

## Dr. (Mrs.) PRABHA CHAND

Professor

Department of Mechanical Engineering

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### Educational Details

Degree/ Exam	Division/ Marks	University/College	Year of Passing
Ph.D (Solar Energy)		Ranchi University/ NIT Jamshedpur	2004
M.Tech (Space Engineering and Rocketry)	1 <sup>st</sup> / 74%	BIT Mesra, Ranchi	1994
B.Sc.(Engg) (Mechanical Engineering)	1 <sup>st</sup> /69%	Ranchi University/ BIT Sindri	1991
I.Sc.	1 <sup>st</sup> /69%	Ranchi University/ Sindri Womens College	1986
10 <sup>th</sup>	1 <sup>st</sup> /73%	BSEB Patna, Bihar	1984

### Research and Professional Experience

Post Held	Name of Employer	Period
Professor	NIT, Jamshedpur	12-05-2018 to continuing
Associate Professor	NIT, Jamshedpur	27-02-2009 to 11-05-2018
Assistant Professor	NIT, Jamshedpur	27-02-2006 to 26-02-2009
Lecturer (Senior Scale)	NIT, Jamshedpur	27-02-2002 to 26-02-2006
Lecturer	RIT, Jamshedpur	27-02-1997 to 26-02-2002

### Total Experience [Teaching & Research]

- i) Undergraduate Class : 20 years
- ii) Postgraduate Class : 10 years

iii) Research : 19 years

### **Professional Interests**

*Research:* Solar Energy, Aerodynamics, Thermal Engineering, Clean and Sustainable Energy, Nano-fluid.

*Teaching:* Solar Thermal Energy Systems, Engineering Thermodynamics, Renewable Energy Systems, Heat and Mass Transfer, Steam Power Systems, Automobile Engineering, Heat Exchanger Design, I.C Engine, Engineering Economics.

### **Awards and Honors**

- Lady Engineering Award, 2019 from Institution of Engineers
- Distinguished Woman in Engineering - 2018 Award from Venus International Chennai.
- Received best paper award in the 19th International Conference on Renewable Energy Resource and Energy Storage (ICRERES -2017) organized by WASET New York, USA held on 4-5 June'2017.

### **Served as Reviewer**

- Reviewed manuscripts for the following journals:
  - ❖ Clean Technology and Environmental Policy
  - ❖ Renewable Energy
  - ❖ International Journal of Mechanical Sciences
  - ❖ Heat Transfer - Asian Research
  - ❖ Desalination and Water Treatment
  - ❖ International Journal of Energy Research
  - ❖ International Journal of Exergy
  - ❖ Energy

### **Administrative Responsibilities**

#### **Institute Level**

- Dean Faculty Welfare, National Institute of Technology Jamshedpur (July 2019 to till Date)
- Executive Committee Member of The Technical Cooperative Credit Society of NIT Jamshedpur since 2016
- Nodal Officer, TEQIP-II from 18.05.2016 to 28.09.2017

- Member, Internal Complaint Committee for Sexual Harassment, National Institute of Technology Jamshedpur (2015- Present)
- Chairperson, CPDA Committee (2015-2018)
- Co-chairperson, Baja Delta Shoot Out event 2015
- Member, Admission Committee (UG) National Institute of Technology Jamshedpur (2009, 2010, 2015, 2016)
- Member, Admission Committee (PG) National Institute of Technology Jamshedpur (2012)
- Co-ordinator, Core Organizing Committee, Utkarsh 2012
- Member, Convocation 2011-2012
- Warden, Girls Hostel, National Institute of Technology Jamshedpur (1997-2000), (2005-2013)
- Chairperson, Women Cell, National Institute of Technology Jamshedpur (2005-2015)
- Organized Blood Donation Camp from NSS on 22.11.2008
- Co-ordinator, M.Tech (CIDM), (2006-2009), PTPG (2005-2009)
- Program Officer of NSS (2004-2011)

