April 2019.
- ✚ Honour code certificate on **“Financial Literacy”** by IITB CDEEP held from 19<sup>th</sup> Feb 2019- 18<sup>th</sup> March 2019.
- ✚ Honour code certificate on **“Handling large projects”** by IITB CDEEP held from 26<sup>th</sup> March 2019- 22<sup>nd</sup> April 2019.
- ✚ Completed a course on **“Fundamentals of Fluid Power”** through Coursera by **“Georgia Institute of Technology”** with 88% marks.
- ✚ Completed a course on **“Introduction to Engineering Mechanics”** through Coursera by **“University of Minnesota”**.
- ✚ Completed a course on **“Programming for everybody (Getting started with Python)”** through Coursera by **“University of Michigan”**.
- ✚ Completed a course on **“Introduction to Thermodynamics: Transferring energy from here to there”** through Coursera by **“University of Michigan”**.

## FDP'S/ SHORT TERM COURSES

- ✚ Attended Short term course on **“Advances in Materials manufacturing processes and properties”** held from 06-06-2020 to 10-06-2020 organized by MNIT Jaipur.
- ✚ Attended Short term course on **“Recent advances in automobiles”** held from 15-02-2021 to 21-04-2021 organized by Govt. Polytechnic college Gantharvakkottai, Tamilnadu.
- ✚ Attended Short term course on **“Electric Vehicle: Opportunities and Challenges”** held from 16-08-2021 to 27-08-2021 organized by Sharda University, Noida.
- ✚ Attended Short term course on **“Emerging Trends in Renewable Energy Technologies”** held from 20-06-2022 to 24-06-2022 organized by MANIT Allahabad.
- ✚ Attended Professional Development workshop on **“Digital Creativity Skills”** held from 19-11-2022 to 25-11-2022 organized by Adobe Express.
- ✚ Attended Short term course on **“Battery Thermal Management systems: Present and Future”** held from 12-06-2023 to 16-06-2023 organized by SVNIT Surat.
- ✚ Attended Short term course on **“Clean and Green Technologies for Environment Sustainability”** held from 27-05-2024 to 31-05-2024 organized by NITTTR Chandigarh.
- ✚ Attended Faculty development program on **“Teaching with Technology: Integrating Characterization Tools in Curriculum”** held from 30-05-2025 to 03-06-2025 organized by GLA Mathura.

## AWARDS AND HOUNOURS

- ✚ Got **Best Teacher award** (Teacher Appreciation award) consecutive two times at Lovely Professional University in School of Mechanical Engineering.
- ✚ Got **Honours Degree** in B. Tech (Mechanical) from Himachal Pradesh University.
- ✚ **GATE 2012 and 2016** Qualified with 90 percentiles.
- ✚ Played **State level** Handball Competition.
- ✚ Played Basketball at **Interzonal level**.

- ✚ Winner of Basketball and Table Tennis event at **college level**.
- ✚ Cleared HP-MAT (**State 7<sup>th</sup> Rank**).
- ✚ Awarded with **NCC A** certificate.
- ✚ Cleared **CDS** written exam on 2010.
- ✚ **NPTEL Topper** in Heat Transfer conducted by IIT Bombay among 1019 enrolled.

