

Evaluative Report of the Department
Please provide data for last 5 years

1. Name of the Department : **Mechanical Engineering Department**
2. Year of establishment : **1956**
3. Is the Department part of a School/Faculty of the University?

Faculty of the University

4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)

Title	Field of Specialization	Sanctioned Intake	Duration (Years)	Year of Starting
Under-Graduate Program	B.E. Mechanical Engineering	110 (2009-2012) 120 (2013-14)	4	1956
	B.E. Industrial Engineering (BE-MBA)	30 (2009-2013)	5 (3 years ME Department +2 years LMTSOM, Derabassi Campus)	2007
	B.E. Mechatronics Engineering	30 (2012-2014)	4	2012
	B.E. Mechanical Production Engineering	40 (2014)	4	2014
Post-Graduate Programs	M.E. Production Engineering	30 (2009-2014)	2	1981
	M.E. CAD/CAM Engineering	30 (2009-2014)	2	2000
	M.E. Thermal Engineering	30 (2010-2014)	2	2010
Research Programs	PhD	Total: 46 candidates got registered (2009 onward)		

5. Interdisciplinary programmes and departments involved:
 - **B.E. in Industrial Engineering (BE-MBA)** jointly undertaken with *L. M. Thapar School of Management (LMTSOM)*
 - **B.E. in Mechatronics Engineering** jointly undertaken with *Electronics and Communication Engineering Department*
6. Courses in collaboration with other universities, industries, foreign institutions, etc:
 - **University of Waterloo, Canada**
 - a) Exchange of students (mainly at the under-graduate levels)
 - b) Two faculty members are pursuing their PhD work under collaborative research programme with the University of Waterloo
 - c) Short-term courses organized by Thapar Institute of Engineering & Technology University listed eminent Professor(s) from University of Waterloo as faculty
 - **University of Wollongong, Australia**
 - a) Exploring MoU option for Faculty and research student exchange

7. Details of programmes discontinued, if any, with reasons:

B.E. Industrial Engineering (BE-MBA), discontinued in 2013

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System

- **Semester system** for B.E in Mechanical Engineering, B.E Mechatronics Engineering, M.E in Production Engineering, M.E Thermal Engineering, M.E CAD/CAM Engineering, B.E in Industrial Engineering and MBA (for year 1 to 3 only)
- **Trimester system** for B.E in Industrial Engineering and MBA (for year 4 and 5 only)

9. Participation of the department in the courses offered by other departments

The department covers some of the courses at the B.E level for students registered in other departments - ECE, EE, CE, ChE, BT

Department	Course Codes	Shared HR and Facilities
Electronics and Communication Engineering Department (ECED)	UTA001 Engineering Graphics	Faculty
	UTA002 Manufacturing Processes	Faculty and lab Staff
	UES004 Thermodynamics	Faculty
Biotechnology and Environment Sciences Department (BTESD)	UTA001 Engineering Graphics	Faculty
	UTA002 Manufacturing Processes	Faculty
	UES004 Thermodynamics	Faculty
	UES003 Applied Mechanics	Faculty and lab staff
Civil Engineering Department (CED)	UTA001 Engineering Graphics	Faculty
	UTA002 Manufacturing Processes	Faculty and lab staff
	UES002 Solid Mechanics	Faculty and lab staff
	UES006 Engineering Mechanics	Faculty and lab staff
Electrical and Instrumentation Engineering Department (EIED)	TA101 Engineering Graphics	Faculty
	TA102 Manufacturing Processes	Faculty and lab staff
	ES103 Thermodynamics	Faculty
	ES102 Solid Mechanics	Faculty and lab staff
Electrical Engineering Department (EED)	TA101 Engineering Graphics	Faculty
	TA102 Manufacturing Processes	Faculty and lab staff
	ES103 Thermodynamics	Faculty
	ES102 Solid Mechanics	Faculty and lab staff
Computer Science and Engineering Deptt. (CSED)	UTA001 Engineering Graphics	Faculty
	UTA002 Manufacturing Processes	Faculty and lab staff
Chemical Engineering Deptt (CHED)	UME704: Heat Transfer Lab	Lab and lab Staff
	UTA001 Engineering Graphics	Faculty
	UTA002 Manufacturing Processes	Faculty and lab staff
	UES004 Thermodynamics	Faculty
	UES003 Applied Mechanics	Faculty and lab staff

10. Number of teaching posts sanctioned, filled and actual (Professors/ Associate Professors/ Asst. Professors/ others)

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	6	4	4
Associate Professor	12	4	4
Assistant Professor	22	20	20
Others	--	04	04

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil. students guided for the last 4 years
Dr. S. K. Mohapatra	Ph.D	Senior Professor	Thermal Engineering	23	4 Ph.D. and 25 M.E thesis
Dr. Ajay Batish	Ph.D	Professor	Industrial and Production	24	2 Ph.D. and 19 M.E thesis
Dr. S.P. Nigam	Ph.D	Visiting Professor	Vibration & Noise	53	14 M.E thesis
Dr. V. P. Agarawal	Ph.D.	Visiting Professor	Mechanisms and Systems Approach	47	19 M.E thesis
Mr. A. S. Jawanda	M.E.	Associate Professor	Indl. Engg, CAD CAM	19	15 M.E thesis
Mr. Sumit Sharma	M.E.	Associate Professor	Turbo Machinery	19	16 M.E thesis
Mr. S. S. Bhullar	M.E.	Associate Professor	Industrial Engineering	17	4 M.E thesis
Dr. Vinod Kumar Singla	Ph.D	Associate Professor	Non-Traditional Machining Processes	17	1 Ph.D. and 22 M.E.thesis
Dr. Sandeep Sharma	Ph.D	Assistant Professor	CAD/CAM	13	14 M.E thesis
Dr. Tarun Nanda	Ph.D	Assistant Professor	Industrial Metallurgy	14	12 M.E thesis
Dr. J. S. Saini	Ph.D	Assistant Professor	CAD/FEM	11	15 M.E thesis
Mr. Ravinder Kumar Duvedi	M.E.	Assistant Professor	CAD/CAM & Robotics	10.5	16 M.E thesis
Dr. Satish Kumar	Ph.D	Assistant Professor	Thermal Engineering	8	17 M.E thesis

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil. students guided for the last 4 years
Dr. Anirban Bhattacharya	Ph.D	Assistant Professor	Manufacturing Technology	11	22 M.E thesis
Mr. Kishore Khanna	M.E	Assistant Professor	CAD/CAM & Robotics	10	13 M.E thesis
Mr. Bikramjit Sharma	M.E	Assistant Professor	CAD/CAM and robotics engineering	8	13 M.E thesis
Mr. Devender Kumar	M.Tech	Assistant Professor	Robotics & Automation	7.5	6 M.E thesis
Mr. Kundan Lal	M.E	Assistant Professor	Thermal Engineering	11.5	14 M.E thesis
Mr. Daljeet Singh	M.E.	Assistant Professor	CAD/CAM & Robotics	10	8 M.E thesis
Dr. S. S. Mallick	Ph.D	Assistant Professor	Mechanical Thermal Engineering	11	9 M.E thesis
Dr. Ashish Singla	PhD	Assistant Professor	Robotics	6.6	6 M.E thesis
Dr. Madhup Kumar Mittal	Ph.D	Assistant Professor	Thermal Engineering	11	8 M.E thesis
Dr. Tarun Kumar Bera	Ph.D	Assistant Professor	Vehicle Dynamics and Robotics	13	2 M.E thesis
Dr. Vivek Jain	Ph.D	Assistant Professor	Non traditional machining/ Micro machining	13	5 M.E thesis
Dr. Dheeraj Gupta	Ph.D.	Assistant Professor	Advance manufacturing process	7	Nil
Dr. Anant Kumar Singh	Ph.D	Assistant Professor	Advanced Machining, Micro/Nano Finishing Using MR Fluids and Automation in Manufacturing	7	Nil
Dr. Hiralal Bhowmick	Ph. D.	Assistant Professor	Design and Material characterization	5	Nil
Dr. Vaneet Srivatava	Ph.D	Assistant Professor	Production Engineering	8	Nil
Mr. Atul Sharma	M.E.	Lecturer (Ad-hoc)	CAD/CAM	10.5	1 M.E thesis
Mr. Arvind	M.E.	Lecturer	Rotodynamic	12	Nil

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil. students guided for the last 4 years
Kaushal		(contract)	Machines		
Mr. Gurpreet Singh Saini	M.E.	Lecturer (contract)	Design	4	Nil
Mr. Ravinder Singh Joshi	M.E.	Lecturer (contract)	CAD/CAM	5	Nil

12. List of senior Visiting Fellows, Adjunct Faculty, Emeritus Professors

- Prof. S.P. Nigam, Visiting Professor, IIT Roorkee
- Prof. V.P. Aggrawal, Visiting Professor, IIT Delhi

13. Percentage of classes taken by temporary faculty - programme-wise information

For undergraduate (B.E level): 9%

For postgraduate (M.E level): 0%

14. Programme-wise Student Teacher Ratio

For undergraduate (B.E level): 15:1

There are approximately 500 students at BE level (Mechanical, Mechatronics, Production Mechanical) (excluding students in 1st year) and 32 faculty members

For postgraduate (M.E level): 6:1

There are approximately 150 students at ME level and almost all faculty members (32) are involved in the activities including thesis guiding, project guiding etc

15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual

Position	Sanctioned	Filled	Actual (including CAS & MPS)
Technical support staff	15	15	15
Administrative support staff	04	04	04

16. Research thrust areas as recognized by major funding agencies

Sl. No.	Research Thrust Areas	Funding Agency	Faculty Involved
1	Non Traditional Machining	UGC	Dr. S. K. Mohapatra
2	Erosion wear for the flow of ash-water slurry	UGC	Mr.Satish Kumar
3	Development of a flat-bed 3-Axis VMC	DSIR	Mr. Ravinder K. Duvedi

Sl. No.	Research Thrust Areas	Funding Agency	Faculty Involved
4	Pneumatic Conveying system	DST, CSIR	Dr. S.S.Mallick
5	Abrasive blasting process	AICTE	Dr V K Singla Dr Ajay Batish
6	Metal matrix Composites	UGC	Dr. Ajay Batish Mr. Anirban Bhattacharya
7	Electric discharge machining (EDM)	UGC	Dr. Ajay Batish Mr. Anirban Bhattacharya
8	Nanofluid	Thapar Institute of Engineering & Technology University	Dr. S.S.Mallick
9	Intelligent Autonomous Vehicle (IAV)	UGC	Dr. Tarun Kumar Bera
10	Fused Deposition Modeling Process	AICTE	Dr. Ajay Batish Mr. Anirban Bhattacharya
11	Ultrasonic micro-machining	Thapar Institute of Engineering & Technology University	Dr. Vivek Jain
12	Microwave Heating	Thapar Institute of Engineering & Technology University	Dr. Dheeraj Gupta
13	Detection of corrosion by ultrasonic method	UGC, DST, NRB	Dr. Shruti Sharma Sandeep K Sharma
14	Fiber Reinforced Polymer Nanocomposites	NRB	Dr. Rajeev Mehta Mr. Bikramjit Sharma
15	Ornamental Wood Working System, CAD CAM and 3D Design automation	Ministry of Textiles	Dr. Ajay Batish, Mr. A. S. Jawanda Mr. R. K. Duvedi
16	Ergonomic Analysis	DST,AICTE	Dr. Ajay Batish
17	Centrifugal Slurry Pump	UGC	Dr. S. K. Mohapatra
18	Forming	AICTE	Dr. Ajay Batish
19	Flexible conveying system	Rockman Industries Ltd.	Dr. Ajay Batish Mr. Anirban Bhattacharya
20	Submerged Arc Welding (SAW)		Dr. Ajay Batish Mr. Anirban Bhattacharya
21	Synthesis and testing of fiber reinforced nanocomposites	NRB	Bikramjit Sharma, Dr. Tarun Nanda
22	Bulk Solids Storage and Transport	DST, CSIR	Dr. S.S.Mallick

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise. - List for last 5 years

Ongoing Sponsored Projects

Sl. No.	Project Title	Funding Agency	Year	Grant (Rs. In Lakhs)	Principal Investigator and Co-Principal Investigator
1.	Design and Control of Intelligent Autonomous Vehicle for Indian Sea Ports.	UGC	2013	6.0	Dr.T.K. Bera
2.	Multi-response Optimization of Process Parameters for the Improved Part Accuracy in Fused Deposition Modeling Process	AICTE	2013	9.75	Dr. Ajay Batish and Mr. Anirban Bhattachary
3.	Simulation and analysis of flow through microchannels fabricated using ultrasonic micro-machining	Thapar Institute of Engineering & Technology University	2013	5.0	Dr. Vivek Jain
4.	Development of Metallic Nano-Composite Cladding on Poor Tribo Characteristics Metallic Substrate through Microwave Heating	Thapar Institute of Engineering & Technology University	2013	5.0	Dr. Dheeraj Gupta
5.	FIST	DST	2013	86	Coordinator: Prof Ajay Batish
6.	Detection of Corrosion by Ultrasonic and Acoustic Emission Techniques	DST	2012	42.0	Dr. Shruti Sharma Sandeep K Sharma
7.	Investigation of corrosion and its progression in ship hulls	NRB	2012	24.64	Dr. Shruti Sharma Sandeep K Sharma
8.	Processing And Characterization of Fiber Reinforced Polymer Nanocomposites And Their Degradation In Marine Environments	NRB	2012	21.54	Dr. Rajeev Mehta Mr. Bikramjit Sharma
9.	Developing Validated Scale-up Procedure for Dense-Phase Pneumatic Transport of Fine Powders using Two-Layer Dune-Flow Model	CSIR	2013-2016	20 lakhs	Principal Investigator: Dr. S.S.Mallick. Co-Principal Investigator: None
10.	Multi-response Optimization of Process Parameters for the Improved Part Accuracy in Fused Deposition Modeling Process	AICTE	April 2013 March 2016	9.75	Dr. Ajay Batish/ Dr. Anirban Bhattacharya

Completed Sponsored Projects

Sl. No.	Project Title	Funding Agency	Duration	Grant (Rs. in Lakhs)	Principal Investigator
1.	State Initiated Design Centre for Ornamental Wood Working System	Ministry of Textiles	2008-11	97.5	Dr. Ajay Batish, Mr. A. S. Jawanda Mr. R. K. Duvedi
2.	Analysis of Asymmetrical Manual Lifting Tasks to determine maximum recommended weight limit by Indian Male workers.	DST	2007-10	22	Dr. Ajay Batish
3.	Ergonomic Analysis of Manual Lifting Tasks for calculating the maximum recommended weight limit for specified two-handed, asymmetrical lifting tasks carried out by Indian male operators	AICTE	2007-10	8	Dr. Ajay Batish
4.	Study on Performance characteristics of a Centrifugal Slurry Pump	UGC	2010-13	7.26	Dr. S. K. Mohapatra
5.	Experimentation for improvement in surface properties of Die and Tool Steels by EDM Process.	DST	2007-2010	23	Dr. Ajay Batish
6.	National Facility in Engg. & Tech with Industrial Collaboration for Forming	AICTE	2009-10	0.5	Dr. Ajay Batish
7.	Chain Weight Reduction	Rockman Industries Ltd.	2011-13	11.08	Dr. Ajay Batish & Mr. Anirban Bhattacharya
8.	Analysis of metallurgical behavior of weld and heat affected zone during Submerged Arc Welding (SAW) of high strength low alloy (HSLA) steel for different flux compositions, weld parameters with pre and post thermal treatment	DRDO	2012-14	14.65	Dr. Ajay Batish and Mr. Anirban Bhattacharya
9.	Optimization and modelling of process parameters for improvement in material characteristics in abrasive blasting process using fuzzy logic methodology	AICTE	2 Years	9.77	Dr. Vinod Kumar
10	Design and Control of Intelligent Autonomous Vehicle for Indian Sea Ports	UGC	2013-15	6	Dr. Tarun Kumar Bera