### **Department Level**

- Head, Department of Mechanical Engineering, National Institute of Technology Jamshedpur (May 2015 to May 2018)
- Chairperson, Departmental Purchase Committee, Mechanical Engineering Department (2015 to 2018)
- Chairperson, MES 2015- 2017
- Professor In charge, Time-Table (Jan 2014 - June 2016)
- Member, Departmental Purchase Committee, Mechanical Engineering Department during 24.09.2013- 13.05.2015
- Professor In charge, Renewable Energy Systems Lab, 2012-2015, 2017 to 2018
- Convener, Energy Systems Engineering Course Structure
- Faculty Advisor, 2010 batch, 2014 batch up to 2015
- Convener, UG Project evaluation committee 2011 batch
- Co-ordinator of M.Tech CIDM during 01.04.2006 - 30.06.2009
- Co-ordinator of M.Sc. Engg. Part time Machine Design group of Mech. Engg. Deptt. during 01.12.2005 – 31.12.2009

- Prof. In Charge of departmental Library during 13.07.2005 - 31.12.2009
- Tabulator & Faculty Advisor of 2006 batch
- In charge of Model Lab during 2000 – 2006, RAC Lab 2006-2007, Automobile Lab since 19.4.2007

#### **Membership of Professional Bodies**

1. Life Member of Indian Society of Technical Education- LM28773
2. Member of Institution of Engineers- M-143288-5

#### **Thesis Supervisor and Undergraduate Project Supervisor/Co- Supervisor**

Ph.D Thesis	03 (awarded), 05(ongoing) [Annexture-1]
M.Tech Dessertation	28 (completed), [Annexture-2]
B.Tech Final Year Projects	23 Batches (completed) [Annexture-3]

#### **Short Term Courses & National Conference Organized**

- Five Day Faculty Devlopment Program on “Productivity Enhancement Program” at N.I.T. Jamshedpur from 24-29 Feb, 2020.
- Two Day National conference on “Renewable Energy and Environmental Challenges” at N.I.T. Jamshedpur from 26-27 Feb, 2018.
- One week short term course on "Advanced Solar Photovoltaic Systems" at N.I.T Jamshedpur from 18-22 April 2016.
- One week short term course on "Modeling and Simulation of Renewable Energy Systems" at N.I.T Jamshedpur from 18-22 June 2012.
- Participant Coordinator of the computer training program under Community Services and Economy of TEQIP from 16.12.2005 to 23.12.2005.

#### **Short Term Courses/ Workshops Attended**

- 5 days FDP Programme on “Artificial Intelligence (AI)” at N.I.T Jamshedpur from 8-12 June 2020.
- 5 days FDP Programme on “Robotics” at N.I.T Jamshedpur from 25-29 May 2020.
- 5 days short term course on "Advanced Solar Photovoltaic Systems" at N.I.T Jamshedpur from 18-22 April 2016.
- One week Faculty Development Program under TEQIP-II on “Achieving Academic Excellence” at IIM Raipur from 23-28 March 2015.

- 1 day effective teaching workshop at ALCOR hotel, Jamshedpur on 2<sup>nd</sup> February 2014
- One week short term course on “Computational Fluid Dynamics” at N.I.T Jamshedpur from 24-28 December 2012.
- 3 days workshop on “Modeling and Analysis of Dynamic Systems” at N.I.T Rourkela from 5-7 December 2011.
- 2 days workshop on “Linux” at N.I.T Jamshedpur from 7-8 February 2009.
- 5 days short term course on "Teaching Learning Process" at N.I.T Jamshedpur from 10<sup>th</sup>-14<sup>th</sup> April 2008.
- 2 days short term course on "Human Resources Training and Opportunities" at N.I.T Jamshedpur from 9<sup>th</sup>-10<sup>th</sup> Feb 2008.
- 7 days short term course on "Programming and Data Structures" at N.I.T Jamshedpur from 2<sup>nd</sup>-8<sup>th</sup> Jan 2007.
- 5 days short term course on "Interpersonal Effectiveness" (LEVEL II) at N.I.T Jamshedpur from 10<sup>th</sup>-14<sup>th</sup> April 2006.
- 2 days short term course on "Recent Advances in Heat Transfer" at N.I.T Jamshedpur from 18<sup>th</sup>-19<sup>th</sup> Dec 2006
- 12 days short term course on "Finite Element Method" at N.I.T Jamshedpur from 27<sup>th</sup> June-8<sup>th</sup> July 2005.
- 14 days short term course on "Industrial Productivity Improvement through Innovative Techniques" at R.I.T Jamshedpur from 17<sup>th</sup>-30<sup>th</sup> June 2002.
- 14 days short term course on "Some Aspects of Modeling and Simulation of Electrical Systems" at R.I.T Jamshedpur from 24<sup>th</sup> Dec 2001-6<sup>th</sup> Jan 2002.
- 14 days short term course on "Energy Technologies and Management-Sustainable Perspective" at B.I.T Mesra from 18<sup>th</sup> -30<sup>th</sup> June 2001.
- 20 days short term course on "Teachers Role in Engineering Education" at R.I.T Jamshedpur from 25<sup>th</sup>Dec 2000 -13<sup>th</sup> Jan 2001.
- 10 days short term course on "Tribology of Bearing in Industries" at R.I.T Jamshedpur from 12<sup>th</sup>-21<sup>st</sup> June 2000.

