

BIO-DATA Prof. CHANPREET SINGH

1. Name : DR. CHANPREET SINGH
2. Designation : PROFESSOR
3. Department : MECHANICAL ENGINEERING
4. Date of Birth : 06.03.1972
5. Address for Correspondence : Department of Mechanical Engineering, Punjabi University,



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- 6 Areas of Specialization : Thermal Engineering, Flow and Heat Transfer in saturated and Unsaturated Porous Media, Natural Convection, nano-fluids, CFD

7. Academic Qualifications:

Sr. No	Degree Held	Year	Board/Univ./ Inst.	% of marks	Div	Subjects Taken
1	B.E.	1993	Punjabi University, Patiala. G.Z. S. College of Engg. & Technology, Bathinda.	72.3	1 st	Mechanical Engineering
2	M.E.	1998	Panjab University, Chandigarh, PEC Chandigarh.	67.8	1 st	Rotodynamic Machines
3	Ph.D	2007	Thapar University, Patiala	----	----	Unsteady Convective Heat Transfer in Liquid Saturated and Unsaturated Porous Media with Reference to an Energy Storage System. Supervisors: Dr. R.G. Tathgir Dr. K. Muralidhar

8. Membership of Professional Bodies/Organisations: NA

9. Medals/Awards/Honours/Received : NA

10. Scholarships:

- i) M.E. GATE scholarship
- ii) Matriculation, Middle and Primary Level State scholarship

11. Details of Experience:

S. No	Name of the Inst./Employer	Position Held	Duration	Major Job Responsibilities and Nature of Experience
1.	Thapar Polytechnic, Patiala	Lecturer	27.9.95 to 27.3.97	Teaching, Extra-curricular Activities and Research
2.	Thapar Institute of Engg. & Technology, Patiala	Lecturer	27.3.97 to 18.12.2006	Teaching, Extra-curricular Activities and Research
4	Punjabi University, Patiala	Reader	19.12.2006 to 17.12.2009	Teaching, Extra-curricular Activities and Research
5	Punjabi University, Patiala	Associate professor	17.12. 2009 to 30.7.2013	Teaching, Extra-curricular Activities and Research
6	Punjabi University, Patiala	Professor	Since 31.7.2013	Teaching, Extra-curricular Activities and Research

12. Published Work (Please specify numbers only) :**Research Papers**

- a. National = 04
- b. International = 27
- Conference/Seminar Presentation = 13
- Books = 02

13. R & D Projects:**Completed:**

1. UGC minor project: Natural Convection of Ambient Air by Circulating in Buried Steel Pipes.

14. Invited Talks : 02**15. Ph.D. Students guided/under guidance (Details):**

S. No.	Name of the Student	Title of Thesis	Year of
1	Beant Singh	Experimental study of inter-phase heat transfer between solid and liquid phases for cyclic heating-cooling of porous media.	2014
2	Jagjit Singh	Impact of Telemedicine: Analysis of Technological components in Discrete Telemedicine networks	2015

3	Manjit Singh	Energy transport in an unsaturated porous media by using a fluid medium.	2018
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16. M.Tech. Students guided:

S. No.	Name of the	Title of Thesis	Year of
1.	Sandeep Negi	Some Studies on Experimental Analysis of Intake Manifold of a Diesel Engine.	2007
2.	Krishna Mani Mishra	Experimental & CFD analysis of intake manifold of I.C. engine	2007
3.	Anshu Dwivedi	A Knowledge Based Engineering Approach for design Automation. (A case Study: Rectangular Turret of Transformer)	2006
4.	Jaspreet Singh	Analysis and Synthesis of Bismuth Telluride (Bi_2Te_3) and Lead Telluride (Pb-Te) nanostructure as possible Thermo Electric Material	2013
5.	Amandeep Singh	Experimental Study of Heat transfer Enhancement in counter flow heat exchanger by using nanofluids	2013
6.	Hardeepak Singh	Numerical Scheme For The Solution Of Laminar Boundary Layer For Flow Over A Flat Plate	2014
7.	Ankit Uppal	CFD Analysis of Heat Transfer Enhancement in a Heat Exchanger Using Various Baffle Arrangements	2014
8.	Jashanpreet Singh	Experimental and Numerical Analysis of Natural Convection Over a Heated Vertical Cylinder in Ambient Air	2014
9	Bharpoor Singh	Experimental investigation of thermal characteristics of heat pipe, copper & stainless steel pipes by using nanofluids in condenser	2018
10	Parminder Singh	Mathematical Optimization of Ball and Bowl Mills Operations and its Effect on Boiler Performance.	2019

15. Academic Responsibilities

- Convener timetable committee of the institute during the academic year 2007-2008.
- Faculty In charge Extra-curricular Activities and Student Welfare (UCoE) 2008 to 2013
- Professor In charge SAF and Extra-curricular Activities and Student Welfare since 2014
- Senior Warden , Banda Singh Bahadur Hostel 2007 to 2013
- Member Board of Studies in Mechanical Engineering since March-2008.
- Member admission committee, Member fee concession committee, Member of Administrative Committee of Department.
- Faculty In charge of Heat and Mass Transfer lab.