Sl. No.	Project Title	Funding Agency	Duration	Grant (Rs. in Lakhs)	Principal Investigator
11	Modelling Solids Friction and Minimum Transport Criteria for Dense-Phase Pneumatic Conveying of Powders	DST	2012-2015	21.95	Principal Investigator: Dr. S.S.Mallick. Co-Principal Investigator: None
12	Experimental investigation of EDM machined surface of Al-SiC and Al-SiC-B ₄ C metal matrix composites	University Grants Commission (UGC), New Delhi, India	August 2012 - July 2014	10.82	Ajay Batish/ Anirban Bhattacharya
13	Establishment of Non Traditional Machining Centre (UGC-SAP)	UGC	2009	44.5	Dr. S. K. Mohapatra
14	TEQIP-Phase II (under 1.2) - MED Component only	NPIU	2010	125	Dr. S. K. Mohapatra
15	Study of erosion wear for the flow of ash-water slurry	UGC	2011	7.26	Mr. Satish Kumar
16	Development of a flat-bed 3-Axis VMC	DSIR	2011	2.1	Mr. Ravinder Kumar Duvedi
17	Modelling Solids Friction and Minimum Transport Criteria for Dense-Phase Pneumatic Conveying of Powders	DST	2012	21.95	Dr. S.S.Mallick
18	Optimization and modelling of process parameters for improvement in material characteristics in abrasive blasting process using fuzzy logic methodology	AICTE	2011	9.77	Dr. V K Singla Dr. Ajay Batish
19	Experimental investigation of EDM machined surface of Al-SiC and Al-SiC-B ₄ C Metal matrix Composites	UGC	2012	9.97	Dr. Ajay Batish and Mr. Anirban Bhattacharya
20	Experimental investigation for surface improvement of die steels during electric discharge machining with tungsten and titanium powder mixed dielectric	UGC	2012	0.9	Mr. Anirban Bhattacharya and Dr. Ajay Batish
21	Developing Validated Scale-up Procedure for Dense-Phase Pneumatic Transport of Fine Powders using Two-Layer Dune-Flow Model	CSIR	2012	19.56	Dr. S.S.Mallick

Sl. No.	Project Title	Funding Agency	Duration	Grant (Rs. in Lakhs)	Principal Investigator
22	Studies Towards Development Of Nanofluid-Based Automobile Engine Coolant	Thapar Institute of Engineering & Technology University	2012	1.0	Dr. S.S.Mallick
23	Ultrasonic Guided Wave Approach for monitoring setting and hardening of concrete	UGC	2012	5.23	Dr. Shruti Sharma Sandeep K Sharma
24	Evaluation of resistance properties of coal-water slurry flowing through local piping fittings	UGC	2012	6.44	Mr.Satish Kumar
25	Experimental investigation for surface improvement of die steels during electric discharge machining with tungsten and titanium powder mixed dielectric	University Grants Commission (UGC), New Delhi, India	August 2012 - July 2014	0.90	Anirban Bhattacharya/ Ajay Batish

18. Inter-institutional collaborative projects and associated grants received

(a) **National collaboration**

- Collaboration with Rockman Industries Ltd. along with DSIR- 11.08 Lakhs received from DSIR.
- Troubleshooting at NTPC (Ash handling system)

Project Title	Funding Agency	Duration	Grant (Rs. in Lakhs)	Principal Investigator
Implementation of research project entitled "Chain weight reduction"	Rockman Industries Ltd. (HeroHonda Group), A-7, Focal Point, Ludhiana - 141010, Punjab	April 2011 to June 2012	11.08	Ajay Batish/ Anirban Bhattacharya,

(b) **International collaboration**

- Dr. S. K. Mohapatra University of Waterloo, Canada
Academic networking, September 2013
- Dr. S. K. Mohapatra Virginia Tech., USA, Academic Networking,
September 2013
- Dr Ajay Batish University of Waterloo, Canada
Academic networking, September 2013
- Dr Ajay Batish Virginia Tech., USA, Academic Networking,
September 2013

- Dr Ajay Batish ABET symposium, Pittsburgh, Delegate, April, 2014
 - Dr Ajay Batish Trinity College Dublin, Academic Networking, September 2013, June 2014
19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received.
Total worth of Rs. 6.376 Crore (list has been provided above)
20. Research facility / centre with
- **State recognition:** State Initiated Design Centre for Ornamental Wood Working System, (SIDC Project), Ministry of textile, Govt. of India.
 - **National recognition:** State Initiated Design Centre for Ornamental Wood Working System, (SIDC Project), Ministry of textile, Govt. of India.
 - **International recognition:** Center workshop as the recognized facility by univ. of Waterloo for under grade student training at TU
21. Special research laboratories sponsored by/created by industry or corporate bodies:
Heat Treatment Laboratory sponsored by Rockman Industries Ltd.
22. Publications: **List for last 5 years**

2010-2011

List of research publications in SCI/Impact Factor journals

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors	Impact Factor
1.	Optimisation of neem methyl ester from transesterification process and fuel characterization as a diesel substitute	Biomass and Bioenergy, 35(2011), pp 1138-1144.	Ragit S.S., Mohapatra, S. K., Kundu, K., Gill, P.,	3.84
2.	Experimental investigation of the effect of flow arrangements on the performance of a microchannel heat sink	Experimental Heat Transfer, 24, 215-233.	Sehgal, S., Murugesan, K., Mohapatra, S. K.	0.425
3.	Multi-Response optimization and Empirical Modeling of Cardiopulmonary Responses during Manual Lifting Tasks	Human Factors and Ergonomics in Manufacturing, Volume 21, No. 1, 2011, pp. 29-43	Ajay Batish, Anirban Bhattacharya, Baljeet Singh	0.426
4.	Effect of Process Parameters on Microhardness and Microstructure of Heat Affected Zone in Submerged Arc Welding	Proceedings of the Institution of Mechanical Engineers, PartB, Journal of Engineering Manufacture, Vol. 225, 2011, pp. 771-721, DOI: 10.1243/09544054JEM2143	Parveen Kumar, Ajay Batish, Anirban Bhattacharya, Ravinder Kumar Duvedi	0.699

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors	Impact Factor
5.	Modeling and Analysis of Component Based Software System. A Graph Theoretic Systems Approach	Systems Research Forum, 4(2), 151-172, 2010	Upadhyay, N., Deshpande, B. M., and Agrawal, V.P.	0.443
6.	Design for X-abilities of a Mechatronic System- A Concurrent Engineering and Graph Theoretic Approach	Concurrent Engineering research with applications, Vol. 19, pp. 55-69, 2011	Kiran C.P., Shibu Clement, Agrawal V.P.	0.959
7.	Coding, evaluation and selection of a mechatronic system	Expert system with applications, vol. 38, pp. 9704-9712, 2011	Kiran C.P., Shibu Clement, Agrawal V.P.	2.908
8.	Developing Maintainability Index of a software Component: A Digraph and Matrix Approach	ACM SIGSOFT 35(5), pp. 1-11, 2010	Upadhyay, N., Deshpande, B. M., and Agrawal, V.P.	0.66
9.	Towards a Software Component Quality Model,	Springer (LNCS), pp. 398-412.	Upadhyay, N., Deshpande, B. M., and Agrawal, V.P.	0.95
10.	Concurrent usability evaluation and design of software component: a digraph and matrix approach	IEEE/IET Software Research Journal, 5(1), pp. 1-13, 2011 (In Press)	N. Upadhyay, B. M. Deshpande, V. P. Agrawal	1.1
11.	A new methodology for multi-pass single point incremental forming with mixed tool paths	CIRP Annals- Manufacturing Technology, Vol. 60, pp. 323-326 doi:10.1016/j.cirp.2011.03.145	R. Malhotra, A. Bhattacharya, A. Kumar, N.V. Reddy, J. Cao	1.603
12.	Micromechanical modelling of weldments using GTN model	International Journal of Fracture, Vol.167, Number 1, Page 71-82, July 2010	R. Chhibber, P. Biswas, Navneet Arora, S.R. Gupta, B.K. Dutta	1.043

List of research publications in Non-SCI/Non-Impact journals

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
1.	Study of agglomeration in 3.5 MW AFBC using rice husk particles	IJRET, 2, 120-142 (2011)	Mohapatra, S. K., Singh, R.I., Gangacharuylu, D.
2.	Simulation of centrifugal slurry pump using k-epsilon modeling scheme	International Journal of Computational Science and Engineering, 1, 1-6 (2011)	Mohapatra, S. K., Kumar Satish, Joshi, R.
3.	Biodiesel production from used frying oil and properties of as an alternate fuel	International Journal of Fluids Engineering, 1, 21-27, (2011)	Mohapatra, S.K., Ragit, S.C., Kundu, K., Dahake V.

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
4.	Experimental study and numerical simulation on thermal analysis of tool and cutter grinding operation using FEM	International Journal of Fluids Engineering, 2, 1-13, (2011)	Mohapatra, S. K., Dhull, V., Singla, V. K.
5.	Performance and emission evaluation of a compression ignition engine fuelled with neem methyl ester and its respective blends	International Journal of Fluids Engineering, 2, 29-40, (2011)	Mohapatra, S.K., Ragit, S.C., Kundu, K., Dahake V
6.	Computational Investigations of centrifugal slurry pump handling bottom ash	International Journal of Fluids Engineering, 3, 241-249, (2011)	Saroj Kumar Mohapatra; Jaiinder Preet Singh; Satish Kumar
7.	Comparative study of engine performance and exhaust characteristics of a single cylinder 4-stroke CI engine operated on esters of hemp oil	Indian Journal of Engineering and Material Science, 18, 1-12, (2011)	Mohapatra, S.K., Ragit, S.C., Kundu, K
8.	Effect of parameters on predicted stresses during single point incremental forming	International Journal of Applied Engineering Research, Vol. 6, No. 4, 2011, pp. 533 - 544	Anirban Bhattacharya, Ajay Batish
9.	Effect of parameters in Resistance Micro-welding of Stainless Steel cross wire using Fractional Factorial Experimental Design	International Journal of Manufacturing Research Vol. 6, No. 3, 2011, pp. 290 - 303.	Jung-Mo Kim, Jaho Seo, Ajay Batish, Anirban Bhattacharya
10.	CEXSC: Concurrent Evaluation of "X-Abilities" of a software component	International Quality Congress, Baroda, India, Oxford University press, pp. 129-142., 2010	Upadhyay, N., Deshpande, B. M., and Agrawal, V.P.
11.	X-abilities based concurrent design and evaluation of mechatronic system	Journal of Mechatronics and Intelligent Manufacturing, Vol. 2, pp. 115-127 (Nova Science Pub.), 2011	C. Phaveendra Kiran, Shibu Clement and V.P. Agrawal
12.	'A group decision making aid for evaluation and optimum selection of Micro-Electro-Mechanical System (MEMS) products	Journal of Mechatronics and Intelligent Manufacturing, vol. 1(1/2), pp. 1-21, 2010	Prince, A.A. and Agrawal, V.P.
13.	Attribute Based Design Specification, Comparison and Selection of Electroplating Waste Treatment System using MADM Approach	Journal of Tribology and surface engineering (Nova Publication, USA) Vol. 1, pp. 263-286, 2010	Kumar, A., Clement, S., Agrawal, V.P.
14.	Integrated Decision Approach for COTS Selection	International journal of Decision Sciences, Risks and Management, 2(3), pp. 165-177, 2010	Upadhyay, N., Deshpande, B. M., and Agrawal, V.P.

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
15.	Concurrent Design Graph Theoretic Approach for Component Based Software System	International Journal of Product Design, 1(1), pp. 13-23, 2010	Upadhyay, N., Deshpande, B. M., and Agrawal, V.P.
16.	Quality modeling and analysis of an electroplating system using graph theory matrix approach.	International Journal of Productivity and Quality Management, Interscience Publication, Vol. 8, pp. 85-112, 2011	Kumar A., Shibu Clement, Agrawal V.P.
17.	A review on the state of the art in wire electric discharge machining (WEDM) process	International Journal of Mechanical Engineering Research and Development Vol.1,pp. 23-39, 2011.	Anish kumar Vinod kumar Jatinder kumar
18.	Review of research work in traditional and Non-Traditional Machining of composites	Journal of information, knowledge and research in mechanical Engineering, Vol.1, pp21-25, Nov, 2010	Davinder sethi Vinod kumar
19.	Green supply chain management issues: A literature review approach	Journal of information, knowledge and research in mechanical Engineering, Vol.1, pp12-20, Oct, 2010.	Sunil luthra Vinod kumar Sanjay kumar Abid Haleem
20.	Strategic Alignment of Organizational Culture Issues for Stimulating Creativity and Innovation	International Journal of Applied Engineering Research, Vol. 6, 471-480, 2011	Gopal Dixit, Tarun Nanda
21.	Strategic Alignment of Organizational Culture and Climate for Stimulating Innovation in SMEs	International Journal of Innovation, Management and Technology, Vol. 2, 77-85, 2011	Gopal Dixit, Tarun Nanda
22.	Elasto-Plastic Analysis of Corten Steel using Finite Element Methods.	International Journal of Applied Engineering Research, Vol. 6(4), 2011. pp. 481-497.	J.S. Saini, Yatheshth Anand
23.	Failure mode of steel tension members due to change in connection eccentricity and connection length.	Journal of Institution of engineers (Civil Division), Vol 91, Nov., 2010. pp. 8-14.	J. S. Saini, D. Kumar, P. Katyal
24.	Experimental Study and Numerical Simulation on Thermal and Structural Analysis of Tool	International Journal of Materials Sciences,6, 169-184,2011.	S. K. Mohopatra, Vinod Dhull, Satish Kumar
25.	Flow Structure and Heat Transfer Analysis in a Laminar Channel Flow with a Built-in Triangular Prism	Journal of Fluids Engineering,2,51-63,2011	Munis Gupta, Satish Kumar
26.	Modeling and Evaluation of Erosion Wear Suspension System	International Journal of Materials Physics,2,21-31,2011	Lalit Upadhayay, Satish Kumar

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
27.	Evolution of Erosion Wear of Centrifugal Pump using CFD	International Journal of Computational Physical Sciences,2,1-8,2011	Manikanwar Singh, Satish Kumar
28.	Computational Study of Solid-Liquid Suspension in Stirred Tanks: A Review of Recent Progress	International Review of Applied Engineering Research,1,27-33,2011	Lalit Upadhayay, Jaiinderpreet Singh, Satish Kumar
29.	Sliding Wear Performance of Detonation Spray Al ₂ O ₃ , TiO ₂ and Hydroxyapatite Hybrid Coatings	International Journal of Mechanical Engineering Research, Volume 1, Number 1, 2011, 117-127	Harpreet Singh, Rahul Chhibber, Sanjeev Bhandari

Publication of papers in conference proceedings and other publications

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
1.	A comparative analysis on the performance and emission characteristics using raw hemp oil and filtered neem oil in Diesel engine	FTIME-2010, GNE Ludhiana, 1, 70-74, 2010	Mohapatra, S.K., Ragit, S.C., Kundu, K., Dahake V
2.	Experimental investigations of performance and emission of hemp biodiesel and its blend with diesel	FTIME-2010, GITM Yamunanagar, 1, 235-241, 2010	Mohapatra, S.K., Ragit, S.C., Kundu, K., Dahake V
3.	Optimisation of Mahua biodiesel by different production technique	Advances in Chemical Engineering, Thapar Institute of Engineering & Technology University, 1, 166-171, 2011	Mohapatra, S.K., Ragit, S.C., Kundu, K., Dahake V
4.	Performance and emission characteristics of a Diesel engine fuelled with hemp oil and 20% blends of hemp oil with diesel	Emerging Trends in Mechanical Engineering, G. H. Patel College of Engineering and Technology, Gujarat, 1, 25-31, 2011	Mohapatra, S.K., Ragit, S.C., Kundu, K., Dahake V
5.	Combustion of agri-waste in fluidized bed boilers	ICTME-2011, TU, 1, 42-51, 2011	S. K. Mohapatra
6.	Various tool designs in friction stir welding	International Conference on Emerging Trends in Mechanical Engineering 2011, Thapar Institute of Engineering & Technology University, Patiala, 382-388	Pritika Pathak, Rahul Chhibber, S.K. Mohapatra
7.	Experimental study and numerical simulation on thermal analysis of tool and cutter grinding operation using FEM	ICTME-2011, TU, 1, 572-581, 2011	Mohapatra S.K., Dhull, V., Singla V.K.