**Expert talk delivered/Session Chaired**

- One day expert talk delivered on “Renewable Energy application in mechanical engineering” Chaibasa Engineering College, from 08 November 2019, Chaibasa, India from

- One day expert talk delivered on “Steam Distribution and Utilization” WIT Dehradun, from 10 October 2019, Dehradun, India

### **Lab Development**

- Developed Renewable Energy Systems lab for UG, PG, and Ph.D. students.
- Developed Model Lab

### **Course Development**

- M.Tech Courses for Energy Systems Engineering and Thermal Engineering
- Designed new P.G courses in Energy Systems and Management
- Designed new U.G courses in
  - Steam Power Systems- 4<sup>th</sup> Semester
  - Introduction of Heat Exchanger Design as elective – 7<sup>th</sup> Semester
  - Introduction of Gas dynamics as elective – 8<sup>th</sup> Semester

### **Journals Publications**

- 1) Kumar, Ashutosh, M. A. Hassan, and **Prabha Chand**. (2020) "Heat transport in nanofluid coolant car radiator with louvered fins." Powder Technology 376: 631-642.
- 2) Subhash Chand, **Prabha Chand**, (2020) “Effects of Louvered Parameters on Exergetic Performance of Louvered Finned Solar Air Heater” Int. Journal of Heat and Technology.
- 3) Abhishek Priyam, **Prabha Chand** (2019), “Experimental investigations on thermal performance of solar air heater with wavy fin absorbers”. Heat and Mass Transfer, 1-16. 9
- 4) Abhishek Priyam, **Prabha Chand** (2018), “Thermal performance of wavy finned absorber solar air heater”. INTERNATIONAL JOURNAL OF HEAT AND TECHNOLOGY, 36(4), 1393-1403.
- 5) Rajesh Kumar, **Prabha Chand**, (2019) “Analytical Investigation on Solar Air Heater with Fins and Twisted Tapes” Int. Journal of Heat and Technology.
- 6) Subhash Chand, **Prabha Chand**, (2018) “Parametric study on the performance of solar air heater equipped with louvered fins” Journal of Mechanical Science and Technology. 32(8): 1-9
- 7) Subhash Chand, **Prabha Chand**, (2018) “Performance evaluation of solar air heater equipped with louvered fins” Int. Journal of Heat and Technology. 36: 741-751.

- 8) Rajesh Kumar, **Prabha Chand**, (2018). “Experimental performance investigation of air heating solar collector with fins and twisted tapes”. Carbon- Science and Technology. 61-66
- 9) Subhash Chand, **Prabha Chand**, (2018). “Exergy based analysis of triangular finned solar air heater”. Carbon- Science and Technology. 10:51-60
- 10) Ambaty Pravin, **Prabha Chand**, (2018). “Modeling of quadruple junction solar cell”. Carbon- Science and Technology. 10:19-26
- 11) Rajesh Kumar, **Prabha Chand**, (2018) “Performance prediction of extended surface absorber solar air collector with twisted tape inserts”. Solar Energy. 169: 40-48.
- 12) Shalini Rai, **Prabha Chand**, S.P. Sharma, (2018) “Evaluation of thermohydraulic effect on offset fin absorber solar air heater”. Renewable Energy. 125: 39–54.
- 13) Abhishek Priyam, **Prabha Chand** (2018), Effect of wavelength and amplitude on the performance of wavy finned absorber solar air heater. Renewable Energy 119; 690-702.
- 14) Abhishek Priyam, **Prabha Chand** (2017), “Heat transfer and pressure drop characteristics of wavy fin solar air heater”. Int. Journal of Heat and Technology. 15.
- 15) Shalini Rai, **Prabha Chand**, S.P. Sharma, (2017) “An analytical investigation on thermal and thermohydraulic performance of offset finned absorber solar air heater”. Solar Energy. 153: 25–40.
- 16) Kumar R. **Chand P.** (2017) “Performance enhancement of solar air heater using herringbone corrugated fins”. Energy 127: 271-279.
- 17) Shalini Rai, **Prabha Chand**, S. P. Sharma, (2016), “Thermal and thermohydraulic performance analysis on offset finned absorber solar air heater”. International Journal of Mechanical & Mechatronics Engineering IJMME-IJENS. 16(5): 14-22.
- 18) S. Rai, **P. Chand**, S. P. Sharma, (2016), “Investigation of an Offset Finned Solar Air Heater Based on Energy and Exergy Performance”. Iranica Journal of Energy and Environment 7(3): 212-220.
- 19) Shalini Rai, **Prabha Chand**, S.P. Sharma,(2016), “Effect of parametric variation on the offset finned absorber solar air heater”. International Journal of Mechanical & Mechatronics Engineering IJMME-IJENS 16(6): 70-77.
- 20) Abhishek Priyam, **Prabha Chand**, S. P. Sharma, (2016), “Energy and exergy analysis of wavy finned absorber solar air heater. International Energy Journal. 16: 119-130.
- 21) Priyam A., **Chand P.**, (2016) "Thermal and thermohydraulic performance of wavy