18. List of Papers/Courses taught at P.G. and U.G. Level

S. No.	Subject	Class
1.	Engineering Graphics	B.Tech 1 st Yr
2.	Heat and Mass Transfer	B.Tech 3 rd Yr
3.	Applied Thermodynamics	B.Tech 2 nd Yr
4.	Fluid Machinery	B.Tech 4 th Yr
5.	Refrigeration and Air Conditioning	B.Tech 4 th Yr
6.	Machine Drawing	B.Tech 2 nd Yr
7.	Turbomachines	B.Tech 3 rd Yr
8.	Elements of Mechanical Engineering	B.Tech 2 nd Yr
9.	Engineering Thermodynamics	B.Tech 1 st Yr
10.	Advanced Heat Transfer	M.Tech 2 nd Yr
11.	Power Plant Engineering	B.Tech 4 th Yr (Elective)

19. Books

- Convective Heat Transfer in Porous Media for Energy Storage. VDM Publisher, 2009. Chanpreet Singh.
- Experimental Study on Heat Transfer in Porous Media, Partridge Publishing, Aug 2015. Beant Singh, Chanpreet Singh.

20. Technical Proficiency

- Experiments in Porous Media
- CFD Code development for flow and heat transfer in porous media
- Natural convection
- Nano-fluids
- Thermal Power Plants

21. List of Papers Published

1. Chanpreet Singh, R.G. Tathgir, K. Muralidhar, "Comparison of 1-equation & 2-equation models for Convective Heat Transfer in Saturated Porous Media." Journal of the Institutions of Engineers (India), Mechanical Engineering Division. Volume 84, 2003, pp 104-113.
2. Chanpreet Singh, R.G. Tathgir, K. Muralidhar, " Experimental Validation of Heat Transfer models for flow through a porous medium" Journal of Heat and Mass Transfer, Springer Berlin/Heidelberg, Vol 43, 2006: pp 55-72.
3. Chanpreet Singh, R.G. Tathgir, K. Muralidhar, "Assessing Experimental and Numerical Data using Sensitivity Functions" in Aug.-2004, Journal of the Institutions of Engineers (India), Mechanical Engineering Division. Volume 87, 2006, pp 54-62.
4. Chanpreet Singh, R.G. Tathgir, K. Muralidhar, "Energy Storage in fluid saturated Porous Media subjected to oscillatory flow." Journal of Heat and Mass Transfer, Springer: Vol 45, 2009, pp 427-441.
5. J.S. Bhatia, Sagri Sharma, Chanpreet Singh (2011), "Technical Impact of E- Health: A Business Case Enues." Global Telemedicine and e-Health Updates: Knowledge Resources, Vol 4 2011 Page 107-110.
6. Beant Singh, Chanpreet Singh, "Analysis of vortex motion in porous media" Journal of Electronics Cooling and Thermal Control, Volume 2 Number 2 June 2012. PP.32-34.
7. Pradeep Prabhakar, Chanpreet Singh, D. Gangacharyulu, "Synthesis and Experimental Details of Thermophysical Properties Of Nanofluids." International Journal of Enterprise Computing and Business Systems, Volume 2 Issue 1 January 2013.
8. Mukesh Kumar, Manjit Singh, Chanpreet Singh, Gangacharyulu, "Modeling For Heat Conduction Transfer through Porous Media." International Journal of Advances in Computing and Information Technology. Sept 2012, Pp- 469-474.
9. Mukesh kumar, Manjit Singh, Chanpreet Singh, Gangacharyulu, "Dimensional Less Analyses of Heat Transfer in Fluid Flow." International Journal of Advances in Computing and Information Technology. Pp-511-521 Oct 2012.
10. Beant Singh, Chanpreet Singh, "Effects of Oscillatory Flow in Porous Media." Global Journal of Current Engineering Research, GJCER, Vol 2 (1), 2013, 173-176.
11. Beant Singh, Chanpreet Singh, "Energy Storage in Porous Bed of Different Particle Size during Oscillating Flow." GJCER Vol 2 (1), 2013, 221-224.
12. Beant Singh, Chanpreet Singh, "Energy Storage in Steel and Glass Porous bed during Oscillating Flow." IJMRAE, Vol 5 No III, July 2013, pp 217-223.