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
8.	Biodiesel production from used frying oil and properties as an alternate fuel	ICTME-2011, TU, 1, 768-772, 2011	Mohapatra, S.K., Ragit, S.C., Kundu, K., Dahake V
9.	Performance and emission evaluation of a CI engine fuelled with neem methyl ester and its blends	ICTME-2011, TU, 1, 773-781, 2011	Mohapatra, S.K., Ragit, S.C., Kundu
10.	Effect of parameters on predicted stresses during Single Point Incremental Forming	International Conference on Emerging Trends in Mechanical Engineering (ICETME-2011), Mechanical Engineering Department, Thapar Institute of Engineering & Technology University Patiala - 147004, Punjab, 24 - 26 February, 2011 pp. 448 - 456	Anirban Bhattacharya, Ajay Batish
11.	Multi-response optimization using Grey analysis for nozzle effectiveness in a cylindrical grinding process	International Conference on Emerging Trends in Mechanical Engineering (ICETME-2011), Mechanical Engineering Department, Thapar Institute of Engineering & Technology University Patiala - 147004, Punjab 24 - 26 February, 2011 pp. 563 - 571	Anirban Bhattacharya, Ajay Batish, Mandeep Singh
12.	CFMEA: Concurrent Failure Mode and Effect Analysis	Proceedings of 2nd International Conference on Reliability, Safety, and Hazard-Risk-Based Technologies and Physics of Failure Methods, December 14-16, 2010, Mumbai pp. 399-405	Upadhyay, N., Deshpande, B. M., and Agrawal, V.P.
13.	A decision making method for selection of finished process for a cylindrical surface	Proceedings of 2010 IEEE International conference on Industrial Engineering and Engineering Management (IEEM 2010), Taipa, Macao SAR, P.R. China, 7th-10th Dec., pp. 38-42.	Varinder Singh, V.P. Agrawal, and P. Deb
14.	An improved graph theoretic model for integrated manufacturing system	Proceedings of the Golden Jubilee National Conference on "Recent Advances in Manufacturing (RAM-2010), 19-21 July 2010, SVNIT, Surat, Gujrat, pp.151-156	Varinder Singh, V.P. Agrawal, and P. Deb
15.	Fuzzy scale based TOPSIS-MADM method for selection of finishing processes	Proceedings of the Golden Jubilee National conference on "Recent Advances in Manufacturing (RAM-2010), 19-21 July 2010, SVNIT, Surat, Gujrat, pp.151-156	Varinder Singh, V.P. Agrawal, and P. Deb

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
16.	Optimization of Regenerative gas turbine cycle using adaptive neuro fuzzy inference system	International Conference on Emerging Trends in Mechanical Engineering (ICETME-2011), Mechanical Engineering Department, Thapar Institute of Engineering & Technology University Patiala - 147004, Punjab 24 - 26 February, 2011	Sumit Sharma
17.	Study of machining characteristics of different materials using abrasive flow machining process: a review	National conference on Advances in manufacturing engineering, UIET, Chandigarh, , 20th - 21st May 2011, pp.230-235	Harmesh kansal Sushil mittal Vinod kumar
18.	A study on applications of non-traditional machining processes-a review	National conference on Advances in manufacturing engineering, UIET, Chandigarh, , 20th - 21st May 2011,pp 236-240	C.S.Kalra Vinod kumar
19.	A review on effect of WEDM performance, recast layer and wire accuracy	National conference on Advances in manufacturing engineering, UIET, Chandigarh, , 20th - 21st May 2011, pp 408-414	Anish kumar Vinod kumar Jatinder kumar
20.	Effect of Machining Parameters on MRR during CNC WEDM of Pure Titanium	5th International Conference on Advances in Mechanical Engineering (ICAME-2011),S.V. National Institute of Technology, Surat Gujarat, India,pp 541-545, June 6-8, 2011.	Anish kumar Vinod kumar Jatinder kumar
21.	Ultrasonic investigations of embedded and submerged components	International Conference on Theoretical and applied computational and experimental Mechanics ICTACEM 2010, IIT Khargarpur, December 26th-27th, 2010	Sandeep Sharma Shruti Sharma Dr. Abhijit Mukherjee
22.	Health Monitoring of Post tensioning tendons using ultrasonic guided waves	First Middle East Conference on Smart Monitoring and Assessment & Rehabilitation of Civil Structures (SMAR) 2011, American University in Dubai, (AUD) & IISHM, February 9th-11th 2011	Sandeep Sharma Shruti Sharma
23.	Mechanisms for producing ultra-fine/ nano grained microstructure for austenitic stainless steels	International Conference on Emerging Trends in Mechanical Engineering (ICETME 2011), Mechanical Engineering Department, Thapar Institute of Engineering & Technology University, Patiala, 2011	Pankaj Sharma; Mrudul Rai; Tarun Nanda

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
24.	An Analytical Finite Element Technique for Predicting Thrust Force and Torque in Drilling Process.	International Conference on Emerging Trends in Mechanical Engineering, Thapar Institute of Engineering & Technology University, Patiala, Punjab, India. Feb., 24-26th, 2011, pp. 199-210	J. S. Saini, Ashish Mittal.
25.	Design of ash transportation system	International Conference on Emerging Trends in Mechanical Engineering, Thapar Institute of Engineering & Technology University, Patiala (Punjab), India, 24-26, Feb., 2011,pg .94-96	Satish Kumar
26.	Design analysis of salisbury and banjo type axle housings	International Conference on Emerging Trends in Mechanical Engineering, Thapar Institute of Engineering & Technology University, Patiala (Punjab), India, 24-26, Feb., 2011,pg .124-131	Tushar Chugh, Satish Kumar
27.	Pressure drop evolution of pipe bend using CFD	International Conference on Emerging Trends in Mechanical Engineering, Thapar Institute of Engineering & Technology University, Patiala (Punjab), India, 24-26, Feb., 2011,pg .690-694	Manu Aggarwal,Prateek Srivastava, Satish Kumar
28.	Design of tussat thermal control system	International Conference on Emerging Trends in Mechanical Engineering, Thapar Institute of Engineering & Technology University, Patiala (Punjab), India, 24-26, Feb., 2011,pg .782-789.	Sohil Batra, Satish Kumar
29.	Energy saving in centrifugal pump with adjustable speed drive	International Conference on Emerging Trends in Mechanical Engineering, Thapar Institute of Engineering & Technology University, Patiala (Punjab), India, 24-26, Feb., 2011,pg .907-910.	Prateek Srivastava,Sasank Shekhar; Satish Kumar
30.	Automation technology in energy management	International Conference on Emerging Trends in Mechanical Engineering, Thapar Institute of Engineering & Technology University, Patiala (Punjab), India, 24-26, Feb., 2011,pg .911-913.	Harish Giri,Rakesh Joshi, Satish Kumar

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
31.	Dimensionless characteristics of radial flow centrifugal pump using variable frequency drive	Emerging Trends in Mechanical Engineering, Thapar Institute of Engineering & Technology University, Patiala (Punjab), India, 24-26, Feb., 2011,pg .919-923	Aseem Mishra,Rakesh Kumar; Satish Kumar
32.	Formability and Surface Finish Studies in Single Point Incremental Forming	Global Trends and Challenges in Design and Manufacturing, 3 rd International and 24 th All India Manufacturing Technology Design and Research Conference, Andhra University College of Engineering (A), Andhra University, Visakhapatnam - 530003, AP, India, December 13-15, 2010. Volume 1, pp. 133 - 137.	Samarjit Singh, A Bhattacharya, NV Reddy
33.	Grain Orientation during Single Point Incremental Forming	6 th International Conference on Micro Manufacturing, Tokyo Denki University, Tokyo, Japan March 7 - 10, 2011 pp. 35 - 39	Anirban Bhattacharya, N V Reddy
34.	Formability and surface finish studies in Single Point Incremental Forming	Proceedings of the 2011 International Manufacturing Science and Engineering Conference, Corvallis, Oregon, USA June 13 - 17, 2011, Paper code: MSEC2011-50284, pp. 1 - 7	A Bhattacharya, Samarjeet Singh, K Maneesh, N Venkata Reddy, Jian Cao
35.	A Study of Ductile and Brittle Fracture Behaviour of Bimetallic Welds at Cryogenic Temperatures for RPVs	International Conference on science and engineering, Rohtak, 2011	Amit Sarda, Rahul Chhibber, B.K. Dutta
36.	Underwater welding	International conference on emerging trends in mechanical engineering, 2011, Thapar Institute of Engineering & Technology University, Patiala, PAGE 72	Aashish Kaushal, Rahul Chhibber
37.	Analysis of Creep in Functionally Graded Cylinder	International Conference on Emerging Trends in Mechanical Engineering, Thapar Institute of Engineering & Technology University, Patiala, Punjab, India, Feb 24-26, 2011, Page 301-306.	Kishore Khanna, Harmandeep
38.	Creep deformation and Stress Analysis in Rotating Disc of Composite Material	International Conference on Emerging Trends in Mechanical Engineering, Thapar Institute of Engineering & Technology University, Patiala, Punjab, India, Feb 24-26, 2011, Page 306-312.	Kishore Khanna, Devender Kumar, Barinder Singh

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
39.	Design and Analysis of Air flow Control Mechanism of Automotive HVAC module using CAE tools	'International Engg. Symposium' 2011, Kumamoto University, Kumamoto, Japan	Daljeet Singh
40.	Epoxy Layered Silicates Nanocomposites as Matrix In Fibre-reinforced Composites.	Advances in polymer science and rubber technology at IIT,KHARAGPUR. March 3-5,2011; Page 52	Sumit Mahajan, Bikramjit Sharma, Rahul Chibber, Rajeev Mehta
41.	An experimental study on effects of thermal cycling on cast aluminium composites reinforced with silicon carbide and fly ash particles	International Conference on Emerging Trends in Mechanical Engineering at THAPAR INSTITUTE OF ENGINEERING & TECHNOLOGY UNIVERSITY, PATIALA. Feb 24-26, 2011;Page 90	Sanjeev Kumar, Bikramjit Sharma, Dr.Rahul Chhibber
42.	Minimum Transport Boudaries for Dense Phase Pneumatic Conveying of Powder	Bulk Solids India, Mumbai, April 2011- (organized by foreign agencies- Vogel and Numberg)	S.S. Mallick, P.W. Wypych, R. Pan
43.	Design of Energy Efficient Pneumatic Transport System using Fluidised Dense-Phase Mode	16th ISME Conference on "Mechanical Engineering for SUSTAINABLE DEVELOPMENT", IIT Delhi, December 2010	S. S. Mallick
44.	Analyzing signal to noise ratio optimization of physiological stress of Indian male workers in summer	Institute of Ergonomics, Stoke Rochford, Lincolnshire,UK, pp 270-277, April 11-13, 2011	Ajay Batish, R.P. Singh; T P Singh
45.	Electric discharge machining of Al-10%Al ₂ O ₃ p as-cast composite	2nd International Conference on Production, Vol 1, 697-701, Dr. BR Ambedkar National Institute of Technology, Jalandhar, 2010	Ajay Batish, Sarabjeet Singh; Sanjeev Kumar
46.	Electric discharge machining of aluminum based metal matrix composite	Global trends and Challenges in Design and manufacturing 3rd International and 24th All India manufacturing Technology, Design and Research (AIMTDR), Vishakhapatnam Vol 2, pp 1211-1216, 2010	Ajay Batish, Sarabjeet Singh; Sanjeev Kumar

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List of research publications in SCI/Impact Factor journals

S No	Title of the paper	Name of the Journal with volume, page nos., year, and ISSN Number	Name of the authors	Impact Factor
1.	Brown hemp methyl ester: transesterification process and evaluation of fuel properties	Biomass and Bioenergy, 41 (June 2012), Page 14-20 DOI:http://dx.doi.org/10.1016/j.biombioe.2011.12.026 ISSN 0961-9534	Ragit, S. S, Mohapatra, S. K., Gill, P., Kundu, K.	3.67
2.	Optimization of Powder Mixed Electric Discharge Machining using Dummy Treated Experimental Design with Analytic Hierarchy Process	Proceedings of the Institution of Mechanical Engineers, PartB, Journal of Engineering Manufacture, Vol. 226, 2012, pages 103-116, ISSN 0954-4054	Anirban Bhattacharya, Ajay Batish, Gurpreet Singh	0.725
3.	Study of Material Transfer Mechanism in Die Steels using Powder Mixed EDM	Materials and Manufacturing Processes (Taylor and Francis), Vol. 27, pp. 449-456, 2012, ISSN 1042-6914 (Print) 1532-2475	Ajay Batish, Anirban Bhattacharya, V K Singla, Gurmail Singh	1.058
4.	An Experimental Study to Evaluate the Effect of Ambient Temperature during Manual Lifting and Design of Optimal Task Parameters	Human Factors and Ergonomics in Manufacturing and Service Industries, Available online since Oct 2011, DOI: 10.1002/hfm.20353, ISSN: 1520-6564	Ravindra Pratap Singh, Ajay Batish, T. P. Singh, Anirban Bhattacharya	0.612
5.	Surface Modification of High Carbon High Chromium, EN31 and Hot Die Steel using powder mixed EDM process	Materials Science Forum, (Special Issue on: Rapid Casting Solutions) of Trans Tech Pub, Switzerland, Volume 701, pp. 43-59, 2012, ISSN: 0255-5476	Anirban Bhattacharya, Ajay Batish, Gurpreet Singh	0.399
6.	Mechanism of material deposition from powder, electrode and dielectric for surface modification of H11and H13 die steels in EDM process	Materials Science Forum, (Special Issue on: Rapid Casting Solutions) of Trans Tech Publication, Switzerland, Volume 701, pp. 61-75, 2012, ISSN: 0255-5476	Ajay Batish, Anirban Bhattacharya	0.399
7.	Formability and Surface Finish Studies in Single Point Incremental Forming	Journal of Manufacturing Science and Engineering, Transactions of ASME, Volume 133, pages: 061020-1 to 061020-8, December 2011 ISSN: 1087-1357	A Bhattacharya, K Maneesh, N Venkata Reddy, J Cao	0.6

S No	Title of the paper	Name of the Journal with volume, page nos., year, and ISSN Number	Name of the authors	Impact Factor
8.	Optimal parameter settings for rough and finish machining of die steels in powder mixed EDM	International Journal of Advanced Manufacturing Technology (Springerlink), Vol. 61, No. 5-8, page 537-548, July 2012, ISSN: 0268-3768 (print), ISSN:1433-3015(online)	Anirban Bhattacharya, Ajay Batish, Gurmail Singh, V K Singla	1.103
9.	Effect of process variables on microhardness, grain size and strain during machining of various die steels with PMEDM using dummy treated experimental design	Proceedings of the Institution of Mechanical Engineers, Part B, Journal of Engineering Manufacture, Vol. 226, No. 7, pp. 1192-1204, ISSN 0954-4054	Anirban Bhattacharya, Ajay Batish	0.725
10.	A new optimal design and analysis method based on MADM for MEMS product development	Int. J. of Advanced manufacturing Technology, Published Online Feb 2012, pp 1-11	Amalin Prince, Iden Jose, and V P Agrawal	1.103
11.	Bunching characteristics of silicon nanowire arrays.	Journal of Applied Physics. Publisher: American Institute of Physics, ISSN:0021-8979 (print), 1089-7550 (online) DOI:http://dx.doi.org/10.1063/1.3688025, Volume 111/Issue 4/ ARTICLES/ Nanoscale Science and Design. 044328 (2012)	Mohammadreza Khorasaninejad, Navid Abedzadeh, Ajayinder Singh Jawanda, Nixon O, M. P. Anantram, and Simarjeet Singh Saini.	2.169
12.	On Improving Scale-Up Procedures for Dense-Phase Pneumatic Conveying of Powders	Particulate Science and Technology: An International Journal, Vol 29, page 409-427, 2012	S.S.Mallick;P.W.Wypych	0.545
13.	Micromechanical modelling of reactor pressure vessel steel	Journal of Materials & Design, Elsevier, Vol 36, April 2012, Pages 258-274	R. Chhibber, H. Singh, N. Arora, B.K. Dutta	2.2

List of research publications in Non-SCI/Non-Impact journals

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
1.	Computational studies the effect of flow arrangements on the performance of a microchannel heat sink	International Journal Advances in Thermal Engineering, 8, pp- 354-363, 2011	Sehgal, S., Mugesan, K. Mohapatra, S.K.

