**Bio Data**

i. Name Dr. Akhilesh Gupta

ii. Address Dr. Akhilesh Gupta, Professor,

 Department of Mechanical & Ind. Engg.

 Indian Institute of Technology Roorkee

 Roorkee - 247667

iii. Date of birth Nov.15, 1956

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iv. Present Institution's address IIT Roorkee, Roorkee-247667

v. **Academic qualifications**

 Degree Year University/Institution

 B.E.(Mechanical) 1977 University of RoorkeeMM M.Tech(Mech.-Thermal) 1983 University of Roorkee MBA(Finance) 2000 IGNOU, New Delhi Ph.D. (Mechanical) 1992 University of Roorkee

vi. **Employment History**

|  |  |  |  |
| --- | --- | --- | --- |
| Period  | Name of Organization/ Institute | Present/Last Post  | Specialization |
| 22.10.84 to contd. | IIT Roorkee | Professor | Heat Transfer, Refrigeration & Air-conditioning, Solar Energy, Energy Management, Fire Engg.  |
| 9.7.87 to 29.03.88 |  IFCI | Industrial Finance Officer (Technical) | Financing of Industries  |
| 17.1.84 to 19.10.84 | NTPC | Engineer | Erection of Thermal Power Plants |
| 15.5.78 to 13.1.84 | BHEL | Engineer | Erection of Thermal Power Plants |

viii **Award/Prize/Certificate etc.**

(a) National Scholarship

(b) Gold Medal in M.Tech.for standing Ist in Ist class in M.Tech.(Thermal)

ix**. Research publications**

International Referred Journals : 51

Conf. Proceedings : 88

x **Number of Thesis Supervised** Awarded In progress

 Ph.D. 14 3

 M.Tech. 40 2

xi **List of subjects taught to U.G./P.G. Classes**

 U.G.Classes P.G. Classes

 Engg.Thermodynamics Advanced Heat Transfer

 Fluid Mechanics Advanced Fluid Mechanics

 Heat Transfer CFD & Heat Transfer

 Fluid Machines Direct Energy Conversion

 Thermal Power Plants Design of Thermal Systems

 Solar Energy Solar Energy

 Energy Management Refrig. & A.C. Systems

 Workshop Ist year

 Machine Drg. Ist year

xii **Sponsored R&D Projects**

1. Development of Fire Test Facility for Defining the Design Fire Environment Relevant For NPPs, Department of Atomic Energy, Rs. 400.00 Lac.

2. Full Length Channel Heat Up Experiments, Department of Atomic Energy, Rs. 236.62 Lac

3. Experimental Investigation of the Rewetting of Fuel Rod Cluster, Department of Atomic Energy, Rs. 78.95 Lac

4. Experimental Investigation of the Asymmetric Heating of Pressure Tubes, Department of Atomic Energy, Rs. 77.23 Lac.

5. Assessment of Radiation Heat Transfer for 19 Pin PHWR fuel bundle under Heat-up Condition, Department of Atomic Energy, Rs. 54.96 Lac.

6. Channel heat-up Experiment: ballooning of pressure tube, Department of Atomic Energy, Rs. 43.47 Lac

7. Channel Heat-up Experiment: pressure tube sagging in accidental coolant loss, Department of Atomic Energy, Rs. 40.50 Lac

8. Enhancement of Heat Transfer During Condensation of Ozone Safe Refrigerants Over Single Horizontal Integral-Fin Tubes, Department of Science & Technology, Rs. 19.5 Lac.

9. A Study of Forced Convection Condensation of Eco-friendly Refrigerants Inside a Horizontal Tube, Department of Science & Technology, Rs. 18.96 Lac

10. Modernisation of Heat Transfer Lab., AICTE N.Delhi, Rs. 10 lac

11. Critical Heat Flux Data Collection under Pool Boiling Conditions, Department of Atomic Energy, Rs. 7.72 Lac.

12. Development of Energy Efficient Heat Exchangers for Refrigeration & Air-conditioning Industries, Department of Science & Technology, New Delhi and Ministry of Science & Technology, Kiev, Ukraine , Rs. 6.55 Lac.