13. Umesh Gera, Beant Singh, Chanpreet Singh, "Variation of Front Amplitude, Front Speed, Front Spread in Porous Media for Different Particle Size during Oscillating Flow." IJERA, Vol.3 issue 4 July 2013. pp: 1547-1551.
14. Amardeep Singh, Chanpreet Singh, Sanjeev Kumar, "Heat Transfer Enhancement in Counter Flow Heat Exchanger By Using Al₂O₃ Nanofluids." GJCER, Vol 2 (1), 2013, 241-245.
15. Jaspreet Singh, Chanpreet Singh, Sanjeev Kumar, "Morphological and structural characterization of Bi₂Te₃ and PbTe nanostructures synthesized using hydrothermal technique". GJCER, Vol 2 (2), 2013, 178-181
16. J.S. Bhatia, Saurav Gupta, Chanpreet Singh, "Factors Enhancing Adoption of Rural Telemedicine Networks." Telemedicine and e-health, journal of the American Telemedicine Association. Telemedicine and e-Health 2014, A-116.
17. J.S. Bhatia, Chanpreet Singh, "Impact of usage of discrete networks on telemedicine capabilities especially in India." Medcom 2014, IEEE EXPLORER. Pp 311-318.
18. J.S. Bhatia, Saurav Gupta, Chanpreet Singh, "Assessing the outcome of a Technology Driven Health camp: An Indian case Study." Medcom 2014, IEEE EXPLORER. Pp 417-421.
19. J.S. Bhatia, Chanpreet Singh, "Adoption of Telemedicine in India- An exploratory study." International Journal of Emerging Technology and Advanced Engineering' Vol 4 Issue 10 Oct 2014. pp 473-483.
20. Manjit Singh, Dr. Chanpreet Singh, D. Gangacharyulu, "Review of Hydraulic Conductivity and Permeability relation in flow through porous medium." International Journal of Engineering Studies. Vol 6 No 2 Special issue 2014.
21. Chanpreet Singh, Jashanpreet Singh, "Numerical analysis of heat dissipation from a heated vertical cylinder by natural convection." Journal of Process Mechanical Engineering, Part E, 2017. Vol. 231(3) pp. 405-413.
22. Jashanpreet Singh, Chanpreet Singh, "Influence of Fluidic Properties on Dimensionless Numbers in Freely Convective Heat Transfer around Cylinder." International Research Journal of Engineering and Technology, Vol 2 Issue 08 Nov 2015, pp: 1-9.
23. Manjit Singh, Chanpreet Singh, D. Gangacharyulu, "Modelling For Flow Through Unsaturated Porous Media With Constant And Variable Density Conditions Using Local Thermal Equilibrium. "International Journal of Computer Applications (0975-8887) pp 24-30.
24. Manjit Singh, Chanpreet Singh, D. Gangacharyulu, "Numerical Analysis on Variations of Thermal and Hydrological Properties during Water Flow through Unsaturated Soil." Lecture Notes in Mechanical Engineering, Advances in Fluid and Thermal Engineering, Select Proceedings of Flame 2018. Springer. PP: 357-368.

25. Jashanpreet Singh, Chanpreet Singh and Satish Kumar, "Implementation of Fuzzy logic on free convection heat transfer around vertical tube via FORTRAN code." *Advances in Intelligent Systems and Computing*. Feb 2017, ISSN: 2194-5357. Pp 331-341. *Proceedings of Sixth International Conference on Soft Computing for Problem Solving*
26. Manjit Singh, Chanpreet Singh, D. Gangacharyulu, "Comparative analysis between UPWIND and QUICK finite difference approach considering thermal diffusion." *A Journal of Composition Theory*, Volume 12 Issue 7 JULY 2019. pp, 997-999
27. Bharpoor Singh, Chanpreet Singh, "Unsteady Natural Convection in Condenser tank containing Al₂O₃-DI water nanofluids." *Journal of the Institutions of Engineers (India): Series (c)*, ISSN 2250-0545, vol 101, pp 703-709. Feb 2020.
28. Manjit Singh, Chanpreet Singh, Gangacharyulu, Mukesh Mann, "SPM/ USPM FLOW APPLICATIONS AND GAP: A CRITICAL REVIEW. *Journal of Critical Review*. 2020; volume 7 issue 19, pp 1723-1729.
29. Jashanpreet Singh and Chanpreet Singh, "Computational Analysis of Convective Heat Transfer Across a Vertical Tube." *FME Transactions* (2021) 49, No 4, 932-940. May 2021. Faculty of Mechanical Engineering (FME), Belgrade.
30. Manjit Singh, Chanpreet Singh, D. Gangacharyulu, "Numerical analysis of unsteady flow through unsaturated soil of uniform sized spheres with distinct packing arrangements." *Materials Today: Proceedings*; volume 56, Part 5A 2022, Pages 2973-2979, November 2021.
31. Chanpreet Singh, Parminder Singh, "Mathematical Validation and Comparison of Ball Tube and Bowl Mill Operations at Steady State." *Journal of Mechanical Science and Technology (JMST)*, the Korean Society of Mechanical Engineering, Springer, Vol 37, No. 6. 2023 pp 3197-3204.

Dated: 23-09-2023

S/d
(Signature of the Teacher)