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
2.	Performance and evaluation of a diesel engine fuelled with filtered pongamia oil and its standardization characteristics	International Journal of Science, Technology, and Management, 2, pp-65-74	Prasad, S., Mohapatra, S.K., Sharma J.K., and Bali, P.L.
3.	FE simulation and experimental validation of powder mixed EDM process for estimating the temperature distribution and volume removed in single crater	International Journal of Modeling, Simulation, and Scientific Computing, Vol. 3; Issue 2, June 2012, DOI No: 10.1142/S1793962312500067	Anirban Bhattacharya, Ajay Batish, Kulwinder Singh
4.	Experimental Investigation for Multi-Response Optimization of Bead Geometry in Submerged Arc Welding using Grey Analysis	Journal of the Institution of Engineers (India), Series C; Published by Springer, Volume 93, Issue 2, 2012, pp. 123-132	Anirban Bhattacharya, Ajay Batish, Parveen Kumar
5.	Electric discharge machining of titanium and its alloys: A review	International Journal of Machining and Machinability of Materials 11, No. 1, 84-111, 2012	Rupinder Singh; Sanjeev Kumar; T P Singh; Ajay Batish
6.	Ultrasonic machining of titanium and its alloys: A state of art review and future prospective	International Journal of Machining and Machinability of Materials 10, No. 4, 326-355, 2011	Gaurav Dhuria; Rupinder Singh; Ajay Batish
7.	Quality, Modeling and Analysis of a mechatronic system.	Int. Journal of Industrial System, Interscience, Vol 12, pp 1-28, 2012	Kiran C. P., Shibu Clement, and V P Agrawal
8.	concurrent design, modeling, and analysis of micro electro mechanical products-Design for X-abilities,	Micro-Nano systems, Vol 4, issue 1, pp 56-74, 2012	Amalin Prince, Iden Jose, and V P Aggarawal
9.	Numerical Verification of CNC Machine Simulations	Computer-Aided Design and Applications, Vol. 8, No. 4, Pages 507-518, 2011. DOI:10.3722 /cadaps.2011.507-518	Gilad Israeli, Stephen Mann, Sanjeev Bedi, Ajayinder Singh Jawanda
10.	Numerical Study of Pressure and Velocity Distribution Analysis of Centrifugal Pump	International Journal of Thermal Technologies, 1, 117-121 (2011)	Satish Kumar, Ayush Kumar, Munish Gupta
11.	Investigation of fuzzy logic approach for the modeling and optimization of process parameters in advanced machining processes	International Journal of Emerging Technologies and Applications in Engineering, Technology and Sciences, Vol.5, Issue 1, pp. 78-83, 2012	Rajpal Vinod Kumar
12.	Study on the applications of taguchi method for the optimization of surface finish and hole diameter accuracy in traditional and non-traditional manufacturing processes	International Journal of Emerging Technologies and Applications in Engineering, Technology and Sciences, Vol.5, Issue 1, pp. 134-139, 2012	Kanwaljeet Singh Vinod Kumar

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13.	Prediction of Surface Roughness in Wire Electric Discharge Machining (WEDM) Process based on Response Surface Methodology	International Journal of Engineering and Technology Volume 2 No. 4, 2012, pp 708-719	Ansih kumar Vinod kumar Jatinder kumar
14.	Layered Silicates in fiber reinforced composites	Research Bulletin of Australian institute of High Energetic Materials, 1, 2011, 106-118	Bikramjit Sharma, Rajeev Mehta, Rahul Chhibber
15.	Glass Fiber Reinforced Polymer-Clay Nanocomposites: Processing, Structure and Hygrothermal Effects on Mechanical Properties	Procedia Chemistry, 4, 2012, 39-46	Bikramjit Sharma, Sumit mahajan; Rahul Chhibber; Rajeev Mehta;
16.	Influence of Tyre's Dimensional Characteristics on Tyre-Pavement Noise Emission"	Physical Review and Research International, Vol 1 No 4, pp. 124-137	A. Kumar, A. Tondon, S. Paul, A. Singla, S. Kumar, P. Vijay and U. D. Bhangale
17.	Effect of Electrode Coatings on Diffusible Hydrogen Content, Hardness and Microstructures of the Ferritic Heat Affected Zones in Bimetallic Welds	Advanced Materials Research, Trans Tech Publications, Switzerland, Vols 383 - 390, pp 4697-4701, 2012.DOI:10.4028/www.scientific.net /AMR.383-390.4697	Deepak Bhandari, Rahul Chhibber, Navneet Arora
18.	Surface Modification of High Carbon High Chromium, EN31 and Hot Die Steel using powder mixed EDM process	Materials Science Forum, Trans Tech Publication, Switzerland, Volume 701, pp. 43-59, 2012, ISSN: 0255-5476	Anirban Bhattacharya, Ajay Batish, Gurpreet Singh
19.	Mechanism of material deposition from powder, electrode and dielectric for surface modification of H11and H13 die steels in EDM process	Materials Science Forum, Trans Tech Publication, Switzerland, Volume 701, pp. 61-75, 2012, ISSN: 0255-5476	Ajay Batish, Anirban Bhattacharya
20.	Multi-response optimization of process parameters in cold chamber pressure die casting	Journal of the Institution of Engineers (India), Production Engineering, Vol. 92, September 2011, page: 19-24	Lalit Kumar, Ajay Batish, Anirban Bhattacharya

Publication of papers in conference proceedings and other publications

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
1.	Hands-on Training and International Experience in Engineering Education	2 nd Annual CEEA Conference June 6-8, 2011 by Canadian Engineering Education Association(CEEA) at Memorial University St. John's, Newfoundland, CANADA.	Sanjeev Bedi, Ajayinder Singh Jawanda, Ajay Batish

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
2.	Prediction of Tool and Nozzle Flow Behavior in Ultrasonic Machining Process	International Conference on Mechanical and Industrial Engineering (ICMIE 2011), World Academy of Science, Engineering and Technology, Singapore, 81, 2011, pp.1224-1229.	Vinod Kumar Jatinder Kumar
3.	Vibration Control of a Cart-Flexible Pole System using a ZVD Shaper	Proceedings of 26 th International Conference on CAD/CAM, Robotics and Factories of Future (CARs&FOF-2011) pp 777-788, Kuala Lumpur, Malaysia	Ashish Singla
4.	Performance Indices for Serial Robotic Manipulators	Proceedings of 26 th International Conference on CAD/CAM, Robotics and Factories of Future (CARs&FOF-2011), pp 747-754, Kuala Lumpur, Malaysia	Ekta Singla, Ashish Singla
5.	Automated Static Force Analysis for Redundant Manipulators	Indo-Russian Seminar on Computational Intelligence and Modern Heuristics in Automation and Robotics, 10-12 September, Novosibirsk, Russia	Ekta Singla, Ashish Singla, and Bhaskar Dasgupta
6.	Discovering hidden structural degradations	International Symposium on Engineering under uncertainty: Safety assessment and management TR004 -- 2012 BEC, Shibpur, WB BEC, Shibpur, WB	Sandeep Sharma Dr Shruti Sharma; Dr. Abhijit Mukherjee
7.	Guided wave approach for damage monitoring in submerged structures	Structural Mechanics in Reactor Technology (SMiRT) - 698, IHC New Delhi International Association for Structural Mechanics in Reactor Technology-IASMiRT, pp. 8-10 November 2011	Sandeep Sharma Dr. Abhijit Mukherjee
8.	Twist in Single Point Incremental Forming	Proceedings of the 2012 International Manufacturing Science and Engineering Conference, Notre Dame, Indiana, USA, June 4-8, 2012, Paper code: MSEC2012-7402, pp. 1-5	J Asghar, Shubin E, A Bhattacharya, NV Reddy
9.	Evaluation of process parameters and their effect on mechanical properties of friction stir welded aluminium butt joint	ICMIE, GOA, 8-12, April (2012)	Pathak, P., Mohapatra, S.K., Sinha, G.P.
10.	Optimisation of Biodiesel Process and Fuel Properties: A Review	(ICAME-2012), Amrutavahini College of Engineering, Sangamner, Maharashtra, March 12-14, 2012, pp 194	Ragit, S., Mohapatra, S. K., Kundu, K.
11.	Design of centrifugal pump using computational fluid dynamics	Proceedings of National Conference on Emerging Trends in Energy engineering (ETEE-2012), March 2012, DIT Dehradun, pp 187-190.	Kumar S., Mohapatra, S. K.

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
12.	Experimental and CFD analysis of solid suspension in a slurry pot tester	Proceedings of National Conference on Emerging Trends in Mechanical Engineering (ETME-2012), ITM University, Gurgaon, 357-363	Kumar Lalit, Kumar, S., Mohapatra, S. K.
13.	Investigating pneumatic conveying characteristics and minimum transport velocity for fluidised dense-phase transport of fine powders	Technological Advancements in Chemical and Environmental Engineering, BITS PILANI, March 2012, Page 55	S.S.Mallick;A.Bansal;G.Setia
14.	Designing, Fabrication and Testing of Impact Attenuator for Formula SAE Car	Recent Innovations In Engineering, Galaxy Global Group of Institutions, Ambala, 24 th -25 th March, 2012, Pg.30	Devender Kumar, Gagandeep Singh; Naman Khanna; Sachin Kumar
15.	Thermal conductivity evaluation for alumina based nanofluids	Proceedings of National Conference on Technological advancement in chemical and Environmental Engineering (TACEE-2012"), CHED, BITS, Pilani, p-189, March 2012.	Kundan Lal S.S. Mallick,
16.	An evaluation of heat transfer property of Al ₂ O ₃ - H ₂ O, ethylene glycol (EG) based nanofluid	Proceedings of 3 rd National Conference on Recent Innovation in Engineering and Technology (RIET)", Glaxay Global Group of Institutions, Shahabad, Ambala, HR., p-7, March 2012	Kundan Lal & S.S. Mallick
17.	Thermal performance review of a low flux solar collector using nanofluid	Proceedings of 3 rd National Conference on Recent Innovation in Engineering and Technology (RIET)", Glaxay Global Group of Institutions, Shahabad, Ambala, HR., p-12, March 2012.	Vivek Verma, Kundan lal & S.S. Mallick
18.	An evaluation of parameters effecting the viscous behavior of Al ₂ O ₃ -H ₂ O based nanofluid	Proceedings of 3 rd National Conference on Recent Innovation in Engineering and Technology (RIET)", Glaxay Global Group of Institutions, Shahabad, Ambala, HR., p-9, March 2012	Jaskaran Singh, Kundan lal & S.S. Mallick
19.	Performance evaluation of nanofluid based solar collectors	Proceedings of National Conference on Emerging Trends in Mechanical Engineering, ITM University, Gurgaon, HR., p- 519, June 2012	Parshant Sharma & Kundan Lal
20.	A review on viscous behavior of Al ₂ O ₃ and CuO based nanofluid	Proceedings of National Conference on Emerging Trends in Mechanical Engineering, ITM University, Gurgaon, HR., p- 414, June 2012	Vishal Bhalla & Kundan Lal,

List of research publications in SCI/Impact Factor journals

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors	Impact Factor
1.	Effect of channel and plenum aspect ratios on the performance of microchannel heat sink under	Journal of Mechanical Science and Technology, Springer, Vol.26, No. 9, pp. 2985-2994, 2012	Sehgal, S. Murugesan, K, Mohapatra, S.K	0.448
2.	Biomass-based gasifiers for internal combustion (IC) engines – A review	Sadhana, Springer, Vol. 38, Part 3, June 2013, pp 461-476	Malik, A. and Mohapatra, S. K.	0.393
3	Force Control in parallel manipulator through virtual foundations	Proceedings of the Institution of Mechanical Engineers, Part I: Journal of Systems and Control Engineering, Vol. 226, No. 8, 088–1106, 2012	Bera T. K., Merzouki R., Ould Bouamama B. and Samantaray A. K.	0.667
4	Design and validation of the reconfiguration strategy for a redundantly actuated intelligent autonomous vehicle”,	Proceedings of the Institution of Mechanical Engineers, Part I: Journal of Systems and Control Engineering, Vol. 226, No. 8, 1060–1076, 2012	Bera T. K., Merzouki R., Ould Bouamama B. and Samantaray A. K.,	0.667
5	An investigation into modelling thermal conductivity for alumina-water nanofluids	International Journal of Powder Technology, vol. 233, pp. 234–244	Mallick, SS, Mishra, A &Kundan, L	2.2
6	Modelling dense-phase pneumatic conveying of powders using suspension density.	Particulate Science and Technology. 31: 340-347	Mallick, S.S., Wypych, P.W. and Pan, R.	0.58
7	Investigating straight-pipe pneumatic conveying characteristics for fluidized dense-phase pneumatic conveying	Particulate Science and Technology. 31: 348-356	Bansal, A., Mallick, S.S. and Wypych, P.W.	0.58
8	Investigation of machining parameters and surface integrity in wire electric discharge machining of pure titanium	Proceedings of the Institution of Mechanical Engineers, Part B, Journal of Engineering Manufacture, 227 (7), pp. 972-992, 2013	Anish kumar Vinod kumar Jatinder kumar	0.77
9	Multi response optimization of process parameters based on Response surface methodology for pure titanium using WEDM process	International Journal of Advanced Manufacturing Technology , DOI 10.1007/s00170-013-4861-9, 2013	Anish kumar Vinod kumar Jatinder kumar	1.2

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors	Impact Factor
10	Effect of process variables on microhardness, grain size and strain during machining of various die steels with PMEDM using dummy treated experimental design	Proceedings of the Institution of Mechanical Engineers, Part B, Journal of Engineering Manufacture, Vol. 226, No. 7, pp. 1192-1204, July 2012 DOI:10.1177/0954405412442777	Anirban Bhattacharya, Ajay Batish	0.725
11	Surface Characterization and Material Migration during Surface Modification of Die Steels with Silicon, Graphite and Tungsten Powder in EDM Process	Journal of Mechanical Science and Technology (Springer) Vol. 27, No. 1, January 2013, pp. 133~140, DOI 10.1007/s12206-012-0883-8	Anirban Bhattacharya, Ajay Batish, Naveen Kumar	0.616
12	EDM of Metal Matrix Composite for Parameter Design using Lexicographic Goal Programming	Materials and Manufacturing Processes, 28, 495-500	Sarabjeet Singh, Ajay Batish, Sidhu, Sanjeev Kumar;	1.297
13	Fabrication and electrical discharge machining of metal-matrix composites: A review	Journal of Reinforced Plastics and Composites, 32, 1310-1320	Sarabjeet Singh Sidhu; Ajay Batish Sanjeev Kumar	0.902

List of research publications in Non-SCI/Non-Impact journals

S. No	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
1.	Experimental valuation on the single cylinder, 4-stroke CI engine using hemp oil and its respective blends for the analysis of performance and emission characteristics	IJES, 16(1), , pp 17-21, July 2012	Ragit, S., Mohapatra, S. K., Kundu, K.
2.	Effect of addition of fly ash and drag Reducing on the rheological properties of bottom ash'	International Journal of Mechanical and Materials Engineering (IJMME), vol 8, No. 1, 1-8, (2013)	Kumar, S., Mohapatra, S. K., Gandhi, B. K.,
3.	Performance and emission study of Indian brown hemp oil, methyl ester in a 4-stroke single cylinder water cooled diesel engine	International Journal of Engineering Research and Technology, ISSN: 0974-3154, 6, 5, pp 15-19, March 2013.	Ragit S. S., Mohapatra, S. K., Kundu, K., and Patil, GJV
4.	Methanolysis and ethanolysis of raw hemp oil; biodiesel production and fuel characterization	International Journal of Engineering Research and Technology, ISSN: 2278-0181, 2, 3, pp 1-10, March 2013.	Ragit S. S., Mohapatra, S. K., Kundu, K., and Karmakar, R.,
5.	Optimization of Pongamia methyl ester from trans-estricification process and fuel characterization as a diesel substitute	Zenith International Journal of Multidisciplinary Research, ISSN 2231-5780, 3 (6), pp 130-140, June (2013).	Prasad V.S., Mohapatra, S. K., Kundu, K.
6.	Diagnostics for pretesting questionnaires: a comparative analysis	Int. Journal of Technology, Policy and Management, Vol. 13, pp.67-79, 2013.	Tarun Nanda, Himanshu Gupta, Manjeet Kharub and Navdeep Singh

