

Curriculum Vitae

Dr. Manish Mishra

Designation - Assistant Professor in Mechanical & Industrial Engineering, IIT Roorkee.

Date of Birth - 2-4-1970

Qualification - BE (Mechanical), ME (Energy Systems & Pollution), PhD

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Details of Qualification:

Exam. Passed	Board/University	Yr of Passing	Division & %
Higher Secondary	Board of Secondary Education, MP, Bhopal	1986	First, 82.8%
BE (Mechanical)	Govt. Engg. College, Raipur	1991	First Div. with Honours, 79.4%
ME (Energy Systems & Pollution)	Govt. Engg. College, Raipur	1994	First Div. with Honours, 78.5%
PhD	IIT Kharagpur	2004	

Experience:

Post Held	Institution	Period From-To	Duration	Remarks
Assistant Professor, Mech & Ind Engg	Indian Institute of Technology Raipur	From 9-7-2008 till now	1-1/2 Yrs	
Associate Professor, Mechanical Engg	National Institute of Technology Raipur	From 30-11-2003 to 8-7-2008	4-1/2 Yrs	
Lecturer, Mechanical Engg	Govt. Engg. College, Raipur	From 30-11-93 to 30-11-2003	10 Yrs	PSC 92 - Merit - 03

Seminar / Short courses attended:

	Title	Place / Institution	Period
1	XI th Young Scientist Congress	RDVV Jabalpur	Feb 28-Mar1, 1996
2	XII th Young Scientist Congress	GGDUniv. Bilaspur	Feb 28-Mar2, 1997
3	XIII th Young Scientist Congress	JU Gwalior	Feb 28-Mar2, 1998
4	Environmental degradation & Its Remedial Measures	IE(I), GEC Raipur	Jan 13-Jan 30, 1995
5	Induction Training Programme for Teachers in Engineering	AICTE, IT BHU, Varanasi	May 8-May 29, 1995
6	Information Technology & Networking	ISTE, GEC Raipur	Sep 22- Oct 6, 1997

7	Modelling & Simulation of Rotor Bearing Systems	CEP, IIT Kharagpur	Dec 21-Jan 2, 1999-2000
8	National Workshop on Role of Technical Education in Promoting Gandhian Vision of Rural Industrialisation	KVIC, AICTE, DST, Wardha	Feb 28 - Mar 2, 2003
9	Basics of Networking	IIT Kanpur	July 6 - July 10, 2004
10	Industrial Applications of Biomass Gasification Technology For Energy Auditors, Consultants and Prospective Users	At Raipur by Ministry of Non-conventional Energy Sources and CESR Indore	July 17 - July 19, 2004
11	One Day Workshop on "Return on Investment"	Canada India Institute-Industry Linkage Project, Raipur	July 21, 2004
12	One Day Workshop on "Work Place Education Phase-II"	Canada India Institute-Industry Linkage Project, Raipur	September 23, 2004
13	National Workshop on Industry – Institute Interaction	TEQIP, NIT Rourkela	Nov 30 – Dec 1, 2006
14	Energy Efficiency Capacity Building Program for Various Stakeholders	Sponsored by World Bank & IREDA at Raipur	Feb 12 – Feb 14, 2007

Distinctions / Prizes / Awards:

1. Recipient of Gauss Medal - Topped in Higher Secy Exam, St. Paul's H.S.School, Raipur, 1986.
2. Third in order of Merit - Univ Exam, BE III Yr (Mech) 1989, First in GEC Raipur
3. Second in order of Merit - Univ Exam, BE IV Yr (Mech) 1990
4. Second in order of Merit - Univ Exam, ME (Mech) 1994
5. GATE 91 - 95.48 percentile
6. GATE 92 - 95.52 percentile
7. GATE 93 - 98.26 percentile

Contribution to Corporate life of Institution:

	Portfolio held	Duration
1	Member, University Exam Committee	1994
2	Member, Stock Verification (Workshop)	1994
3	Teacher Guardian, SC/ST Students	1995
4	Member, Stock Verification (Library)	1996
5	Member, BBA Counselling Team	1998
6	Prof. I/C PTDC Admission	1998
7	Prof I/C, Departmental Sessional & Exam Work	1994-1999
8	Prof I/C, Departmental UG, PG Admission	1994-1999
9	Prof I/C, PG Seminar	1994-1999, 2003-04
10	Prof. I/C PG Computer Lab	Mar 17, 1997-July 7, 1999
11	Prof. I/C Heat Engine & Heat Transfer Lab	2003-05
12	Prof I/C Departmental Practical Examinations	2003-05