finned absorber solar air heater" Solar Energy; 1;30:250-259.

- 22) Priyam A., **Chand P.** (2016.) "Effect of collector aspect ratio on the thermal performance of wavy finned absorber solar air heater "International Journal of Electrical, Computer, Energetic, Electronic and Communication Engineering"10(5).
- 23) Priyam A., **Chand P.** (2016) "Effect of complex geometry of wavy fin on the performance of wavy fin equipped solar air heater" International Journal of Mechanical & Mechatronics Engineering IJMME-IJENS vol- 16 issue: 05; 31-40; 562-566.
- 24) Priyam A., **Chand P.** (2015) "Thermal performance comparison of solar air heater having wavy fin and longitudinal fin" Int. J. of Engg. Research & Technology; 4(9); 152-157.
- 25) Shalini Rai, Prabha Chand (2012). Centrifugal Fan Impeller Design with Optimization of Blade. International Journal of Applied Engineering Research (IJAER) Volume 7, Number 11 pp. 2082-2089 Special Issues.
- 26) **Prabha Chand** and S.P. Sharma, (2009), "The effect of collector aspect ratio on the thermal performance of solar air heaters with extended surfaces absorber" International Journal ARISE (Renewable Energy) Vol. 5 No. 1, pp. 59-67.
- 27) **Prabha Chand** and Sanjay (2008), "Passive cooling techniques of Buildings: Past and Present Review" International Journal ARISE (Energy), vol-4 (1), pp- 37-46.
- 28) **Prabha Chand** and J.N Mishra (1995), "Pressure unsteadiness and validation of mechanical probings over expansion surfaces in supersonic flows" Journal of the Institution of Engineers, vol-75 3/95 pp-10-14.

#### **List of book published/book chapter published**

- Dulari Hansdah, **Prabha Chand** and S. Murugan (2020) Bioethanol Operation in a DI Diesel Engine with DEE Fumigation., Alternative Fuels and Their Utilization Strategies in Internal Combustion Engines, Springer Nature Singapore Pte Ltd.
- Abhishek Priyam, **Prabha Chand** and Lata D.B. (2019) Effect of Hydrogen and Producer Gas Addition on the Performance and Emissions on a Dual-Fuel Diesel Engine. In: Agarwal A., Gupta J., Sharma N., Singh A. (eds) Advanced Engine Diagnostics. Energy, Environment, and Sustainability. Springer, Singapore.
- Abhishek Priyam, **Prabha Chand** (2018) Analysis of Wavy Fin Absorber Solar Air Heater, LAP Lambert Academic publishing