S. No	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
7.	A new method to design cam used in automobile heating, ventilating and cooling system	Journal of the Institution of Engineers (India), Series C; (Springer Publication), Vol. 93 (4), pp. 275-286, Oct.-Dec., 2012.	Baljeet Singh, Daljeet Singh, J. S. Saini
8.	Dynamic Analysis of Condenser Assembly of Automobile Air Conditioning System using CAE Tools	Journal of the Institution of Engineers (India), Series C; (Springer Publication), Vol. 94 (2), pp. 135-145, April-June, 2013.	Manjeet Singh, Daljeet Singh, J. S. Saini
9.	Effect of cetylpyridinium chloride, triton X-100 and sodium dodecylsulphate on rheology of fly ash	International Journal of Scientific and Research Publication (IJSRP), vol. 2, no. 8, pp. 1-5, Aug. 2012 (Online ISSN 2250-3153)	Singh, K. & Kundan, L.
10.	A review of the thermal conductivity of Al ₂ O ₃ -H ₂ O, EG based nanofluids	GGGI Journal of Engineering and Technology, vol. 1, no. 2, pp. 45-51, 2012. (ISSN:2278-1226)	Lal Kundan and Mallick S.S.
11.	Thermal performance evaluation of a direct absorption flat plate solar collector (DASC) using Al ₂ O ₃ -H ₂ O based nanofluids	IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE), vol. 6, no. 2, pp. 29-35, 2013. (ISSN: 2278-1684)	Verma, V. & Kundan, L.
12.	Performance evaluation of a nanofluid (CuO-H ₂ O) based low flux solar collector	International Journal of Engineering Research (IJER)', vol. 2, issue 2, pp. 108-112, 2013. (ISSN: 2319-6890)	Kundan, L & P Sharma
13.	An experimental investigation of the viscous behavior of Al ₂ O ₃ based nanorefrigerant	International Journal on Theoretical and Applied Research in Mechanical Engineering (IJTARME), vol. 2, issue 3, pp. 143-147, 2013. (ISSN: 2319 - 3182)	Singh, G & Kundan, L.
14.	An experimental study on thermal conductivity and viscosity of Al ₂ O ₃ / Nano Transformer Oil	International Journal on Theoretical and Applied Research in Mechanical Engineering (IJTARME), vol. 2, issue 3, pp. 125-130, 2013. (ISSN: 2319 - 3182)	Singh M. & Kundan L
15.	Drop test analysis of impact attenuator for formula SAE car	International Journal of Scientific and Research Publications, Volume 2, Issue 10, October 2012.	Devender Kumar, Sachin Kumar, Gagandeep Singh, Naman Khanna
16.	Investigation on centrifugal slurry pump performance with variation of operating speed	International Journal of Mechanical and Materials Engineering, vol. 8, no. 1, pp.40-47, 2012.	Kumar Satish, Mohapatra, S. K., and Gandhi, B.K
17.	Defect detection in plated structures using ultrasonic guided waves	Journal of Pure and Applied Ultrasonics, 34 (2-3), pp. 53-59.	Sandeep K Sharma Dr. Abhijit Mukherjee

S. No	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
18.	Metallographic analysis of pure titanium (grade-2) surface by wire electro discharge machining (WEDM)	Journal of Machinery Manufacturing and Automation, vol.2, Issue1, pp. 1-5, World Academic Publishing CO., Ltd, 2013.	Anish kumar Vinod kumar Jatinder kumar
19.	Optimization and modelling of process parameters involved in ultrasonic machining of glass using design of experiments and regression approach	American Journal of Materials Engineering and Technology, 2013, vol. 1, no. 1, pp. 13-18, Science and Education Publishing DOI:10.12691/materials-1-1-3	Vinod kumar
20.	Effect of machining parameters on dimensional deviation in Wire Electric Discharge Machining process using pure titanium	Journal of Engineering and Technology, vol.3, Issue 2, pp. 105-112, 2013	Anish kumar Vinod kumar Jatinder kumar.
21.	Predictor equations for estimating crater dimensions in PMEDM process using FEM simulation and experimental validation	Materials Science Forum, (Special Issue on: Recent Advances in Manufacturing Processes), vol. 751, pp. 45-60, March 2013. DOI:10.4028/www.scientific.net/MSF.751.45	Anirban Bhattacharya, Ajay Batish
22.	Optimizing the compression ratio of compression ignition engine fuelled with Esters of crude rice bran oil	International Journal on Theoretical And Applied Research In Mechanical Engineering (IJATERME, ISSN : 2319 - 3182, Volume-2, Issue-3, 2013	Mohit Vasudeva1, Sumeet Sharma2, S.K. Mohapatra3 & Krishnendu Kundu
23.	Characterization of Biodiesel derived from waste cotton seed oil and waste mustard oil	International Journal Of Engineering Science And Technology (IJEST), vol. 5, no.07, pp. 1443-48, July 2013. (ISSN : 0975-5462)	Sandeep Singh,, Sumeet Sharma, S.K. Mohapatra & K. Kundu
24.	Industry Support Institutions fostering Innovations culture among SME's of Punjab, India: A strategic Perspective	The Asian Journal of Technology Management, Vol 6, No. 1, 37-48	B S Sangha;T P Singh, Ajay Batish
25.	Electric Discharge Machining of 10VOL% AL2O3/AL metal matrix composite - an experimental study	Materials Science Forum, (Special Issue on: Recent Advances in Manufacturing Processes), vol. 751, pp. 9-19	Sarabjeet SinghSidhu; Ajay Batish Sanjeev Kumar

Publication of papers in conference proceedings and other publications

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
1.	Study of particle size distribution on fluidization parameters in a 5 MW AFBC power plant using cotton stalk	Widener University, Philadelphia, March 10-13, 2013, pp 1376-1381.	Mohapatra, S. K., and Sharma, R. K.
2.	Effect of additive on the rheological properties of coal slurry, 28 th International Conference on Solid Waste Technology and Management	Widener University, Philadelphia, March 10-13, 2013, pp 1376-1381.	Kumar S., Mohapatra, S. K., and Gandhi B. K.,
3.	Modeling and simulation of flow distribution of centrifugal slurry pump, 28 th International Conference on solid waste Technology and Management	Widener University, Philadelphia, March 10-13, 2013, pp 1254-1260..	Kumar S., Mohapatra, S. K., and Gandhi B. K.,
4	Bond graph modeling of an over-actuated intelligent autonomous vehicle with decoupled steering wheel",	IEE International conference on Robotics and Biomimetics, 2012, Guangzhou, China, pp. 624-629.	Bera T. K., Merzouki R., Ould Bouamama B. and Samantaray A. K.
5	Modelling of an Reconfigurable Autonomous Vehicle	1 st KIIT International Symposium on Advances in Automotive Technology, 2013, Bhubaneswar.	Bera T. K., and Samantaray A.K.
6	An investigation into thermophysical properties of alumina (Al ₂ O ₃) based nanofluids for the convection heat transfer applications	In the proceeding of International Conference on application of Fluid Engineering (CAFE-2012)", G. L. Bajaj Institute of Technology and Management Greater Noida, pp-59, September 2012	Kundan Lal and S.S. Mallick
7	A review on the performance of the nanofluid based solar collectors - solar energy	In the proceeding of National Conference on Recent Advances in Renewable Energy & Environment Sciences (NCRAREES)" Shoolini University H.P., June 2013	Sharma K., Kundan L
8	A review on the performance of the nanorefrigerant based vapour compression cycle	In the proceeding of National Conference on Recent Advances in Renewable Energy & Environment Sciences (NCRAREES)" Shoolini University H.P., June 2013.	Singh S., Kundan L
9	Nanoclay reinforced epoxy as matrix in fiber reinforce composites	Advances in Naval Materials NIOT, Chennai, February 22-23, 2013, Pages 63-74.	Vishwasrao B. Patil, Bikramjit Sharma, Rahul Chhibber and Rajeev Mehta

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
10	Performance analysis of a solar parabolic trough collector using different reflective material for hot water generation	National Conference on Low and High Temperature Application of Solar Energy, NIT Kurukshetra, 25-26 May, 2013.	Devender kumar, Sanjay ,Avadhesh Yadav
11	Modelling and simulation of ejector based multi-evaporator refrigeration system	International Conference on "Sustainable Innovative Techniques in Civil and Environmental Engineering" on 5 th -6 th June, 2013 at Jawaharlal Nehru University (JNU), New Delhi	Harpreet Singh and Madhup Kumar Mittal
12	An automated system to detect gate parameters for die-casting dies	3 rd International Conference on Production and Industrial Engineering, CPIE-2013, NIT, Jalandhar, March 29-31, 2013, P1-10.	A. S. Johal, Kishore Khanna, and Ranjit Singh
13	Thermal stress analysis in a functionally graded rotating disc with variable thickness	National Congress of Science and Technology, DAV-NCST, 2013, DAVIET Jalandhar, May 30-31, 2013.	Rupinder Singh, Kishore Khanna, and Manish Garg
14	Modeling and simulation of flow distribution of centrifugal slurry pump	The twenty-eighth international conference on solid waste technology and management, Widener University, University Place, Chester, Philadelphia, U.S.A., March 10-13, 2013	Kumar Satish ,Mohapatra, S. K., and Gandhi,B.K
15	Design of centrifugal pump using computational fluid dynamics	International conference on Innovations in Engineering & Management' (ICIEM 2013), 22-23 February, 2013, BITS Patna.	Kumar Satish ,Mohapatra, S. K., and Gandhi,B.K
16	Damage Diagnosis in GFRP Laminates using guided waves in submerged state	International Conference on Advanced Materials for Energy Efficient Buildings (AME2 B-2013), Organised By CSIR-CBRI Roorkee at India Habitat Centre New Delhi, Feb 13-15, 2013.	Sandeep Sharma Shruti Sharma
17	Investigating straight-pipe pneumatic conveying characteristics and minimum transport boundaries for fluidized dense-phase pneumatic conveying of fine powders	In the Proceedings of 7 th International Conference on Conveying and Handling of Particulate Solids, Friedrichshafen, Germany, 10-13 th September, 2013.	Setia, G., Bansal, A. and Mallick, S.S.
18	Modelling thermal conductivity for nanopowder suspension in fluid (nanofluid)	In the Proceedings of 7 th International Conference on Conveying and Handling of Particulate Solids, Friedrichshafen, Germany, 10-13 th September, 2013	Mallick, S.S. and Mishra, A.

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
19	Input shaped open-loop control for vibration suppression of lightweight flexible manipulators	Proceedings of International Conference on Emerging Technologies - Micro to Nano (ETMN-2013), pp 69-70, BITS Goa.	Ashish Singla, Ekta Singla
20	Electric discharge machining parameter selection for Al/Zr composite using Taguchi L27 orthogonal design	Proceedings of 4 th International Conference on Recent Advances in Composite Materials (ICRACM-2013), IIT BHU, GOA	R. Singh, R. S. Panwar, O. P. Pandey, A. Singla and P. Sharma
21	An analytical study on human body vibration for Indian subjects under sitting posture	5 th International Conference on Whole Body Vibration Injuries, 5 th to 7 th June 2013 in Amsterdam, Holland.	Ishbir Singh, SP Nigam, V Huzur Saran
22	Aerodynamic analysis of Cabriolet passenger car: A design approach	17 th Asia Pacific Automotive Conference by SAE, 1-3 April 2013, Bangkok, Thailand	Felix Regin, A B Reddy, SP Nigam
23	An assessment of regional innovation system among all small scale auto parts industry of Punjab	Proceedings of VII Annual International Conference of Knowledge forum held on Nov 30-Dec 2, 2012	B S Sangha; T P Singh, Ajay Batish
24	Best Practice (I) Performance Incentive Scheme for faculty who have excelled in teaching and research at Thapar Institute of Engineering & Technology University	Workshop of IQAC Coordinators, National Assessment and Accreditation Council, July 4-5, 2012, Bangalore	Ajay Batish
25	Best Practice (II) Continual Improvement of academic processes and programs at Thapar Institute of Engineering & Technology University	Workshop of IQAC Coordinators, National Assessment and Accreditation Council, July 4-5, 2012, Bangalore	Ajay Batish

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List of research publications in SCI/Impact Factor journals

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors	Impact Factor
1	Study of surface properties in particulate reinforced MMC using powder-Mixed EDM	Materials and Manufacturing Processes, 29: 46-52, 2014	Sarabjeet Singh Sidhu, Ajay Batish, Sanjeev Kumar	1.486
2	An Experimental Study to Evaluate the Effect of Ambient Temperature during Manual Lifting and Design of Optimal Task Parameters	Human Factors and Ergonomics in Manufacturing and Service Industries Vol 24, Issue 1, pp 56-70	Ravindra Pratap Singh, Ajay Batish, Anirban Bhattacharya, T. P. Singh	0.624
3	Determination of safe limits of significant task parameters during manual lifting	Workplace Health & Safety, Volume 62 · Issue 4: 150-160	Ravindra Pratap Singh, Ajay Batish, T. P. Singh	0.856
4	A multipoint method for 5-axis machining of triangulated surface models	Computer-Aided Design, Elsevier, Vol. 52, page 17-26, 2014	R K Duvedi, Sanjeev Bedi, Ajay Batish, Stephen Mann	1.264
5	Performance characteristics of centrifugal slurry pump with multi-sized particulate bottom and fly Ash mixtures	Particulate Science and Technology.32:366-376.	Kumar Satish, Gandhi, B.K., and Mohapatra, S. K.	0.586
6	Development of Automatic GMAW Setup for Process Improvements: Experimental and Modeling Approach	Materials and Manufacturing Processes, Taylor and Francis (ISSN 1042-6914 (Print), 1532-2475 (Online)) Vol. 29, No. 8, pp. 988-995, 2014.	Bhattacharya A., and Bera T. K.	1.486
7	Rheological behavior of MR polishing fluid in ball end magnetorheological finishing process	Magnetohydrodynamics (2013) 49/3- 4: 512-515.	Anant Kumar Singh, Sunil Jha, P.M. Pandey	0.55
8	Modelling thermal conductivity for alumina-water nanofluid	International Journal of Particulate Science and Technology-Taylor Francis, vol. 32, Issue 3, pp. 319-326, 2014.	Mishra A, Kundan L & Mallick SS	0.60
9	Hard Turning: Parametric Optimization using Genetic Algorithm for Rough/Finish Machining and Study of Surface Morphology	Journal of Mechanical Science and Technology Vol. 28, No. 5, May 2014, pp. 1629-1640.	Ajay Batish, Anirban Bhattacharya, Manwinder Kaur, Manjot Singh Cheema	0.616
10	Surface Roughness and Profile Error in Precision Diamond Turning of C18000	Materials and Manufacturing Processes, Taylor and Francis, Vol. 29, No. 5, Pages: 606-613	Anikate Gupta, S V Ramagopal, Ajay Batish, Anirban Bhattacharya	1.297

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors	Impact Factor
11	Experimental investigation of material transfer mechanism in WEDM of pure titanium (Grade-2	Advances in Materials Science and Engineering, Vol.2013, Article ID: 847876, PP.1-20,DOI: 10.1155/2013/ 847876, Hindawi Publishers	Anish kumar Vinod kumar Jatinder kumar	0.897
12	Surface integrity and material transfer investigation of pure titanium for rough cut surface after wire electro discharge machining	Proceedings of the Institution of Mechanical Engineers, Part B, Journal of Engineering Manufacture, SAGE publications, (Published online, December 2013),DOI:10.1177/0954405413513013,PP 1-22	Anish kumar Vinod kumar Jatinder kumar	0.77
13	Microstructure analysis and material transformation of pure titanium and tool wear surface after Wire Electric Discharge machining process	Machining Science and Technology, 18:47-77, 2014 Taylor & Francis Group, DOI: 10.1080/10910344.2014.863632	Anish kumar Vinod kumar Jatinder kumar	0.876
14	On Improving Solid Friction Factor Modelling for Fluidized Dense-Phase Pneumatic Conveying Systems	Powder Technology, Volume 257, pp 88-103, year 2014	Gautam Setia, S.S.Mallick, P.W. Wypych	2.499
15	Anisotropic CuO nanostructures of different size and shape exhibit thermal conductivity superior than typical bulk powder	Colloids and Surfaces A: Physicochemical and Engineering Aspects, Volume 459, pp 282-289, year 2014	Bhupender Pal, Soumya Suddha Mallick and Bonamali Pal	2.494
16	Vehicular traffic noise modeling using artificial neuron network approach	Transportation Research Part-C, v. 40 pp 111-122	Paras Kumar, S.P. Nigam & Narotam Kumar	3.118

List of research publications in Non-SCI/Non-Impact journals

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
1	Characterisation of biodiesel derived from waste cotton seed oil and waste mustard oil	International Journal of Engineering Science and Technology (IJEST), ISSN: 0975-5467, Vol 5, No 7, July 2013, pp 1443-1448.	Singh S., Sharma S., Mohapatra, S. K., Kundu, K.
2	Exhaust gas emission revelation during the study of performance of Pongamia oil as biodiesel	International Journal of Engineering Research & Technology (IJRET), ISSN: 2278-0181, Vol 2, Issue 8, August-2013, pp 993-997.	Prasad V.S. Mohapatra, S. K., Pooja I.M.