13. Developing highly efficient Counter flow solar air heater, AICTE N.Delhi Rs. 5.00 lac

**LIST OF PUBLICATIONS**

**International Referred Journals**

1. Akhilesh Gupta, J. S. Saini and H. K. Varma, Boiling Heat Transfer in Small Horizontal Tube Bundles at Low Cross Flow Velocities, Int. J. Heat Mass Transfer, Vol. 38, No. 4, pp. 599-605, 1995.

2. Akhilesh Gupta, J. S. Saini and H. K. Varma, Cross Flow Boiling Heat Transfer in small tube bundle, Journal of Energy Heat and Mass Transfer, Vol. 18, No. 1, pp. 9-15, 1996.

3. R.D. Misra, P.K. Sahu and Akhilesh Gupta, Application of the Exergetic Cost Theory to the LiBr/HsO Vapour Absorption System, J. of Energy, Vol. 27, No. 11, pp. 1009-1025, 2002,.

4. R.D. Misra, P.K. Sahu, S. Sahoo and Akhilesh Gupta, Thermoeconomic Optimization of a Single-Effect H2O/LiBr Absorption Chiller System, International Journal of Refrigeration, Vol. 26(2), pp. 158-169, 2003.

5. Sahoo, P.K., Misra, R. D., and Gupta, A., “Exergoeconomic Optimization of an Aqua Ammonia Absorption Refrigeration System”, International Journal of Exergy.,VoI.1 (1), pp. 82-93, 2004.

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2. Misra, R. D., Sahoo, P.K., and Gupta, A., “Thermoeconomic Optimization of a LiBr/H2O Absorption Chiller using Structural Method”, Transactions of ASME: Journal of Energy Resources Technology, Vol. 127, pp. 119-124, 2005.

8. Ravi Kumar, Akhilesh Gupta and SandeepVishvakarma, Condensation of R-134a Vapour Over Single Horizontal Integral-Fin Tubes: Effect of Fin Height, International Journal of Refrigeration,Vol.28, pp. 428-435, 2005.

9. Akhilesh Gupta, Enhancement of Boiling Heat Transfer in a 5x3 Tube Bundle, International Journal of Heat and Mass Transfer , Vol. 48, pp.3763-3772, 2005.

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12. Rajeev Kumar, Ravi Kumar and Akhilesh Gupta, “Analysis of the Ventilation System of an Isolated Room for a Hospital” International Journal of Ventilation, ISSN 1473-3315, Vol..7, No2. pp. 139-149, Sept. 2008.

13. Vikas J. Lakhera, Akhilesh Gupta and Ravi Kumar, “Investigation of Coated Tubes in Cross-Flow Boiling”, International Journal of Heat and Mass Transfer, Vol. 52, pp. 908-920, 2009.

14. M.K. Mittal, Ravi Kumar, Akhilesh Gupta, “Numerical Analysis of Adiabatic Flow of Refrigerant through a Spiral Capillary Tube”, International Journal of Thermal Sciences, 48, pp. 1348-1354, 2009.

15. R. Kathiravan, Ravi Kumar, Akhilesh Gupta, Ramesh Chandra, “Characterization and Pool Boiling Heat Transfer Studies of Nanofluids” ASME Journal of Heat transfer, Vol. 131 No.8 pp. 081902-1-8, August 2009.

16. D. Senthil Kumar, K. Murugesan and Akhilesh Gupta,”Effect of Thermo-Solutal Stratification on Recirculation Flow Patterns in a Backward-Facing Step Channel Flow”, Int. J. Numer, Meth. Fluids (2009). Published online in Wiley Inter Science ([www.interscience.wiley.com](http://www.interscience.wiley.com)), DOI: 10.1002/fld.2148.