13	Prof I/C Final Yr Results	2003-04
14	Member, Audit committee, Autonomous College	2003
15	Member, counselling and college admission	2003, 2004
16	Member, internal counselling	2003
17	Member, Contract appointment scrutiny committee	2003, 2005
18	Back up, Industry Linkage Officer for Work Place Education / Industrial Training	2004
19	Dy. Superintendent, Autonomous examination	2004
20	Co-ordinator, centre for excellence	2004
21	Member, Scrutiny Committee, Opening of New Polytechnics in CG	2004, 2005, 2006
22	Co-ordinator, BUDGET, Technical Education, CG	2004, 2005, 2006
23	OSD, at Directorate of Technical Education, CG	2005-2006
24	Co Coordinator, Project for Development of HMT Lab under FIST	2006-2007
25	Coordinator, TEQIP, NIT Raipur	2007
26	Dy Presiding Officer, JEE 2007, AIEEE 2007	2007
27	Dy Controller, Autonomous Examinations	2004-2005, 2007
28	I/c Head of the Department, Electronics & Telecommunications Engg	2007-08
IIT Roorkee		
29	Co-ordinator, Thermodynamics MI-101	2010 -
30	Co-ordinator, Work-package IITR, Pan-IIT Solar Thermal Project	2009 -

Membership of Professional Bodies:

1. Associate of Institution of Engineers (India) - A 515378
2. Life Member, Indian Society for Technical Education (LM-22237)
3. Life Member, Indian Society for Heat & Mass Transfer

Field of specialisation and specific interest:

Heat Transfer, Fluid Mechanics, Computational Methods, Conventional and Non-Conventional Energies, Heat Exchanger Design, Design of Thermal Systems.

Course Developed:

Heat Exchanger Design (PG), Heat Exchanger Technology (UG)

Practical Experience:

Design and Testing of Compact Plate-Fin Heat Exchangers.

Doctoral Research:

Numerical and Experimental Studies on Crossflow Heat Exchangers.

Sponsored Project:

1. Funding of Rs 11.00 Lakhs for infrastructure development of Heat Transfer Lab by DST under FIST at NIT Raipur.
2. Funding of Rs 3.60 Lakhs for “Numerical & Experimental Studies on Modified Design & Performance of Solar Air Heater” a sponsored research project under FIG-A, IIT Roorkee.

Project/ Thesis Guidance:

	Completed	In Progress
M.Tech.	07	02
Ph.D.	-	03

International Activities:

Reviewer of following International Journals -

ASME – Journal of Heat Transfer (ASME)

Heat Transfer Engineering (Taylor & Francis)

Energy (Elsevier)

INTERNATIONAL JOURNAL OF Intelligent Defence Support Systems (Inderscience)

Knowledge of Computer:

Operating Systems - Windows

Softwares - Microsoft Office (Word, Excel, PowerPoint), AutoCAD

Languages - C, FORTRAN

Soft-computing tool - Genetic Algorithm

List of Publications:

International Journal:

1. **Effect of End Heat Exchanger Parameters on the Performance of a Natural Circulation Loop** N.M.Rao, Manish Mishra, B.Maiti and P.K.Das, International Communications in Heat Mass Transfer, Vol. 29(4), **2002**, pp. 509-518.
2. **Optimum Design of Crossflow Plate-Fin Heat Exchangers Through Genetic Algorithm** Manish Mishra, P.K. Das and Sunil Sarangi, International Journal of Heat Exchangers, Vol. 5 (2), August **2004**, pp. 379-402.
3. **Transient Behaviour of Crossflow Heat Exchangers with Longitudinal Conduction and Axial Dispersion** Manish Mishra, P.K. Das and Sunil Sarangi, ASME Journal of Heat Transfer, vol. 126, **2004**, pp. 425-433.
4. **Transient Behaviour of Crossflow Heat Exchangers Due to Perturbations in Temperature and Flow** Manish Mishra, P.K. Das and Sunil Sarangi, International Journal of Heat and Mass Transfer, vol. 49 (5-6), **2006**, pp. 1083-1089.
5. **Dynamic Behaviour of Three-Fluid Crossflow Heat Exchangers** Manish Mishra, P.K. Das and Sunil Sarangi, ASME Journal of Heat Transfer, vol. 130 (1), **2008**, pp. 011801/1-6.
6. **Effect of Temperature and Flow Nonuniformity on Transient Behaviour of Crossflow Heat Exchanger** Manish Mishra, P.K. Das and Sunil Sarangi, International Journal of Heat and Mass Transfer vol. 51, **2008**, pp. 2583-2592.
7. **Thermoeconomic Optimisation of Crossflow Plate-Fin Heat Exchanger Design Using Genetic Algorithm** Manish Mishra and P.K. Das, International Journal of Exergy vol. 6 (6), **2009**, pp. 847-852.
8. **Second Law Based Optimisation of Crossflow Plate-Fin Heat Exchanger Design Using Genetic Algorithm** Manish Mishra, P.K. Das and Sunil Sarangi, Applied Thermal Engineering vol. 29, **2009**, pp. 2983-2989.
9. **Transient Behaviour of Crossflow Heat Exchangers Due to Sinusoidal Excitation** Manish Mishra, P.K. Das and Sunil Sarangi, Accepted for publication in ASME-Journal of Heat Transfer, **2010**.