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
3	An experimental study on thermal conductivity and viscosity of Al ₂ O ₃ / Nano-transformer oil	International Journal on Theoretical and Applied Research in Mechanical Engineering (IJTARME), vol. 2, issue 3, pp. 125-130, 2013 (ISSN: 2319 - 3182)	Singh M, Kundan L
4	Experimental investigation into thermal conductivity and viscosity of Al ₂ O ₃ based engine coolant (Nano-coolant)	International Journal of Research in Mechanical Engineering & Technology (IJRMET vol. 3, issue 2, pp. 184-187. (ISSN: 2249-5762 (Online) ISSN: 2249-5770 (Print), 2013, Pub: Cosmic Journals.	Sharma G & Kundan L
5	Experimental investigation of various parameters on thermal conductivity of Al ₂ O ₃ based nanorefrigerant	International Journal of Engineering Research & Technology (IJERT), vol. 2, issue 12, pp. 3408-3417, 2013. (ISSN: 2278 - 0181)	Singh, G, Kundan, L
6	Experimental Study of Failure Modes and Scaling Effects in Micro-Incremental Forming	Journal of Micro and Nano-Manufacturing (Transactions of ASME) Volume 1, Issue 3, September 2013, 031005 (2013) (15 pages); doi:10.1115/1.4025098	Michael Beltran, Rajiv Malhotra, A. J. Nelson, Anirban Bhattacharya, N. V. Reddy, Jian Cao
7	Finite element modeling and analysis of powder mixed electric discharge machining process for temperature distribution and volume removal considering multiple craters	International Journal of Modeling, Simulation, and Scientific Computing, Volume 5, No. 3, pages 1450009-1 - 1450009-21	Hardeep Singh, Anirban Bhattacharya, Ajay Batish
8	Experimental Study of Failure Modes and Scaling Effects in Micro-Incremental Forming	Journal of Micro and Nano-Manufacturing (Transactions of ASME) Volume 1, Issue 3, September 2013, 031005 (2013) (15 pages); doi:10.1115/1.4025098	Michael Beltran, Rajiv Malhotra, A. J. Nelson, Anirban Bhattacharya, N. V. Reddy, Jian Cao

Publication of papers in conference proceedings and other publications

S. No.	Title of the paper	Name of conference with venue, date and year, page nos.	Name of the authors
1.	Effect of addition of fly ash on the rheological properties of bottom ash slurry at varying temperature	Proc. International Conference on PGBSIA, November 28-31, 2013, Thapar Institute of Engineering & Technology University, Patiala, pp 388-393.	Kumar S., Mohapatra, S. K., and Gandhi B. K
2.	Performance and emission characteristics of a C.I. engine fuelled with different blends of biodiesel derived from waste mustard oil	Proc. of Intl. conf. on Advances in Mechanical Engineering, AETAME, NOIDA, Dec 13-14, 2013.	Bhardwaj V., Sharma S., Mohapatra, S. K., and Kundu, K

S. No.	Title of the paper	Name of conference with venue, date and year, page nos.	Name of the authors
3.	Numerical Simulation of Solid liquid two phase Flow behaviour in Centrifugal slurry Pump	International conference on Powder, Granule and Bulk Solids: Innovations and applications, Thapar Institute of Engineering & Technology University, Patiala, India, 1,170-175.	Kumar Satish, Gandhi, B.K., and Mohapatra, S. K.
4.	Scallop Height of 5-axis Machining of Large Triangles with a Flat End Mill	Annual International CAD conference, CAD'14, Hong Kong, 23to 26 June, 2014	Ravinder Kumar Duvedi, Ajay Batish, Sanjeev Bedi, Stephen Mann
5.	Analysis and Control of Semi Active Suspension System for a Bicycle vehicle model: A Bond Graph Approach	Second International Conference on Intelligent Robotics, Automation and Manufacturing (IRAM), IIT Indore, December 2013; pp. 168-173.	Bera, T. K. and Singh, J.
6.	Bond graph aided performance analysis of antilock braking system for a bicycle vehicle model with camber angle and fork angle	International Conference on Machines and Mechanisms (iNaCoMM 2013), IIT Roorkee, December 2013; pp 70-76.	Bera, T. K. and Singh, A.
7.	A novel ball end magnetorheological finishing process	ASME 2014 International Mechanical Engineering Congress & Exposition, IMECE2014, November 14-20, 2014, Montreal, Canada.	Anant Kumar Singh, Sunil Jha, P.M. Pandey
8.	Effect of dispersion parameters on thermal conductivity of alumina and copper oxide nanofluid,	"International Conference on Powder, Granule and Bulk Solids: Innovations and Applications (PGBSIA 2013)", Nov. 28-30, 2013. (Poster Presentation)	Kundan L & Mallick SS
9.	Powder Mixed Dielectric: An Approach for Improved Process Performance in EDM	Proceedings of International Conference on Powder, Granule and Bulk Solids: Innovations and Applications (PGBSIA), Mechanical Engineering Department, Thapar Institute of Engineering & Technology University Patiala - 147004, Punjab November 28-30, 2013, pp. 370 - 376.	Ajay Batish, Anirban Bhattacharya, Naveen Kumar
10.	Experimental Investigation of Magnetic field assisted Powder Mixed Electric Discharge Machining	Proceedings of International Conference on Powder, Granule and Bulk Solids: Innovations and Applications (PGBSIA), Mech. Engg Dept., TU Patiala, November 28-30, 2013, pp. 344 - 350	Geeta Bhatt, Anirban Bhattacharya, Ajay Batish
11.	Taguchi method approach for determining the effect of process variables on properties of epoxy nanocomposites	International conference on advanced polymeric materials, October 11-13, 2013, Kottayam, 95	Bikramjit Sharma, Rahul Chhibber, Rajeev Mehta

S. No.	Title of the paper	Name of conference with venue, date and year, page nos.	Name of the authors
12.	Composite Cladding on Mild Steel Substrate using Microwave Hybrid Heating	The International Conference on Smart Technologies for Mechanical Engineering (STME-2013), DTU, Delhi, 731-735. 2013	Dheeraj Gupta, Deepika Naudiyal
13.	Simulation of single slope solar still at different inclinations using CFD	International conference of advance research innovation (ICARI- 2014) Venue: Institution of Engineers Delhi State Center, Engineers Bavan 2, Bahadur Shah Zafar Marg, New Delhi Date & Year: February 1st 2014, Page no: 512-519.	Amrik Singh, M. K. Mittal
14.	Tool Path Generation for Free Form Surfaces using B-Spline Surface	International Conference on Research and Innovations in Mechanical Engineering, Guru Nanak Dev Engineering College, Ludhiana, Punjab, Oct., 24-26 th , 2013	Simranpreet S. Randhawa, J. S. Saini
15.	Effect of Clay Reinforcement on the Properties of Epoxy based Polymer Matrix Nanocomposites	Proceeding of the International Conference on Emerging Trends in Engineering and Management, November 8-9, 2013, MED, CIET, Jalvehra, Fatehgarh Sahib.	Karanbir Singh and Tarun Nanda
16.	Effect of Alloying and Heat Treatment on the Properties of Super Martensitic Stainless Steels	Proceeding of the International Conference on Emerging Trends in Engineering and Management, November 8-9, 2013, MED, CIET, Jalvehra, Fatehgarh Sahib.	Surinder Singh and Tarun Nanda
17.	D-H Parameters Augmented with Dummy Frames for Serial Manipulators containing Spatial Links	The 23rd IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN 2014), August 25-29, 2014, Edinburg, Scotland, UK (Accepted)	Amanpreet Singh, Ashish Singla and Sanjeev Soni
18.	High Index Norm Approach: A Redundancy Resolution Scheme For Inverse Kinematics of Redundant Serial Manipulators	Proceedings of 6 th International IEEE Conference on Robotics and Mechatronics (ROBMECH-2013), pp. 40-45, Oct 30-31, 2013, Durban South Africa	Ashish Singla
19.	Vibration Suppression of a Cart-Flexible Pole System Using a Hybrid Controller	Proceedings of the 1st International and 16th National Conference on Machines and Mechanisms (iNaCoMM2013), pp. 375-382, Dec 18-20, 2013, IIT Roorkee, India	Ashish Singla
20.	An investigation into the stability and thermal conductivity of silver/water nanofluids	International Conference on Powder, Granule and Bulk Solids: Innovations and Applications, November 28-30, 2013, Thapar Institute of Engineering & Technology University, pp 271-276	Apoorva Singh, B.Pal and S.S. Mallick

S. No.	Title of the paper	Name of conference with venue, date and year, page nos.	Name of the authors
21.	Evolution of Scale-Up Procedures for Dense-Phase Pneumatic Conveying of Powders	15 th International Freight Pipeline Society Symposium 2014, Czech Association of Scientific and Technical Societies (CSVTS), Novotného lánka 5, Praha 1, Czech Republic, 24 June - 26 June 2014	P.W. Wypych, S.S. Mallick, R. Pan
22.	A Comparative study of various methods for identification of isomorphism in kinematic chains	Ist international and 16 th National Conference on machines and mechanisms (iNaCoMM 2013) IIT Roorkee. pp 582-589	Rashmi Arora & S.P. Nigam

2014-March 2015

List of research publications in SCI/Impact Factor journals

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors	Impact Factor and Citation Index
1.	Modal Analysis of human body vibration model for Indian subjects under sitting posture	Ergonomics DOI:10.1080/00140139.2014.961567	I Singh, S. PNigam V H Saran	1.7
2.	Vehicle Traffic Noise Modeling using artificial neural network approach	Transportation Research Part C 40 (2014) 111-122	P Kumar, S.P. Nigam, N. Kumar	2.6
3.	Performance Characteristics of Centrifugal Slurry Pump with multi-sized particulate bottom and fly ash mixtures,	Particulate Science and Technology, 32 (5), 2014	Kumar S., Gandhi, B. K., Mohapatra, S. K.	0.48
4.	A three dimensional CFD modelling of 45 tph fluidised bed combustor based on biomass and coal	Materials Research Innovations, 2015	Kumar, H., Mohapatra, S. K., Singh, RI	0.47
5.	Fluidised bed combustion based on co-firing biomass and coal	Sadhana	Kumar, H., Mohapatra, S. K., Singh RI	0.59
6.	Numeric Implementation of Drop and Tilt Method of 5-Axis Tool Positioning for Machining of STL surfaces	International Journal of Advanced Manufacturing Technology (IJAMT), 2015	Ravinder Kumar Duvedi Sanjeev Bedi Ajay Batish Stephen Mann	
7.	Experimental Investigation of Magnetic Field Assisted Powder Mixed Electric Discharge Machining	Particulate Science and Technology (Taylor and Francis) Accepted: 04 Sept, 2014 Online: 29 Sept, 2014 DOI: 10.1080/02726351.2014.968303	Dr. Ajay Batish and Dr. Anirban Bhattacharya	0.482

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors	Impact Factor and Citation Index
8.	Powder Mixed Dielectric: An Approach for Improved Process Performance in EDM	Particulate Science and Technology (Taylor and Francis) Accepted: 20 July, 2014 Online: 03 Sept 2014 DOI: 10.1080/02726351.2014.947659	Dr. Ajay Batish and Dr. Anirban Bhattacharya	0.482
9.	Microwave Processing Of Materials and Applications in Manufacturing Industries	A Review, Journal of Materials and Manufacturing Processes, 30: 1-29, 2015. [Publisher: Taylor and Francis	Singh, S., Gupta, D., Jain, Vivek.,	1.8
10.	Recent Applications of Microwaves in Material Joining and Surface Coatings	Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, DOI: 10.1177/0954405414560778 (In press). [Publisher: Sage]	Singh, S., Gupta, D., Jain, Vivek.,	0.7
11.	Comparative study for surface topography of bone drilling using conventional drilling and loose abrasive machining	Journal of Engineering in Medicine, DOI: 10.1177/0954411915576945 (In press). [Publisher: Sage,	Gurmeet Singh, Vivek Jain, Dheeraj Gupta,	1.14
12.	An investigation into flow mode transition and pressure fluctuations for fluidized dense-phase pneumatic conveying of fine powders	Particuology, 16: 187-195, 2014	Mittal A., Mallick S.S. and Wypych P.W	2.058
13.	Shape dependent thermal conductivity of TiO ₂ -deionized water and ethylene glycol dispersion,	Journal of Nanoscience and Nanotechnology, 15(5): 3670-3676, 2014,	Pal, Bhupinder, Mallick, S.S., Pal, B., 2015	1.17
14.	Anisotropic CuO nanostructures of different size and shape exhibit thermal conductivity superior than typical bulk powder	Colloids and Surfaces A: Physicochemical and Engineering Aspects, , 459: 282-289, 2014	Pal Bhupinder, Mallick S.S., Pal B	2.94
15.	Modelling Fluidized Dense-Phase Pneumatic Conveying of Fly Ash	Powder Technology, 270: 39-45, 2015,	Setia. G and Mallick S.S	2.499
16.	Mechanical and Metallurgical Studies in Double Shielded GMAW of Dissimilar Stainless Steels	Materials and Manufacturing Processes (Taylor and Francis) Accepted: 7Nov, 2014 Online: 16 Dec, 2014 DOI:10.1080/10426914.2014.994760	Dr. Anirban Bhattacharya And Dr. Tarun Kumar Bera	1.486

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors	Impact Factor and Citation Index
17.	Influence of Current and Shielding Gas in TiO ₂ Flux Activated TIG Welding on Different Graded Steels	Materials and Manufacturing Processes (Taylor and Francis) Accepted: 11 Sept, 2014 Online: 16 Oct 2014 DOI:10.1080/10426914.2014.973591	Dr. Anirban Bhattacharya And Dr. Tarun Kumar Bera	1.486
18.	On Cutter Deflection Profile Errors in End Milling: Modeling and Experimental Validation	Materials and Manufacturing Processes (Taylor and Francis) Accepted: 18 Sept, 2014 Online: 16 Oct 2014 DOI:10.1080/10426914.2014.973598	Dr. Anirban Bhattacharya and Dr., Tarun Kumar Bera	1.486
19.	Development of Automatic GMAW Setup for Process Improvements: Experimental and Modeling Approach	Materials and Manufacturing Processes, Taylor and Francis, Vol. 29, No. 8, pp. 988-995, 2014	Bhattacharya A., and Bera T. K.	1.486
20.	Influence of Heat Input in Automatic GMAW: Penetration Prediction and Microstructural Observation	Materials and Manufacturing Processes, Taylor and Francis Vol. 29, No. 10, pp. 1210-1218, 2014.	Bhattacharya A., Bera T. K. and Suri V.K.	1.486
21.	Surface Roughness and Profile Error in Precision Diamond Turning of C18000	Materials and Manufacturing Processes (Taylor and Francis) (Impact Factor: 1.486) ISSN: 1042-6914 (Print), 1532-2475 (Online) Accepted, February 27, 2014 Online: 21 st March, 2014 Volume 29, Issue 5, May 2014, Pages 606-613, DOI: 10.1080/10426914.2014.901529	Anikate Gupta, S V Ramagopal, Ajay Batish, Anirban Bhattacharya	1.486
22.	Material Transfer Mechanism during Magnetic Field Assisted Electric Discharge Machining of AISI D2, D3 and H13 Die Steel	Proceedings of the Institution of Mechanical Engineers, Part B, Journal of Engineering Manufacture Accepted, January 15, 2014 Online: 14 th March, 2014 Volume 229, No. 1, Pages: 62-74 (January, 2015) DOI:10.1177/0954405414522797 (Impact Factor: 0.661) ISSN 0945-4054	Anirban Bhattacharya, Ajay Batish, Geeta Bhatt	0.661

