DR. RAVI KANT RAVI

OBJECTIVE

To get accelerate in doing a challenging job that can radiant the scope to work on cutting-edge technology, enhance my global perspective & my multi-faceted personality.

WORK EXPERIENCE

Currently working at **G. B. Pant Institute of Engineering& Technology (An Autonomous Institute of Government of Uttarakhand), Pauri Garhwal** as an Assistant Professor in **Mechanical Engg. Department** from 09 July 2018 to till date.

Worked at **College of Engineering Roorkee, Roorkee** (Affiliated by U.K. Tech. University, approved by AICTE, India & Accredited by NBA) as an **Assistant Professor** in **Mechanical Engg.** Department from August 01, 2012 to May 30, 2013.

Worked at **National Institute of Technology Kurukshetra, Kurukshetra** (as an **Assistant Professor** in **Mechanical Engg.** Department from September 12, 2011 to June 30, 2012.

Before that, I was working in B.H.E.L. (HEEP) haridwar on contract through **U.S. Saini & Co.**, **Roorkee** from July 10, 2007 to June 10, 2009.

QUALIFICATIONS

Professional-

Ph.D *from* ***Indian Institute of Technology, Roorkee****, India, in the field of "STUDY OF DOUBLE PASS ROUGHENED SOLAR AIR HEATER WITH DISCRETE MULTI V SHAPED AND STAGGERED RIBS"*

M.Tech *in* ***Thermal engineering,*** *from* ***National Institute of Technology, Kurukshtera,*** *India, in July 2011****.***

B.Tech *in* ***Mechanical Engineering*** *from* ***Meerut Institute of Engineering and Technology****, Meerut (UPTU) U.P., India, in 2007.*

Academic -

Intermediate-From VM Inter College, Sec-5, BHEL Haridwar from U.P. Board, India, in 2002.

High school- From VM Inter College, Sec-5, BHEL Haridwar from U.A. Board, India, in 2000.

COMPUTER AWARENESS

Operating system	DOS, WINDOW-95, 98/NT, 2000/2003/2007/2010
Languages	Programming techniques using C & C++
Web Authoring/Software	HTML,XML, Internet, front page-2000,
Professional software	Autocad, MS-Office: Package 2007-13, Polymath-2013, Sigma plot, CFD-Fluent

RESEARCH AREA AND INTEREST

Heat Transfer
Thermal Engineering
Solar Energy, Solar air heater, Development of correlations, Thermal performance enhancement techniques
Renewable Energy

COURSE TAUGHT/BEING TAUGHT DURING WORK EXPERIENCE

Basic Thermodynamics
Heat Transfer
Engineering Drawing
Basic Mechanical Engineering
Power Plant Engineering
Energy Conservation
Renewable Energy System
Workshop Practice

AWARDS AND HONOR

Secured MHRD Scholarship grant for M.Tech for the year 2009-2011, NIT, Kurukshetra.
Secured MHRD Scholarship grant for Ph.D for the year 2013-2018, IIT Roorkee, Roorkee.

RESEARCH PAPER PUBLISHED IN WORKSHOP/SEMINAR/SYMPOSIUM ATTENDED AND PARTICIPATED[ANNEXURE-1]

A. **International Journal**-07 Published, 03- Communicated
B. **International Conference**-09 Published,
C. **Book Chapter-02**
D. **Workshop/Seminar/Short term course/Symposium/ FDP/Seminar**-13

Google scholar profile link: https://scholar.google.com/citations?hl=en&user=fBF6gRwAAAAJ

THESIS/DESSERTATION/RESESRACH WORK

Ph. D Thesis

Title: STUDY OF DOUBLE PASS ROUGHENED SOLAR AIR HEATER WITH DISCRETE MULTI V SHAPED AND STAGGERED RIBS.

The core objective of the thesis is to investigate the thermohydraulic performance of the double pass solar air heater roughened with discrete multi V- shaped and staggered rib roughness. Thesis assesses the Heat transfer and friction factor characteristics of artificially roughened double pass solar air heater duct. Thesis also comprises the development of correlations for Nusselt number and friction factor of double pass roughened duct. Based on these correlations, a computer program in MATLAB has been developed to calculate the thermal, effective and exergetic efficiency of the roughened duct. Further, the design plots were prepared which can be utilized to obtain set of optimum values of roughness parameters that will result in the best thermo-hydraulic performance. A design procedure was specified to arrive at the optimum roughness geometry for given set of operating parameters of the collector.