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19. R. Kathiravan, Ravi Kumar, Akhilesh Gupta, Ramesh Chandra, P.K.Jain “Pool boiling characteristics of carbon nanotube based nanofluids over a horizontal tube” ASME Journal of Thermal Science and Engineering Applications, Vol. 1, No. 2, pp. 022001-7, June 2009.

20. M.K. Mittal, Ravi Kumar, Akhilesh Gupta “An experimental study of the flow of R-407C in adiabatic helical capillary tube”, International Journal of Refrigeration, Vol. 33, pp. 840-847, 2010.

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24. B.M. Ramani, Akhilesh Gupta and Ravi Kumar, “Performance of a double pass solar air collector”, Solar Energy, Vol. 84 , pp.1929-1937, 2010.

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26. Raja Kathiravan, Ravi Kumar, Akhilesh Gupta & Ramesh Chandra (2012): Preparation and Pool Boiling Characteristics of Silver Nanofluids Over a Flat Plate Heater, Heat Transfer Engineering, 33:2, (2012), 69-78

27. Vikas J. Lakhera, Akhilesh Gupta & Ravi Kumar (2012): Enhanced Boiling Outside 8 × 3 Plain and Coated Tube Bundles, Heat Transfer Engineering, 33(9), (2012), 828-834,

28. Chitranjan, Kumar, R., Gupta, A., Chatterjee, B., Effect of Jet Diameter on the Rewetting of Hot Horizontal Surfaces during Quenching, Experimental Thermal and Fluid Science, Vol.42, (2012),25-37

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2. Ashwini Kumar Yadav, P. Majumdar, Ravi Kumar, Barun Chatterjee, Akhilesh Gupta, Lele H.G., "Experimental investigation of symmetric and assymetric heating of pressure tube under accident conditions for Indian PHWR", Nuclear Engineering and Design, Vol. 254, pp. 300-307, 2013
3. Pramod C. Ramteke, Akhilesh Gupta, Ravi Kumar, A.K. Gupta, Pawan K. Sharma, Experimental Investigation and CFD Simulation of Hydrocarbon Pool Fire, J. Applied Fire Science, Vol. 22(2), pp. 201-222, 2012-2013.

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35. Ashwini K. Yadav, P. Majumdar, Ravi Kumar, B. Chatterjee, Akhilesh Gupta, D. Mukhopadhyay, Experimental simulation of asymmetric heat up of coolant channel under small break LOCA condition for PHWR, Nuclear Engineering and Design, Vol. 255, pp. 138-145, 2013

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10. R. M. Sarviya, J. S. Saini and Akhilesh Gupta, Nucleate Boiling Heat Transfer Mechanism - A Perspective, National Convention of Chemical Engineers & National Seminar on Fire & Explosive Hazards in Chemical Industries, The Institute of Engineers, M. P. State Centre, Bhopal, Oct. 1997.

11. Niranjan Sahu and Akhilesh Gupta, Optimization of a Solar Driven Vapour Absorption System, National Solar Energy Convention, University of Roorkee, pp. 428-436, Nov. 30 - Dec. 2, 1998.

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7. Sikarwar Basant Singh, Gupta Akhilesh, Kumar Ravi and Pundhir D.S., “ Simulation of Flow Development in a Pipe by FLUENT Software” Proceedings of National Seminar on CFD-The New 3rd Dimension in Flow Analysis & Thermal Design, Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal, pp. 1-8, May 7-8, 2007.
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**Details of Review**

1. Reviewed the book entitled “ Thermal Sciences Engineering Data Book” by B.N. Nijaguna, Published by Tata McGraw-Hill Publishing Company Limited New Delhi.
2. Reviewed Self Instruction Material on “Applied Thermodynamics” (ME08D) prepared by Co-ordinator, DDE, TIET-Patiala.