List of research publications in Non-SCI/Non-Impact journals

Sl. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
1.	A Production of Biodiesel from Waste Cotton Seed Oil and Testing on Small Capacity Diesel Engines	International Journal Advance Research in Science and Engineering, 2014 (2), 172-176	Singh, S., Sharma, S, Mohapatra, S. K., Kundu, K
2.	Transportation performance of highly concentrated coal-water slurries prepared from Indian coals	Applied Mechanics and Materials, July 2014	Dr. S. K. Mohapatra & Dr. Satish Kumar
3.	CFD simulation of spray cooling : Review and problems	Int. Journal of Engineering and Technology management and applied sciences Vol. 3, special issue March 2015, 587-593	Anam Singh, V.P. Aggarwal
4.	Attribute based evaluation And optimize selection of non- conventional biodiesel production methods using MADM- TOPSIS	Int. Journal of Engineering and Technology management and applied sciences Vol. 3, special issue March 2015, 577-586	Farun Garg and V.P. Aggarwal
5.	Linear stability analysis of hydrodynamic Journal bearing with flexible and micro polar lubrication	Tribology Transaction Vol.58 2015, 316-326	Pikesh Bansal, Ajit K. Chattopadhyay and Vishnu P, Aggarwal
6.	Optimization of cutting parameters for surface roughness of stainless steel SS304 in abrasive assisted drilling	Procedia Material Science 6, (2014) 1572 - 1579, [Publisher: Elsevier].	Kapil Kumar Goyal, Vivek Jain and Sudha kumari
7.	A novel ball end magnetorheological finishing process	ASME 2014 International Mechanical Engineering Congress & Exposition, IMECE2014 Montreal, Canada. November 14-20, 2014	Dr. Anant Kumar Singh

Publication of papers in conference proceedings and other publications

1.	Magneto rheological fluids in viscous friction Torsional vibration dampers	18 th IRF International conference, Pune, 11 th Jan 2015, 90 - 95	Anant Chawla and S.P. Nigam
2.	Application of hybrid fuzzy expert system to predict the quality of laser beam machined surface	Processing and fabrication of Advanced materials XXIII, Organized by Mechanical Engineering Department, Indian Institute of Roorkee, Co-organized by Division of Materials Science and Engineering, University of Akron, Ohio, USA during December 5-7, 2014, pp. 405-416.	Gaurav Sharma Vinod Kumar

3.	Optimization and Characterization of magnetic field assisted PMEDM of Die steel (H13)	National conference on “Advances in Manufacturing Systems Technology, Materials and Management (CAMS-2014) sponsored by TEQIP-II and AICTE, Delhi organized by department of Mechanical Engineering, Shaheed Bhagat Singh state technical campus, Ferozepur during 5 th - 6 th , Sept 2014, pp.53-60, ISBN: 978-93-83842-71-1	Devinder Singh Sidhu Vinod Kumar
4.	A novel ball end magnetorheological finishing process	ASME 2014 International Mechanical Engineering Congress & Exposition, IMECE2014, November 14-20, 2014, Montreal, Canada. (Presented at Conf. venue Personally)	Anant Kumar Singh, Sunil Jha, P.M. Pandey
5.	Exploring forging load in closed-die forging	5th International & 26th All India Manufacturing Technology, Design and Research Conference (AIMTDR 2014) IIT Guwahati, Assam, India December 12th-14th, 2014, pp 280-1 - 280-6.	D. Sheth, Santanu Das, A. Chatterjee and A. Bhattacharya

Details of patents and income generated

Filed Indian patent application on:

S. no.	Name & Title of Patents	Year of filing patent application and application ref. number
1	Drop and tilt method of tool positioning for 5-axis machining of triangulated surfaces	18/04/2014 (Application Ref No. 1064/DEL/2014)
2	Development of a customized PC based CNC controller system for 3-axis simultaneous interpolation for sculptured surface machining.	02/12/2014 (Application Ref. No. 3509/DEL/2014)

23. Areas of consultancy and income generated (2010-2014)

Title of Project	PI and Co-PI	Client/ Sponsor	Worth (Rs.)	Year
Manpower, OEE, cycle time, method studies in product line	Ajay Batish and Anirban Bhattacharya	Polyplastics, industries, private limited, industrial area, Yamunanagar, Haryana	3,00,000	2010-2011
Design Review of Ash handling System for Thermal Power Plant	S.S.Mallick	McNally Bharat Engineering Co., Kolkata, India	2,00,000	2011-2012
Designing Pneumatic Ash Handling System for Thermal Power Plant	S.S.Mallick	McNally Bharat Engineering Co., Kolkata, India	2,00,000	2011-2012

Title of Project	PI and Co-PI	Client/ Sponsor	Worth (Rs.)	Year
Design review of ash handling system in Yamunanagar Power Plant	Dr.S.S.Mallick (PI) and Gautam Setia (Co-PI)	Haryana Power Generation Corporation Ltd	1 Lakhs (INR)	2014
Estimation of pressure drop of ash handling plant	Dr.S.S.Mallick (PI)	McNally Bharat Engineering Co. Ltd	2 Lakhs (INR)	2014

24. Faculty selected nationally internationally to visit other Laboratories/Institutions/ Industries in India and abroad

Sl. No.	Name of Faculty	Details of Visit
1.	Dr. S. K. Mohapatra	Widener University, Philadelphia (USA), March, 2013
2.	Mr. Satish Kumar	Widener University, Philadelphia (USA), March, 2013
3.	Dr. S. K. Mohapatra	University of Waterloo, Canada September 2013 for study and networking tour under TEQIP - II
4.	Dr. S. K. Mohapatra	Virginia Tech, USA in September 2013 for study and networking tour under TEQIP - II
5.	Prof. S. K. Mohapatra	Formula Electric and Hybrid, Italy (Faculty Advisor of Team Hybrid) sponsored by IMechE during 7th-9th October, 2009
6.	Dr. Ajay Batish	Formula student competition, Silver Stone, U.K (Faculty Advisor of Team Hybrid) during July 14-21, 2009
7.	Dr. Ajay Batish	University of Waterloo in 2013 for visiting their labs and discussions on future collaborations
8.	Dr. Ajay Batish	Virginia State Institute in 2013 for visiting their labs and discussions on future collaborations
9.	Dr. Ajay Batish	Kuala Lumpur Malaysia conference sponsored by Avantha Group during April 11-14, 2010
10.	Mr. Anirban Bhattacharya	Northwestern University, Evanston, IL, USA (funded by Indo-US Centre for research Excellence in Fabrication, New Delhi) Collaborative research on incremental sheet metal forming (between IIT Kanpur and NU, USA) May 23, 2010 to August 13, 2010
11.	Dr. Ajay Batish	Institute of Ergonomics, Stoke Rochford, Lincolnshire, UK, April, 2011
12.	Mr. A. S. Jawanda	Post Graduate Research in the area of "Development of simulator based control algorithm for CNC milling lathe" under Canadian Commonwealth Fellowship Programme, 2010-11, University of Waterloo, Waterloo, Ontario, Canada
13.	Mr. Ravinder Kumar Duvedi	Post Graduate Research in the area of "Development of Tool Path Planning Algorithms for Improved Machining of Sculptured Surfaces using Profiled Tools for 3-Axis and 5-Axis CNC machining" under Canadian Commonwealth Fellowship Programme, 2010-11, University of Waterloo, Waterloo, Ontario, Canada
14.	Mr. Daljeet Singh	Kumamoto University, Kumamoto, Japan, March 2011
15.	Dr. S. S. Mallick	Visiting Faculty - Development of Bulk Solids Research Laboratory, University of Wollongong, Australia, June-July, 2011
16.	Mr. Ashish Singla	The INTI, International University and the University of Bradford (UK), in Kuala Lumpur, Malaysia, July, 2011

Sl. No.	Name of Faculty	Details of Visit
17.	J. S. Saini	Faculty advisor of 'Formula Electric and Hybrid Event' held at Fiat Group Automobile Safety Centre, Orbassano, Torino, Italy, Oct., 7-10, 2010
18.	Dr. Ashish Singla	Networking meeting at IIT Kanpur, IIT Delhi, IIT Roorkee and IIT Ropar During Feb-Mar, 2015 with Prof. Gurvinder S Virk, Professor, University of Gavle, Sweden.
19.	Dr. Tarun Kumar Bera	Visited Gabriel India Limited, Manesar and Munjal Showa Limited, Gurgaon for project semester monitoring during March, 2015.
20.	Dr. S.S.Mallick	Visiting researcher to the Bulk Solids Handling Laboratory of Fujian Longking Co. (China), June, 2014
21.	Mr. Ravinder Kumar Duvedi	Visited Hong Kong University of Science and Technology, Hong Kong, SAR, China from 23 to 26 June, 2014 to attend Annual International CAD conference CAD'14

25. Faculty serving in

- a) National committees b) International committees c) Editorial Boards d) any other (please specify)

Sl. No.	Name of Faculty	Details of Committee/Editorial board/other
1.	Dr. S. K. Mohapatra	Member NKFH FICCI
2.	Dr. S.K. Mohapatra	Institution of Engineers (Mechanical Engineering) (Reviewer)
3.	Dr. S.K. Mohapatra	Biofuel (Reviewer)
4.	Dr. Ajay Batish	Member Board of Studies, National Institute of Technology, Jalandhar
5.	Dr. Vinod Kumar	Editor of the "American Journal of Modeling and Optimization", USA for the duration January 1, 2013 to 2015.
6.	Dr. Vinod Kumar	Editor of the "American Journal of Mechanical Engineering", Science and Education Publishing, USA for the period December 1, 2012 to 2014.
7.	Dr. Dheeraj Gupta	<ul style="list-style-type: none"> • International Research Journal of Engineering Science, Technology and Innovation • Journal of Science and Technology • International Journal of Scientific and Engineering Research • Advances in Ceramic Science and Engineering
8.	Dr. S.P. Nigam	Chairman, Recruitment and Assessment Board, DRDO, Govt. of India, New Delhi
9.	Dr. S.P. Nigam	Member of the Expert Committee on Aircraft Noise Control, formed by Central Pollution Control Board, MoEF, Govt. of India
10.	Dr. Ashish Singla	Reviewer <ul style="list-style-type: none"> • Sadhana - Academy Proceedings in Engineering Science • Nation Academy of Science (NASA), Section - A, Physical Sciences, Springer • 1st International and 16th National Conference on Machines and Mechanisms (iNaCoMM2013)

		Member of Professional Societies <ul style="list-style-type: none"> • Robotic Society of India (RSI)
11.	Dr. S P Nigam	Chirman, Recruitment & Assessment Board, DRDO, Min of Defence, Govt of India, New Delhi
12.	Dr Vivek Jain, MED	National Research Journal of Mechanical Engineering and Technology (Reviewer)
13.	Dr Vivek Jain, MED	National Research Journal of Composite Materials and Metallurgical Engineering (Reviewer)

Faculty recharging strategies (UGC, ASC, Refresher/ orientation programs, workshops, training programs and similar programs).

UGC, ASC, Refresher/Orientation programs, Seminars/Conferences/Workshops	Source of Funding	Coordinator(s)
Basics and Applications of Computational Fluid Dynamics, 10th -23rd July, 2009 MED, TU	AICTE	Dr. S. K. Mohapatra Mr. Satish Kumar
Non-Traditional Manufacturing processes 12th March, 2010, MED, TU	UGC-SAP	Dr. S. K. Mohapatra Dr. Ajay Batish
One day work shop on "Advanced Manufacturing Processes", March 16, 2012, Mechanical Engineering Deptt., TU Patiala.	UGC-SAP	Dr. S. K. Mohapatra Dr. Ajay Batish
TU-UW-ITP (26th June to 27th August 2009)	University of Waterloo	Dr. Ajay Batish and Mr. A. S. Jawanda
Status of Research in Area of Noise. 22nd October, 2009, MED, TU	TU	Prof. S. P. Nigam
Advanced Course on Noise, Vibrations and Seismic Analysis, CGL Mumbai on 21-23 December 2009	Crompton Greaves Ltd., Mumbai	Dr. S.P. Nigam
TU-UW-ITP, 29th January-20th April 2010	University of Waterloo	Dr. Ajay Batish and Mr. A. S. Jawanda
Computational Fluid Dynamics, 21st to 22nd February, 2010, MED, TU	TU	Mr. Satish Kumar
Recent Development in Energy conversion Technology, NWRDEC-2010, 22nd and 23rd March, 2010, MED, TU	DST	Mr. Satish Kumar
Engineering Applications of Graph Theory, 27th March, 2010, MED, TU	TU	Prof. V. P. Agrawal Mr. Devender Kumar
SolidWorks core concepts in CAD- Training program in MED. Training by Ideas Design Solutions, Gurgaon, 21st to 24th September 2009	Ministry of Textiles GOI	Mr. A. S. Jawanda
CAE using SolidWorks-Training program in MED, 30th November 2009 to 3rd December 2009	Ministry of Textiles GOI	Mr. A. S. Jawanda
Advances in Pro-E wildfire 5.0, 15th to 16th May 2010	TU	Mr. A. S. Jawanda

UGC, ASC, Refresher/Orientation programs, Seminars/Conferences/Workshops	Source of Funding	Coordinator(s)
One day short term program on "Introduction and Working with 3-axis CNC Wood Carving Machine" to a group of carpenters and artisan in Patiala, 23rd February, 2010, State Initiated Design Centre, MED, TU	Ministry of Textiles, GOI	Mr. R. K. Duvedi
One day short term program on "Introduction to CAD CAM Technology" to a group of carpenters and artisan, in Patiala, 15th February, 2010, State Initiated Design Centre, MED, TU	Ministry of Textiles, GOI	Mr. R. K. Duvedi
Workshop on 2 stroke engine assembly and disassembly, 25 Sept, 2009, TU, Patiala	TU	Mr. Daljeet Singh
ICTME-2011, 24th -26th February, 2011		Mr. Satish Kumar, Dr. Rahul Chhibber
Two days training programme on rheology, 13-14, April, 2011, Thapar Institute of Engineering & Technology University, Patiala		Mr. Satish Kumar
Staff Development Program on "Experimental design Techniques for Analysis of Multiple Responses", 28th May-8th June-2012, Mechanical Engineering Dept., TU Patiala.		Dr. Ajay Batish
TEQIP sponsored Three-Day Short Term Training Program on Advanced Robotics: Design, Planning and Control (STTPAR-2013) MED, Thapar Institute of Engineering & Technology University, Patiala, Punjab, India, held during March 21-23, 2013.	TEQIP-II	Dr. Tarun Kumar Bera and Dr. Ashish Singla
TEQIP Sponsored Workshop on Review of ME Thermal Engineering Curriculum and Syllabus, May 24, 2013 in Committee room of Thapar Institute of Engineering & Technology University	TEQIP	Dr. Madhup Kumar Mittal
One day Workshop on "INTRODUCTION TO Solid Works 3D MECHANICAL CAD". Trainers sponsored from IDSPL. 22 September 2012. Under SIDC, Mechanical Engineering Dept. TU Patiala.		Mr. Ajayinder Singh Jawanda
Ten Days EXPERT LECTURES AND TRAININGS on the area of DESIGN INNOVATION - By Dr. SANJEEVBEDI, Professor Mechanical and Mechatronics Engineering Department, University of Waterloo, ONT, CANADA. 10 days - 25 June to 8 July 2013, STATE INITIATED DESIGN CENTRE (SIDC LAB), MED, TU Patiala.	TEQIP-Phase II	Mr. Ajayinder Singh Jawanda
Material Tailoring in Functionally Graded Structures	United States-India Educational Foundation (USIEF)	Ajay Batish, Devender Kumar and Dr. Hiralal Bhowmick
Structural analysis using ANSYS "SAA-2013" from 16th - 20th December, 2013 at MED, Thapar Institute of Engineering & Technology University, Patiala	TEQIP-II	RK Devedi SK Sharma
Workshop on basics and application of computational fluid dynamics, 30-31, August 2013	TEQIP	Mr. Satish Kumar
Hands on training of computational fluid dynamics, 18th - 20th October, 2013	TEQIP	Mr. Satish Kumar
Exposition to Research Areas in Vibration and Noise	TEQIP	Dr. S.P. Nigam

UGC, ASC, Refresher/Orientation programs, Seminars/Conferences/Workshops	Source of Funding	Coordinator(s)
International Conference on Powder, Granule and Bulk Solids: Innovations and Applications (PGBSIA 2013), November 28-30, Thapar Institute of Engineering & Technology University, Patiala	Various Govt. and Private Sponsorship: DST, CSIR, TEQIP, BMEA, Fujian Longking etc	Dr. S.S.Mallick

28. Student projects (**List for last 3 years**)

Percentage of students who have done in-house projects including inter-departmental projects

- BE projects: 100%
- ME Projects: 99 %

Percentage of students doing projects in collaboration with other universities /industry / institute

- BE projects- 97%
- ME Projects- 1 %

29. Awards / recognitions received at the national and international level by

- Faculty

Sl. No.	Name of Faculty	Details of Awards/Recognition
1.	Dr. S. K. Mohapatra	Nominated as governing council member of FICCI-NKFH, July, 2011
2.	Dr. S. K. Mohapatra	Nominated as member of BoS, Chandigarh University, Gharuan, August, 2012
3.	Dr. S. K. Mohapatra	Nominated as Member BoG, SVNIT Banur, Sept., 2012-13
4.	Dr. S. K. Mohapatra	Nominated to chair technical session 7C by Widener University, Philadelphia, 12th March, 2013
5.	Dr. S. K. Mohapatra	Conference Chair of International conference on 'PGBSIA' during November 28-30, 2013 funded by TEQIP-II, DST etc
6.	Dr. S.S.Mallick	Fujian Longking Co. Ltd., China, Visiting researcher, June 2014
7.	Dr. Vinod Kumar	As session chair in oral and technical presentation, recognition and appreciation of research contributions to ICMIE 2011, International Conference on Mechanical and Industrial Engineering, organized by World Academy of Science, Engineering and Technology at Singapore, Sept 28-30, 2011.
8.	Mr. Ravinder Kumar Duvedi	"Canadian Common wealth Fellowship" for year 2010-11
9.	Mr. A. S. Jawanda	"Canadian Common wealth Fellowship" for year 2010-11
10.	Dr. S.P. Nigam	Nominated as Chairman Recruitment and Assessment Board, DRDO, GOI, New Delhi, 2009-2010
11.	Mr. J. S. Saini, Mr. Tarun Nanda, Mr. Kishore Khanna	THE N. K. IYENGER Memorial Prize' Institution of Engineers (India), Kolkata, 11th Dec, 2009
12.	Dr. S.P. Nigam	Nominated as Chairman Recruitment and Assessment Board, DRDO, GOI, New Delhi and at IIT Jodhpur, IIT Mandi, January 2012 - December 2013

13.	Dr. Anirban Bhattacharya	Special recognition and Certificate for Outstanding Contribution as Reviewer for journal Materials and Manufacturing Processes (Taylor and Francis) for the year 2014.
14.	R.K. Duvedi	Session chair for 5-axis machining session in International conference CADA at HKUST Hong Kong, SAR, China in 2014

- Doctoral/post doctoral fellows:

Doctorate fellows Mr. A.S. Jawanda and Mr. R.K. Duvedi visited University of Waterloo, Canada on Canadian Commonwealth Scholarship for 7 months, December 2010 - July 2011 for part of PhD research work in the area of CAD/CAM Engineering.