### UG students guided

S.No.	Name of the student	Registration No.	Batch year	Project Title
1	Venda Prasad	11004048	2010-14	Running an Engine using Gasifier.
2	Sunil Singh Tomar	11011935	2010-14	
3	Shah Jital Dwarkeshbhai	11012508	2010-14	
4	Ayan Biswas	11004304	2010-14	
5	Sandeep Kumar	11000920	2010-14	Capstone project
6	Devashish	11002763	2010-14	
7	Himansh Rai	11002213	2010-14	
8	S. Mukesh Rao	11013457	2010-14	
9	Alok Kumar dwivedi	11003513	2010-14	Capstone project
10	Sahil Duvedi	11001350	2010-14	
11	Rajiv	11004247	2010-14	
12	Anil Kumar	11000177	2010-14	
13	Avinash Pundhir	11003905	2010-14	Capstone project
14	Pankaj	11000180	2010-14	
15	Arpit Mahajan	11003364	2010-14	
16	ravi gupta	11008427	2010-14	
17	Atul Kumar	11005954	2010-14	Capstone project
18	Durgesh Patankar	11013546	2010-14	
19	Naveen Kumar	11005352	2010-14	
20	Jaspal Singh	11007881	2010-14	
21	Sachin Kumar	11007795	2010-14	Capstone project
22	Baleshwar Singh Pagrotra	11011373	2010-14	
23	L Chaitanya Teja Harsha	11013447	2010-14	
24	Awadhesh Kumar	11010510	2010-14	
25	Gaurav Chaudhary	11004455	2010-14	Capstone project
26	Satyam Kumar	11003811	2010-14	
27	Aman Guleria	11010265	2010-14	
28	Ashok	11202894	2011-15	
29	Parveen	11203378	2011-15	Designing of apparatus of Sonic levitation to levitate objects on stationary nodes.
30	Kuldeep	11208574	2011-15	
31	Parveen Kumar	11203975	2011-15	
32	Ajay Kumar	11303671	2013-17	Design of Solar Powered Bicycle.
33	Utkarsh Sharma	11310777	2013-17	
34	Rajat Dubey	11311940	2013-17	Design and Fabrication of Solar Powered Bicycle.
35	Anuj Singh Tomar	11307865	2013-17	
36	Md Equbal Ansari	11311150	2013-17	
37	Chinta Venkata Reddy	11302095	2013-17	Power generation with the use of roller breakers
38	Vegi Jaya Prakash	11302643	2013-17	



39	Vishal Malhotra	11310248	2013-17	Designing and Fabrication of Hydraulic RAM system with methods of increasing its Rankine and D'Aubuisson's efficiency.
40	Chandan Thakur	11304113	2013-17	
41	Abhishek Dwivedi	11304342	2013-17	
42	Aditya Singh Gurjar	11303069	2013-17	
43	Sudhanshu Rai	11302186	2013-17	Design and fabrication of single row rice plantation machine
44	Karan Thapa	11408303	2014-18	
45	Rohtash	11408144	2014-18	
46	Jagdev Singh	11401670	2014-18	
47	Vanamadi Narendra	11406443	2014-18	Power generation by using piezoelectric material
48	Anuj Kumar Singh	11412725	2014-18	
49	Saket Trivedi	11411401	2014-18	Design and fabrication of smart hybrid bio-gas plant
50	Raj Gupta	11413188	2014-18	
51	Chetan Sahu	11412151	2014-18	
52	Harsha Dutta Mishra	11411954	2014-18	Design and Fabrication of Solar grass cutting machine.
53	Ankit Kumar	11507306	2015-19	
54	Shubham Dhiman	11505690	2015-19	
55	Harinderpal Singh	11502082	2015-19	
56	Ravi	11504699	2015-19	
57	Ravindra Karwasra	11504439	2015-19	Design and Fabrication of Multi-row rice plantation machine
58	Nikunj Kumar Chauhan	11511205	2015-19	
59	Rishabh Kumar Mandilwar	11511197	2015-19	
60	Chandramahesh Annam	11510752	2015-19	
61	Jayant Bhandari	11511334	2015-19	
62	Utsav Chaudhary	11511349	2015-19	Design and validation of ignition inter-locker using seat belt
63	Jyotishman Das	11504881	2015-19	
64	Jyotidev Das	11504882	2015-19	
65	Swagat Nayak	11504575	2015-19	
66	Aman Dagur	11506025	2015-19	Design and Analysis of planetary gear system
67	Koushik Gope	11606042	2016-20	
68	Rishab Raj	11606121	2016-20	
69	Sourav Chowrasiya	11606848	2016-20	
70	Hritik Kumar	11610539	2016-20	Design and analysis of Heat pipe
71	Madisa Sai	11703844	2017-21	
72	Amarapalli Sai Raj Sarath	11704904	2017-21	
73	Velamuri Aditya	11704921	2017-21	
74	Vantipalli Harsha Vardhan	11710801	2017-21	
75	Gangumalla Jithendra Kumar	11714220	2017-21	Design and Analysis of a Single pass solar air heater
76	Sheikh Abdul Munim	11801131	2018-22	
77	Sanidhya Gupta	11802245	2018-22	
78	Sahil Deshmukh	11809176	2018-22	
79	Amit Kumar	11810099	2018-22	
80	Inderpreet Singh	11812768	2018-22	Design and Fabrication of Solar Bicycle
81	Avinash Kumar Jha	11902056	2019-23	