Conference (Reviewed):

1. **Design of an Experimental Rig for Study of Heat Transfer and Flow Friction Characteristics of Compact Plate Fin Heat Exchangers** I. Ghosh, Manish Mishra, P. K. Das and S. Sarangi, 18th International Cryogenic Engineering Conference, Mumbai Feb.2000.
2. **Experimental Investigation of Heat Transfer & Flow Friction Characteristics of Compact Plate Fin Heat Exchangers** I. Ghosh, Manish Mishra, P.K. Das and S. Sarangi BSME-ASME International Conference on Thermal Engineering, Dhaka, 31 December 2001 – 2 January **2002**, 274-279.
3. **Optimisation of Crossflow Plate-Fin Heat Exchanger Design Using Genetic Algorithm** Manish Mishra, P.K. Das and Sunil Sarangi, BSME-ASME International Conference on Thermal Engineering, Dhaka, 31 December 2001 – 2 January **2002**, 267-273.
4. **Dynamic Behaviour of Crossflow Heat Exchangers – A State of the Art Review** Manish Mishra, Indranil Ghosh, P. K. Das and Sunil Sarangi, presented at 18th International Cryogenic Engineering Conference, Mumbai, Feb.2000.
5. **Effect of End Heat Exchanger Parameters on the Performance of a Natural Circulation Loop** N.M.Rao, Manish Mishra, B.Maiti and P.K.Das, 26th National Conf on Fluid Mechanics and Fluid Power, Kharagpur, **1999**, 412-418.
6. **Steady State Analysis and Optimum Conditions of a Natural Circulation Loop With End Heat Exchangers** N.M.Rao, Manish Mishra, B.Maiti and P.K.Das, 16th National and 5th International ISHMT-ASME Heat and Mass Transfer Conference, Calcutta, Jan 3-5 **2002**, 888-893.
7. **Transient Behaviour of Crossflow Heat Exchangers - The Effect of Axial Dispersion** Manish Mishra, P.K. Das and Sunil Sarangi, 18th National & 7th International ISHMT-ASME Heat and Mass Transfer Conference, IIT Guwahati, India, Jan 4 - 6, **2006**.
8. **Design Optimisation of Tubular Heat Exchanger Through Graphical Technique** M.H.Soni, I.B.Mirza, R. Salhotra and Manish Mishra, National Conference on 'Mechanical and Production Systems in 21st Century', Jabalpur Engineering College, Jabalpur, Nov. 29-30, **2007**.
9. **Dynamic Behaviour Of Three-Fluid Crossflow Heat Exchanger With Large Core Capacity** Manish Mishra, P.K. Das and Sunil Sarangi, International Conference on Advances in Energy Research' (ICAER) 2007, IIT Bombay, Dec 12-14, **2007**.
10. **Optimization of Heat Pumps Based on Finite-Time-Thermodynamics Using Genetic Algorithm** R. Salhotra and Manish Mishra, 20th National and 9th International ISHMT-ASME Heat and Mass Transfer Conference, Mumbai, Jan 4-6 **2010**, 1227-1231.
11. **Performance Improvement of Solar Air Heater – A Numerical Study** Addisu Bekele, S. Dutta and Manish Mishra, 20th National and 9th International ISHMT-ASME Heat and Mass Transfer Conference, Mumbai, Jan 4-6 **2010**, 993-1000.
12. **Transient Behaviour of Three-Fluid Crossflow Heat Exchanger: The Effect of Flow Non-Uniformities** Manish Mishra, 20th National and 9th International ISHMT-ASME Heat and Mass Transfer Conference, Mumbai, Jan 4-6 **2010**, 702-707.