## Conferences Publication

### International Conferences

- 1) Rajesh Kumar, **Prabha Chand**. "Augmentation of heat transfer in air heating flat plate collector by fins and twisted tapes" 14th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics, Wicklow, Ireland 22-24 July 2019.
- 2) Subhash Chand, **Prabha Chand**, (2019). "Comparative Performance Evaluation and Parametric Studies of Louvered Finned Solar Air Heater" International Conference on Renewable Energy and Sustainable Climate, Jamia Milia Islamia, New Delhi, India: 7-9 Feb' 2019
- 3) Abhishek Priyam, **Prabha Chand** "Influence of channel depth on the performance of wavy fin absorber solar air heater" ICRERES -2017:WASET New York, USA: 4-5 June'2017
- 4) Rajesh Kumar, **Prabha Chand** "Heat transfer enhancement using perforated fins in a flat plate solar air heater"COMET-17; IIT (BHU) Varanasi: 8-9 April'17.
- 5) Abhishek Priyam, **Prabha Chand** "Experimental study on thermal performance of wavy fin solar air heater" ICASPCT-2017; OPJU Raigarh: 22-23 Mar'17.
- 6) Abhishek Priyam, **Prabha Chand** " Heat transfer enhancement using wavy fin absorber in solar air heater" SEEC-2017; CIAB, Mohali, Punjab; 26-28 Feb'2017.
- 7) Abhishek Priyam, **Prabha Chand** "Effect of collector aspect ratio on the thermal performance of wavy finned absorber solar air heater" ICSREE -2016: WASET Montreal, Canada: 16-17 May 16.
- 8) Shalini Rai, **Prabha Chand** and S.P. Sharma (2016) "Exergetic performance evaluation of an offset finned solar air heater" International conferences on recent trend in engineering and material Science (ICEMS- 2016); JNU Jaipur. 17th -19<sup>th</sup> March.
- 9) Abhishek Priyam, **Prabha Chand** "Effect of collector length on the heat transfer and pressure drop characteristics of wavy fin solar air heater" ICASPCT-2016; OPJU Raigarh: 17-19 Mar'16.
- 10) Shalini Rai, **Prabha Chand** and S.P.Sharma, "Numerical investigation of solar air heater with new design offset finned below the absorber Plate".Proc. of Int. Conf. on Emerging Trends in Engineering & Technology, IETET, 2016.
- 11) Abhishek Priyam, **Prabha Chand** "Comparative study of solar air heater having

- wavy fin and longitudinal fin" GCRE-16; NIT Patna: 4-6 Mar'16.
- 12) Rajesh Kumar and **Prabha Chand**. "Thermal and exergetic performance analysis of longitudinal fins solar airheater" GCRE-16; NIT Patna: 4-6 Mar'16.
  - 13) Priyam A., **Prabha Chand** "Performance analysis of wavy finned solar air heater compared to offset rectangular finned solar air heater" ICAER-2015; IIT Bombay: 15-17 Dec'15.
  - 14) Subhash Chand, **Prabha Chand** "An analytical investigation on thermal and thermohydraulic performance of finned absorber solar air heater" ICAER-2013; 10-12 Dec' 2013.
  - 15) Shalini Rai, **Prabha Chand** and S.P.Sharma (2013). "A packed bed solar air heating systems: Performance analysis". International Conference Energy Efficient Technologies for Sustainability (ICEETS); 10-12 April. Kanyakumari, Tamilnadu. IEEE Xplore: DOI: 10.1109/ICEETS.2013.6533453.
  - 16) **Prabha Chand** and S.P. Sharma, "The effect of collector aspect ratio and fin density on the thermal performance of rectangular finned absorber solar air heaters" 3<sup>rd</sup> International Conference on Sustainable Energy Technologies (IEEE ICSET 2012); Kathmandu, Nepal: 24-27 Sept 2012.
  - 17) **Prabha Chand** and S.P. Sharma, "Thermal performance prediction of extended absorber solar air heater". Proceedings of the 20<sup>th</sup> National and 9<sup>th</sup> International ISHMT-ASME Heat and Mass Transfer Conference, IIT Mumbai, India, January 4-6, 2010.
  - 18) **Prabha Chand** and S. P. Sharma, "An analytical investigation on thermal and thermohydraulic performance of finned absorber solar air heater". International Conference of World Renewable Energy Council – IX, Florences, Italy, 2006.
  - 19) Chaitali Kar and **Prabha Kumari**, "HCCI- The Environmentally Responsible Technology" International Conference on Emerging Technology (ICET-2004), Kalinga Institute of Industrial Technology, Bhubneshwar, 22-24 Dec 2004.
  - 20) **Prabha Kumari**, and S. P Sharma, "Heat Transfer enhancement in air heating flat plate solar collectors", International Conference on Recent Advances in Solar Energy Conversion Systems, MANIT, Bhopal (M.P), Sept. 28-29, 2002.