82	Rottela Lokesh	11904652	2019-23	
83	Rajat Yadav	11912447	2019-23	
84	Rupesh Kumar Mahato	11918041	2019-23	
85	Bimal Kumar Thakur	11906027	2019-23	
86	Vivek Murmu	11903128	2019-23	Design and Fabrication of solar powered refrigeration system.
87	Siddharth Krishna Yadav	11909590	2019-23	
88	Satyam Pandey	11901594	2019-23	
89	Aman Kumar Pandey	11902401	2019-23	
90	Kelvin Ekka	11911970	2019-23	
91	Kishlay Verma	11906732	2019-23	Design and fabrication of Hydraulic RAM
92	RA Yasswanth	11906804	2019-23	
93	Rangesh Siva Sundaram S	11904757	2019-23	
94	Sanjeev Kumar Maurya	12020314	2020-24	Design and Fabrication of chainless bicycle.
95	Kuljeet Singh	12020577	2020-24	
96	Rizwan Saiyad	12101518	2020-24	
97	Seikh Arif Aslam	12103162	2020-24	
98	Ravi Inder Singh	12103850	2020-24	
99	Pankaj Shilu	12019393	2021-25	Smart irrigation system for precision farming
100	Gunavardhan Yakkanti	12107585	2021-25	
101	V Janardhan Reddy	12113944	2021-25	
102	Abhay Pareek	12105487	2021-25	Solar-powered EV charging station
103	Erva Kalidass	12204070	2021-25	

### PG (M.Tech Students Guided)

S.No.	Name of the student	Registration No.	Batch year	Project Title
1	Dinkar Prasad Singh	11001320	2010-15	Design and fabrication of Solar air heater with artificial roughness on absorber plate.
2	Shubham Srivastava	11008025	2010-15	Design and fabrication of Solar Refrigeration system.
3	Parteen Minhas	11510443	2015-17	Experimental investigation of a Double Pass Solar Air Heater having ribs as artificial roughness on both sides of the absorber plate.
4	Akash Ghosh	11103244	2011-13	Study of single droplet combustion of E85 fuel and generation of NOx
5	Suraj Kumar Sao	11301960	2013-15	Experimental investigation of Double pass Solar Air Heater having rectangular duct with different shaped geometries on both sides of the absorber plate.
6	Kushal Dhalaria	11409442	2014-16	An experimental investigation of the performance enhancement techniques of a solar water heater

7	Parthasarathi Purohit	11813432	2018-20	Analysis of emissions from Diesel engine and exhaust after treatment for the reduction of various emissions from Diesel engine.
8	Bommu Neelothpal Reddy	11914933	2019-21	Thermal and Thermohydraulic performance analysis of a two-pass Solar air heater having s-shaped ribs.
9	Krishan Chandra	12011169	2020-22	Heat transfer and thermal performance analysis of a solar air heater.
10	Ashutosh Singh Baghel	12104409	2021-23	An investigation and analysis of a Solar water heater with its performance enhancement techniques.

### PhD Students

S.No.	Name of the student	Registration No.	Year	Project Title	Status
1	Fale Samish Mahendra	41800851	2023	Experimental performance and economic analysis of nano fluids in inclined solar still equipped of the stepped absorber with corrugated fins and evacuated tube	Completed
2	Manmeet Singh	42000378	2025	Experimental investigation of temperature homogeneity and peak temperature in a battery pack of cylindrical Li-ion cells under free and forced convection.	Submitted
3	T Vijaya Sarathi	42000069	2020-Present	Investigation on Tribological Performance of Castor Oil based Bio Nano lubricants	Pursuing

### PERSONAL INFORMATION

Nationality : Indian  
 Gender : Male  
 Marital Status : Married  
 Languages Known : Hindi, English (Speak, Read & Write)  
 Hobbies : Reading Books, Playing Table Tennis and Basketball  
 Strength : Responsible & Hardworking, Confident, Keen Observer and Fast Learner  
 Father's Name : Sh. Vijay Bhushan Dogra  
 Permanent Address : Village: Ghuggar Har, PO & Teh: Palampur, Distt: Kangra(H.P) 176061