M.Tech dissertation

Title: SIMULATION OF FLOW STRUCTURE AND HEAT TRANSFER ENHANCEMENT IN A TRIANGULAR DUCT WITH RECTANGULAR WING

The core objective of the dissertation is an attempt to highlight the importance of heat transfer enhancement technique in a duct. The research focus on a detailed CFD analysis, carried out for rectangular wing type vortex generator using Fluent Ansys software. The overall performance of the channel with single rectangular wing type vortex generator mounted at different angle of attack and different locations in the triangular channel was compared with the plain triangular channel without wing. The result of the study reported that the considerable enhancement in both heat transfer and pressure drop was obtained using such type of vortex generator as compared to plane channel.

B.Tech Industrial Training

- Vocational training: **June 2005** at Bharat Heavy Electricals Limited (BHEL), Haridwar in Turbine Blade Manufacturing (TBM) section.
- Vocational training: **June 2006** at Bharat Heavy Electricals Limited, Haridwar in Turbine Assembly (TUM) section.

INSTIUTE AND DEPARTMENT LEVEL RESPONISIBLITY

1. Mechanical lab OC at COER, Roorkee, UK, India, 2012-13.
2. Heat Transfer lab OC at NIT Kurukshetra, Kurukshetra, India 2011-12.
3. Warden Alaknand Hostel from 2020 to till date.
4. Fluid mechancis and Fluid machine lab OC at GBPIET, Pauri garhwal from 2018 to till date.
5. Time table OC at MED, GBPIET pauri garhwal from 2019 to till date.
6. Member of the SC/ST cell at GBPIET.
7. Deputy coordinator in NBA work

CO-CURRICULAR ACTIVITY

- Worked as a co-ordinator of "**SURGE'11**" organized by Mexperts PG Society, NIT Kurukshetra, held on 4th to 6th march 2011.
- Organizer of Mexperts Society in NIT Kurukshetra.
- Organised the STC in MED GBPIET.
- Coordinator of the FDP in MED GBPIET.

PERSONAL DETAIL

Marital Status	Married
Date of Birth	October 27, 1985
Nationally	Indian
Father's Name	Sh. Bhanpal Singh Ravi
Mother's Name	Smt. Malti Ravi
Leisure	To achieve a propels and respectful position in my life.
Contact No.	**+91-7830605240**
Address	Q-96, Shivalik nagar, B.H.E.L., Ranipur, Haridwar-249403, U.K., India
Core-Competence	Getting together with my friends & like to travel places

ANNEXURE-I

[A] INTERNATIONAL JOURNAL PUBLICATIONS

[1] Ravi, R.K. and Saini, R.P. (2016), "A review on different techniques used for performance enhancement of double pass solar air heaters", Renewable and sustainable Energy Reviews, Elsevier, 56, 941-952.

[2] Ravi, R.K. and Saini, R.P. (2016), "Experimental investigation on performance of a double pass artificial roughened solar air heater duct having roughness elements of the combination of discrete multi V shaped and staggered ribs", Energy, Elsevier, 116, 507-516.

[3] Ravi, R.K. and Saini, R.P. (2017), "Effect of roughness elements on thermal and thermohydraulic performance of double pass solar air heater duct having discrete multi V-shaped and staggered rib roughness on both sides of the absorber plate", Experimental Heat Transfer, Taylor and Francis, 31(1), 47-67.

[4] Ravi R.K. and Saini R.P. (2018), "Nusselt number and friction factor correlations for forced convective type counter flow solar air heater having discrete multi V shaped and staggered rib roughness on both sides of the absorber plate", Applied Thermal Engineering, Elsevier, 129 (2018), 735–746.

[5] Singh T., Puri M., Tejyan S., Ravi R.K. (2021), "Abrasive wear and dynamic–mechanical behavior of marble dust filled bagasse fiber reinforced hybrid polymer composites", Polymer Composites 42 (6), 2817-2828.

[6] Ravi R.K., Kumar M., Kumar M., Saini R.P. (2022), "Experimental investigation on heat transfer and fluid flow characteristics for roughened counter flow solar air collector", International Journal of Green Energy 19 (8), 865-878.

[7] Kumar M. , Mehla N., Srivastava S., Ravi R.K. (2022), "Water generation from atmospheric air by using desiccant materials-nature-based solution–a review", World Journal of Engineering, ISSN: 1708-5284.