### National Conferences

- 1) Subhash Chand, **Prabha Chand**, (2020). "Comparative Performance Evaluation of Louvered Finned Solar Air Heater". NCMMM 2020: NIT Jamshedpur, India: 29-30 Aug' 2020

- 2) Md Ahsan, **Prabha Chand** and Kumari Namrata, (2020). “Comparison of different models to estimate the best solar global radiation for Jamshedpur, Jharkhand, India”. RDMPMC20: NIT Jamshedpur, India: 26-27 Aug’ 2020
- 3) Rajesh Kumar, **Prabha Chand**, (2018). “Experimental performance investigation of air heating solar collector with fins and twisted tapes”. NCREEC-2018: NIT Jamshedpur, India: 26-27 Feb’ 2018
- 4) Subhash Chand, **Prabha Chand**, (2018). “Exergy based analysis of triangular finned solar air heater”. NCREEC-2018: NIT Jamshedpur, India: 26-27 Feb’ 2018
- 5) Ambaty Pravin, **Prabha Chand**,(2018). “Modeling of quadruple junction solar cell”. NCREEC-2018: NIT Jamshedpur, India: 26-27 Feb’ 2018
- 6) **Prabha Kumari**, Sanjay, “Solar passive cooling Techniques as applied to Building – A Review”. Proceeding of National Conference on New and Renewable Energy, BIT Mesra, Ranchi,PP- 90-97. 17-18 December 2007
- 7) **Prabha Kumari** and S. P. Sharma, “Thermal Performance Prediction of Extended Absorber Solar Air Heater”. National Conference on Energy and Environment, Jaipur Engg.College, Kukas, Jaipur; 25-26 November 2006
- 8) **Prabha Kumari**, Sanjay, Anjani Kumar. “A novel approach to environment risk management in the petroleum sector”. Proceeding of Institution of Engineer’s Eco-Friendly Manufacturing BIT Mesra, Ranchi, PP-129-136; 25-26 August2007.
- 9) Chaitali Kar and **Prabha Kumari**. “Analytical Analysis of Variable Compression ration I.C. Engine”. XIII National Conference of Indian Society of Mechanical Engineers, ISME-2003, IIT ROORKEE,December 30-31,2003.
- 10) **Prabha Kumari**. and S. P. Sharma, “The influence of collector aspect ratio on the thermal performance of solar air heaters with extended surfaces absorber”, National Seminar on Emerging Convergent Technologies and System, Dayalbagh Educational Institute, Agra, March 1-2, 2002.
- 11) **Prabha Kumari**. and S. P. Sharma, “The influence of area enhancement factor on the collector efficiency of wavy finned absorber solar air heater”, XXV National Renewable Energy Convention – 2001, REC, Warangal, Dec. 27-29, 2001.
- 12) **Prabha Kumari**. and S. P. Sharma, “Thermohydraulic performance of solar air heaters with extended surface absorber”, National Conference on Thermal System I.T.B.H.U., Varanasi. Feb. 17-18, 2001.
- 13) **Prabha Kumari**. and S. P. Sharma, “Enhancement of thermal performance of solar air heater with extended surface absorber”, XVI, NCME, Roorkee, Sept. 29-30, 2000.

- 14) **Prabha Kumari.** and Sharma, S. P., “Enhancement of thermal performance of finned absorbers solar air heater, National Convention on Renewable Energy I.I.T., Bombay, Nov. 26-27, 2000.
- 15) **Prabha Kumari.** and S. P. Sharma, “Thermal performance prediction of solar air heaters with extended surface absorbers”, National Seminar on Energy Technologies for Sustainable Development, BIT, Ranchi, Dec. 17-18, 1999.

## Annexure-1

### Ph.D Thesis Supervised By Dr. (Mrs.) Prabha Chand

Ph.D Supervision: 03 (awarded), 03(ongoing)

#### Details of Ph.D. Supervision

Sl.No.	Name of Scholar (Reg. No.)	Title of Thesis	Period
1.	ShaliniRai (2012 RSME09)	Investigation on Thermal Performance of Offset Finned Absorber Plate Solar Air Heater	2012 –2017 (Awarded )
2.	AbhishekPriyam (2013PGPHDME07)	Thermal and Thermohydraulic Performance Investigation of Wavy Fin Absorber Solar Air Heater	2013–2017 (Awarded)
3.	Rajesh Kumar (2015)	Performance Prediction of Solar Air Heater with Extended Surface Absorber	2015- 2018 (Awarded)
4.	Subhash Chand (2016)	Energy and Exergy Analysis of Louvered Finned Solar Air Heater	2016 - continuing
5.	Bipin Bihari Sharan (2017)	Life Cycle Assessment of Solar Energy system (Broad Area)	2017- continuing
6.	Ashutosh Kumar 2018	Nano fluid (Broad Area)	2018- continuing
7.	MD. Ahsan (2019)	Nano fluid (Broad Area)	2019- continuing
8.	Suman Kumar Sourabh	Solar Energy (Broad Area)	2019- continuing

\*Joint Supervision

## Annexture-2

### M.TechDessertation Supervised By Dr. (Mrs.) Prabha Chand

M.Tech Supervision: 21 (completed), 03(ongoing)

#### Details of M.Tech Supervision

Sl.No.	Name of Student (Reg. No.)	Title of Dessertation	Completion Year
1.	Ranjeet Kumar* (02/04)	Interpolating subdivision surfaces for reverse engineering of sculptured shapes	2006
2.	Subhash Khandait* (10/05)	Modeling and simulation of burden distribution in blast furnace	2007
3.	DurgaCharan Nandi* (12/M/PM/02)	Implementation of daily management in 'G' blast furnace of Tata Steel (A case study)	2007
4.	DebanikMitra (06/M/PM/02)	Investigation on productivity management at a sinter plant	2007
5.	Binod Kumar Das (02/M/PM/91)	Selection of Alternatives for the expansion of the Tata Steel- A case study	2008
6.	Dinesh Prasad Singh (08/M/PM/01)	Reduction in dry coke rate in blast furnace by reducing losses- A case study	2009
7.	K. Prameela (04/07)	Layered manufacturing of porous objects using CAD/CAM	2009
8.	ShaliniRai (11/08)	Analysis of stresses and deformations in involute spur gears	2010
9.	Mukseh Kumar* (12/09)	Optimization of hot rolling process parameter of high strength steel	2011
10.	Subhash Chand (39/11)	Analysis of thermal and thermohydraulic performance of finned absorber solar air heater	2013
11.	Pooja Singh* (32/12)	Analysis of emission from gas turbine combusters	2014
12.	Kapil Kr. Khandelwal (36/12)	Performance analysis of double flow solar air heater with longitudinal fins	2014
13.	Md. Shoeb (05/13)	Performance analysis of solar air heater with offset strip fins	2015
14.	Rajesh Kumar (10/13)	Energy and exergy analysis of solar air heater with longitudinal fins	2015
15.	Ravi Chandan* (11/13)	Investigation on thermal performance of solar pond and its application for solar thermal power generation	2015
16.	BhukyaMahender (04/14)	Thermal performance analysis of circular perforated fin attached solar air heater	2016
17.	Gopi Krishna Singh (05/14)	Design of a solar electric rickshaw	2016
18.	RavindraKarellaBabu* (07/14)	Energy and exergy analysis of solar air heater with baffled fins absorber	2016
19.	ShashiRanjan (2015PGMEES08)	Performance enhancement of a coal based thermal power plant with the help of post combustion carbon capture	2017

20.	B. Ankita Anil (2015PGMEES13)	Finite element analysis of wind turbine rotor blade	2017
21.	Sameer Kr. Singh (2015PGMEES15)	Performance analysis of solar air heater with phase change material	2017
22.	SaloniShikha (2016PGMEES10)	Solar PV based water pumping system using BLDC motor	2018
23.	BikasRanjanPattanaik (2016PGMETE08)	Performance analysis of solar chimney for room ventilation	2018
24.	PravinAmbaty	Modelling and simulation of multi junction solar cells	2018
25.	Vikash Kumar	A 2-D transient melting of phase change material under the effect of two side constant heat flux.	2019
26.	Sandeep Kumar	Thermal performance of the double glass solar collector with and without porous media	2019
27.	Harsha	Analysis of photovoltaic thermoelectric ventilation system using simulink (MATLAB)	2019
28.	Rahul Kumar	Aerodynamic analysis and design optimization of annular diffuser	2020