[B] INTERNATIONAL CONFERENCE PRESENTAION/ ATTENDED/ PUBLICATIONS

[1] Ravi, R.K. and Saini, R.P. (2015), "Nusselt number and friction factor characteristics for double pass solar air heater duct having discrete multi V shaped and staggered rib roughness", Proceeding of ICAER conference, IIT Bombay, Bombay, India.

[2] Ravi, R.K. and Saini, R.P. (2017), "Experimental Investigation on Thermal and Hydraulic performance of Artificially Roughened Double pass solar air heater duct", Proceeding of ICONRER conference, SKIT Jaipur, Jaipur, India.

[3] Ravi, R.K. and Saini, R.P. (2019), "Nusselt number and friction factor characteristics for double pass solar air heater duct having artificial roughness", International Conference on Contemporary Advances in Mechanical Engineering (ICCAME-2019), CEC Landran , Mohali Punjab India.

[4] Debnath S., Kumar M., Kumar V., Saini A, Salwan K., Ravi R. (2021), "Experimental Investigation on Thermal Performance of Solar Air Collector Provided with Corrugated Absorber", Advances in Clean Energy Technologies, 1137-1145.

[5] Mishra K.K., Kumar M., Ravi R., Saini A., Salwan K., Sharma M.P. (2021), "Improving Cold Flow Properties of Biodiesels Using Binary Biodiesel Blends" Advances in Clean Energy Technologies, 951-961.

[6] Ravi R., Kumar M. (2021), "Experimental Investigation on Performance Enhancement Technique for Counter Flow Solar Air Collector", Advances in Clean Energy Technologies, Energy Centre, Maulana Azad National Institute of Technology, Bhopal, India.

[7] Ravi R., Kumar M. (2021), "Experimental Investigation on Performance Enhancement Technique for Counter Flow Solar Air Collector", Advances in Clean Energy Technologies, Energy Centre, Maulana Azad National Institute of Technology, Bhopal, India.

[8] Ravi R.K., Saini R.P. (2021), "CFD Simulation for Rectangular Solar Air Heater Having Cubical Rib Protrusions as Roughness Elements", Advances in Clean Energy Technologies, Energy Centre, Maulana Azad National Institute of Technology, Bhopal, India.

STC/ FDP organized/ Attended

[1] Participated in one week STC on Emerging Trends & Technology in Internet of Things (IOT) and Cloud Computing" organized by Deptt. Of computer science & Engg. GBPIET, Pauri Garhwal Uttarkhand during September 10-14, 2018.

[2] Participated in one week STC on Advances in materials & Manufacturing" organized by Deptt. of Mechanical Engg., GBPIET, Pauri Garhwal Uttarkhand during December 24-28, 2018.

[3] Participated in FDP on Recent Advances in Mechanical Engineering organized by Department of Mechanical Engineering, NIT Puducherry, Karaikal during June 24-28, 2019.

[4] Participated in STC on Recent Trends in Renewable Energy Systems" organized by Department of Electrical Engineering, GBPIET Pauri Garhwal during November 26-30, 2019.

[5] Organized Two week online FDP on Experimental and Numerical Methods for Mechancial Engineers organized by Department of Mechanical Engineering, GBPIET Pauri Garhwal during August 17-28, 2020.

[6] Organized one week online STC on Recent Developments in Mechanical Systems organized by Department of Mechanical Engineering, GBPIET Pauri Garhwal during September 07-11, 2020.

[7] Organized one week online FDP on Tools and Scientific Communications for Research Article and Proposal Writing organized by Department of Mechanical Engineering, GBPIET Pauri Garhwal during September 19-23, 2020.

[8] Participated in two week FDP on Recent Advances and Innovations in Design of Structures organized by Department of Civil Engineering, GBPIET Pauri Garhwal during December 07-18, 2020.

[9] Participated in FDP on Experimental and Computational Methods in Fluid flow anf Heat Transfer in Engineering Applications organized by NIT Manipur, Imphal, India during February 15-19 2021.

REFRENCES

1. **Prof. R.P. Saini**
   Professor, AHEC, IIT Roorkee, Roorkee,
   Contact No.- +91-1332-285213

2. **Prof. M.P. Sharma**
   Professor, AHEC, IIT Roorkee, Roorkee
   Contact No.-+91-1332-285213

3. **Prof. Arun Kumar**
   Professor, AHEC, IIT Roorkee, Roorkee
   Contact No.- +91-1332-285821

4. **Dr. Gulshan Kumar**
   Assistant Professor, NIT Kurukshetra, Kurukshetra,
   Contact No.- +91 9812533221

Date:….

Place:….

(Ravi Kant Ravi)