\*Joint Supervision

## Annexture-3

### **B.Tech Final Year Thesis Supervised By Dr. (Mrs.) Prabha Chand**

18 Batches (completed), 02 Batches (ongoing)

S.No	Topic	Name of candidate	Year
1.	Reduction of manufacturing defect using six sigma Methodology- A case study	Anoop Ramesh M (16/01) J V Sandilya (66/01) KaissaryMadhukar P (69/01) Manoj Kumar Tiwari (88/01) Siva KiranBattepati (191/01)	2005
2.	Heat Transfer Enhancement in air heating Flat plate solar collector	Awanit Kumar (65/03) Shailendra Kumar (66/03) Vishal Kumar (67/03) Utpal Kumar (69/03) ShivekaNand (70/03)	2007
3.	Design Modification of Cylinder, Valve and Piston of an I.C Engine by use of composite material.	Pankaj Kumar Pramit Das Prashant Kumar Praveen Baskey Praveen Kr. Pankaj	2008
4.	Thermal and Thermo Hydraulic Performance analysis of a solar air heater	Manoj Kumar Banra (100/05) Manoj Kumar (101/05) Mascarenhas Xavier Peter (103/05) Mithlesh Kumar	2009
5.	Experimental Analysis and study of finned Absorber solar air heater	Pranav Kumar (192/06) Rakesh Kumar Sharma (223/06) Rahul Kumar (211/06) Rupesh Kumar (256/06) Sumit Kumar (312/06)	2010
6.	Performance Analysis of cylindrical Parabolic concentrating solar collector	Anjesh Ratnam (46/07) Ajay Kumar Pandit (22/07) Gautam Sharma (126/07) HimanshuCharanGagrai (133/07)	2011
7.	Performance analysis of cylindrical parabolic concentrating solar collector	Anjesh Ranjan (46/07) Ajay Kumar Pandit (22/07) Gautam Sharma (126/07) Himanshu Charan Gagrai (133/07)	2011
8.	Design and performance analysis of a smart dual axis solar tracking system	B. Murali Pavana Krishna (115/08) D.V Kiran Verma (130/08) Kunal Goel (176/08) Kumar Sanu (182/08) Kumari Shweta (184/08)	2012



9.	The performance Analysis Double pass solar air heater with Fins Attached	Abhishek (24/09) RohitYadav (528/09) Abhishek Kumar (18/09)	2013
10	Study and application of DMAIC theory to achieve six sigma in an industry, case study: Ceylon Lion Brewery, Sri Lanka	Chinthana Thanthirige Navnit Kumar Gautam	2013
11	Multi-disciplinary design optimization (MOD) of ventilated Disc design	SouravGorain (490/10) Sudhir Kumar Agrawal (491/10) SushantBarnawal (520/10)	2014
12	Performance analysis of Double flow solar air heater with Triangular Fins	Abhishek Kumar (20/10) Abhishek Kumar (21/10) Indrajeet Kumar Singh (210/10)	2014
13	Design and development of railways using Quantum levitation	PoojaPriyadarshini (106/11) Rohit Raj (132/11) PreetiKumari (364/11)	2015
14	Design of solar absorption refrigeration System	Mukesh Kumar (ME111411) Arun Kumar Mishra (ME111099) Adarsh Kumar Giri (ME111084)	2015
15	Design of photovoltaic cells	Akshay Kumar (ME112003) Dilip Kumar (ME112083) Vineet Kumar (ME112225)	2016
16	Performance Analysis of solar car	Anjani Kumar(ME112164) Preetam Kumar (ME112181) Kumar Gaurav (ME112019)	2016
17	Design analysis of intake manifold of Ic engine	JaswantJamra (2013UGME001) Sushant Kumar(2013UGME010) AnuragBharti (2013UGME025)	2017
18	Flow and thermal analysis of a shell and tube type heat exchanger	Aditya Kumar (2013UGME006) Nikhil ChikBarai(2013UGME007) Sanjeev Kumar (2013UGME008)	2017
19	Computational investigation of thermal performance of solar air heater having roughness elements as bend on the absorber plate	Rahul Kumar (2015UGME005) Anup Chaki (2015UGME031) Satyam Kumar (2015UGME059)	2019
20	CFD analysis of heat transfer performance in a radiator with nanofluids as coolants	Shubham Chatterjee, Alok Kumar Jha, Dheeraj Kumar Singh	2019
21	Design of solar powered cold storage	Sumit Vishwakrma, Rahul Kumar Roy, Yagesh Tripathi,	2020