30. Seminars/ Conferences/Workshops organized and the source of funding (national /international) with details of outstanding participants, if any).

Title of Seminars/ Conferences/ Workshops	Source of Funding	National/ International	Details of outstanding participants	Coordinator(s)
Basics and Applications of Computational Fluid Dynamics 10th -23rd July, 2009 MED, TU	AICTE	National	Newly inducted engineering college teachers	Dr. S. K. Mohapatra Mr. Satish Kumar
TU-UW-IITP (26th June to 27th August 2009)	University of Waterloo	International		Dr. Ajay Batish and Mr. A. S. Jawanda
Status of Research in Area of Noise. 22nd October, 2009, MED, TU	TU	National		Prof. S. P. Nigam
Advanced Course on Noise, Vibrations and Seismic Analysis, CGL Mumbai on 21-23 Dec 2009	Crompton Greeves Ltd., Mumbai	National		Dr. S.P. Nigam
TU-UW-IITP, 29th January - 20th April 2010	University of Waterloo	International		Dr. Ajay Batish and Mr. A. S. Jawanda
Computational Fluid Dynamics, 21st to 22nd February, 2010, MED, TU	TU	National		Mr. Satish Kumar
Non-Traditional Manufacturing processes 12th March, 2010, MED, TU	UGC-SAP	National		Dr. S. K. Mohapatra Dr. Ajay Batish
Recent Development in Energy conversion Technology, NWRDEC-2010, 22nd and 23rd March, 2010, MED, TU	DST	National		Mr. Satish Kumar
Engineering Applications of Graph Theory, 27th March, 2010, MED, TU	TU	National		Prof. V. P. Agrawal, Mr. Devender Kumar
SolidWorks core concepts in CAD-Training program in MED.	Ministry of Textiles	National		Mr. A. S. Jawanda

Title of Seminars/ Conferences/ Workshops	Source of Funding	National/ International	Details of outstanding participants	Coordinator(s)
Training by Ideas Design Solutions, Gurgaon, 21st to 24th September 2009	GOI			
CAE using SolidWorks-Training program in MED, 30th November 2009 to 3rd December 2009	Ministry of Textiles GOI	National		Mr. A. S. Jawanda
Advances in Pro-E wildfire 5.0, 15th to 16th May 2010	TU	National		Mr. A. S. Jawanda
One day short term program on "Introduction and Working with 3-axis CNC Wood Carving Machine" to a group of carpenters and artisan in Patiala, 23rd February, 2010, State Initiated Design Centre, MED, TU	Ministry of Textiles, GOI	National		Mr. R. K. Duvedi
One day short term program on "Introduction to CAD CAM technology" to a group of carpenters and artisan, in Patiala, 15th February, 2010, State Initiated Design Centre, MED, TU	Ministry of Textiles, GOI	National		Mr. R. K. Duvedi
Workshop on 2 stroke engine assembly and disassembly, 25 Sept, 2009, TU, Patiala	TU	National		Mr. Daljeet Singh
ICTME-2011, 24th -26th February, 2011	TU	National		Mr. Satish Kumar, Dr. Rahul Chhibber
Two days training programme on rheology, 13-14, April, 2011, Thapar Institute of Engineering & Technology University, Patiala	TU	National		Mr. Satish Kumar
One day work shop on "Advanced Manufacturing Processes", March 16, 2012, Mechanical Engineering Deptt., TU Patiala.	UGC-SAP	National		Dr. S. K. Mohapatra Dr. Ajay Batish
Staff Development Program on "Experimental design Techniques for Analysis of Multiple Responses", 28th May-8th June-2012, Mechanical Engineering Deptt., TU Patiala.	TEQIP-II	National		Dr. Ajay Batish

Title of Seminars/ Conferences/ Workshops	Source of Funding	National/ International	Details of outstanding participants	Coordinator(s)
TEQIP sponsored Three-Day Short Term Training Program on Advanced Robotics: Design, Planning and Control (STTPAR-2013) MED, Thapar Institute of Engineering & Technology University, Patiala, Punjab, India, held during March 21-23, 2013.	TEQIP-II	National	Dr. Subir Kumar Saha, Professor IIT Delhi, Dr. Anirvan Dasgupta, Professor IIT Kharagpur, Dr. Pushparaj Mani Pathak, IIT Roorkee, Dr. Pankaj Wahi IIT Kanpur, Dr. Ekta Singla IIT Ropar	Dr. Tarun Kumar Bera and Dr. Ashish Singla
TEQIP Sponsored Workshop on Review of ME Thermal Engineering Curriculum and Syllabus, May 24, 2013 in Committee room of Thapar Institute of Engineering & Technology University	TEQIP	National		Dr. Madhup Kumar Mittal
One day Workshop on "INTRODUCTION TO Solid Works 3D MECHANICAL CAD" Trainers sponsored from IDSPL. 22 September 2012. Under SIDC, Mechanical Engineering Dept. TU Patiala.	TU	National		Mr. Ajayinder Singh Jawanda
Ten Days EXPERT LECTURES AND TRAININGS on the area of DESIGN INNOVATION. By Dr. SANJEEVBEDI, Professor Mechanical and Mechatronics Engineering Department, University of Waterloo, ONT, CANADA. 10 days - 25 June to 8 July 2013, STATE INITIATED DESIGN CENTRE (SIDC LAB), MED, TU Patiala.	TEQIP-Phase II	National		Mr. Ajayinder Singh Jawanda
Material Tailoring in Functionally Graded Structures	TEQIP-II and United States-India Educational Foundation (USIEF)	National	Prof Romesh C. Batra, Ph.D., D.Sc. (Honoris Causa) Clifton C. Garvin Professor, Department of Engineering Science and Mechanics Virginia Polytechnic Institute and State University, Blacksburg, VA 24061	Devender Kumar and Dr. Hiralal Bhowmick
structural analysis using ANSYS "SAA-2013" from 16th - 20th December, 2013 at MED, Thapar Institute of Engineering & Technology University, Patiala	TEQIP-II	National		RK Devedi SK Sharma

Title of Seminars/ Conferences/ Workshops	Source of Funding	National/ International	Details of outstanding participants	Coordinator(s)
WORKSHOP ON BASICS AND APPLICATION OF COMPUTATIONAL FLUID DYNAMICS,30-31, August 2013	TEQIP	National		Mr. Satish Kumar
HANDS ON TRAINING OF COMPUTATIONAL FLUID DYNAMICS,18th -20th October, 2013	TEQIP	National		Mr. Satish Kumar
Exposition to Research Areas in Vibration and Noise	TEQIP	National	Dr. D. Manek, IIT, Bombay; ii) Dr. B.K. Mishra , IIT, Roorkee iii) Dr. S.P. Harsha , IIT, Roorkee; iv) Dr. A. Darpe , IIT, Delhi v) Dr. Karunanidhi , RCI, DRDO, Hyderabad; vi) Mr. A. K., ASL , DRDO, Hyderabad; vii)Mr. Balaji , ASL, DRDO, Hyderabad	Dr. S.P. Nigam
International Conference on Powder, Granule and Bulk Solids: Innovations and Applications (PGBSIA 2013), November 28-30, Thapar Institute of Engineering & Technology University, Patiala	Various Govt and Private Sponsorship: DST, CSIR, TEQIP, BMEA Australia, Fujian Longking, China, Mecgale Pneumatics , India	International	1) Prof. Peter Wypych, University of Wollongong, Australia 2) Prof. S. Komar Kawatra, Michigan Technological University, USA 3. Prof. Giuseppe Bonifazi University of Rome, Italy 4. Prof. Shimin Wang Southeast University, Nanjing University, Nanjing, China 5. Bevin, BS&B Safety Systems, Singapore 6. Prof. Tomas Sverak, Christopher, Brno University of Technology, Czech Republic 7. Prof. Elmhurst USA, Michael Prior, IDEX Corporation, Evesham,	Dr. S.S.Mallick

Title of Seminars/ Conferences/ Workshops	Source of Funding	National/ International	Details of outstanding participants	Coordinator(s)
			UK. 8. Prof. R. Gandhi, K. Venkatesh, Dr. Reddy's Laboratories Ltd. 9. Prof. R. P. Kingsly Ambrose, Josephine M. Boac and Dirk Maier, Kansas State University, U.S.A 10. Prof. A. Levy, Ben-Gurion University of the Negev, Israel 11. Prof. Tarasankar Pal, Indian Institute of Technology, Kharagpur, India 12. Prof. Renhu Pan, Fujian Longking Company, China 13. Prof. Chandana Ratnayake, Tel-Tek Institute, Norway	

31. Code of ethics for research followed by the departments

The following are mandatory/recommended ethics and practices:

- (i) Zero tolerance for plagiarism
- (ii) Protecting confidentially information of human/organization participating in research
- (iii) Ensuring safety of human, assets and biodiversity taking part in research
- (iv) Quality check through communication of major research findings to peer reviewed journals and conference of international repute (in fact, as per the current norms of the University at least two research papers in SCI Journals are required be with "accepted" status before submission of PhD dissertation for examination)
- (v) Discourage faculty and research students to publish in "paid" journals

CODE OF ETHICS FOR RESEARCH

Departmental Code of Ethics for research is based on the following:

1. Respect for the Rights and Dignity of the Person
2. Competence
3. Responsibility
4. Integrity

I. Respect for the Rights and Dignity of the Person

School ensures that the faculty

1. Undertake the interests of the community in particular and the country in general.
2. Take care not to infringe, in research or service activities.
3. Share confidential information with others only with the informed consent of those involved, or in a manner that the individuals involved cannot be identified, except as required or justified by law.
4. Store, handle, transfer and dispose of all records, both written and unwritten (for example, computer files, video tapes), in a way that attends to the needs for privacy and security and which is in accordance with the law.
5. Respect the rights of research participants and others to safeguard their own dignity.
6. Respect the right of individuals to discontinue participation in research at any time, and be responsive to non-verbal indications of a desire to discontinue if individuals have difficulty in verbally communicating such a desire.
7. That the research will contribute to the well-being of the group.

II. Competence

School ensures that the faculty

1. Engaged in research is appropriately qualified.
2. Keep up to date with relevant knowledge, research methods, and techniques, through the reading of relevant literature, peer consultation, and continuing education activities, in order that research activities and conclusions shall benefit and not harm others.

III. Responsibility

School ensures that the faculty

1. Engaged in research be aware of their professional responsibilities to institute including research participants.
2. Be sensitive to the needs, current issues, and problems of society.
3. Maintains the highest standards of integrity.
4. Be sensitive to, and knowledgeable about, individual differences and vulnerabilities to discern what will benefit and not harm persons involved in research activities.
5. Not contribute to, nor engage in, research which promotes or is intended for use in deliberate impairment of an individual's psychological integrity.
6. Act to minimize the impact of research activities on research participants' personality or their mental or physical integrity.
7. Screen research participants and select those not likely to be harmed, if risk or harm to some research participants is possible.

IV. Integrity

School ensures that the faculty

1. Promotes integrity in the undertaking of its research.
2. Conduct research in a way that is consistent with a commitment to honest, open inquiry, and to clear communication of any research aims, sponsorship, social context, personal values, or financial interests that may affect or appear to affect the research.
3. Give publication credit to others (as appropriate) in proportion to the professional contribution that they have made.
4. Not exploit any professional relationship to further personal, political or business interests.
5. Be acutely aware of the problematic nature of dual relationships and recognize that it is not always possible to avoid them. Where it is possible, avoid such relationships; where it is not, steps should be taken to safeguard research participants' interests.

32. Student profile programme-wise:

Prog.	Branch	Year	Application received	Selected		Pass percentage	
				Male	Female	Male	Female
BE	Mechanical	2014	14098	138	2		
	Mechanical	2013	14784	126	0		
	Mechanical	2012	15788	140	1		
	Mechanical	2011	16843	129	1		
	Mechanical	2010	16998	126	0	100	
	Mechanical	2009	18211	122	1	99	100
BE	Mechanical Production	2014	14098	36	2		
BE	Mechatronics	2014	14098	38	2		
	Mechatronics	2013	14784	30	2		
	Mechatronics	2012	15788	30	3		
	INE	2013	14784	8	2		
	INE	2012	15788	26	4		
	INE	2011	16843	26	5		
	INE	2010	17840	31	2		
	INE	2009	18211	27	5	92.59	100
ME	Production Engg.	2014	116	26	2		
	Production Engg.	2013	2312	29	1		
	Production	2012	2610	25	1	88	100

	Engg.						
	Production Engg.	2011	2274	25	1	96	100
	Production Engg.	2010	1960	29	0	100	
	Production Engg.	2009	1279	24	1	100	100
ME	CAD/CAM	2014	76	24	0		
ME	CAD/CAM	2013	2312	24	1		
	CAD/CAM	2012	2610	25	0	88	
	CAD/CAM	2011	2274	22	2	92	100
	CAD/CAM	2010	1960	30	0	100	
	CAD/CAM	2009	1279	24	1	96	100
ME	Thermal	2014	164	28	1		
	Thermal	2013	2312	27	1		
	Thermal	2012	2610	28	1	85.71	100
	Thermal	2011	2274	24	2	92	100
	Thermal	2010	1960	29	1	96	100
	Thermal	2009					
PhD	Mechanical	2014		6	1		
	Mechanical	2013	339	5	0		
	Mechanical	2012	312	6	2		
	Mechanical	2011	268	5	0		
	Mechanical	2010	520	11	0		
	Mechanical	2009	271	19	0		

33. Diversity of students

Prog	Branch	Year	% Of Students From The Same University	% Of Students From Other Universities Within State	% Of Students From Universities Outside The State	% Of Students From Other Countries
BE	Mech. Engg	2014	0.00	47.85	52.14	
	Mech. Engg	2013	0.00	50.43	47.86	1.71
	Mech. Engg	2012	0.00	41.6	57.6	0.8
	Mech. Engg	2011	0.00	57.14	37.14	5.71
	Mech. Engg	2010	0.00	55.65	41.13	2.42
	Mech. Engg	2009	0.00	57.52	42.48	0.00
BE	Mech. Prod. Engg	2014	0.00	50	50	0.0
BE	Mechatronics	2014	0.00	57.50	42.50	0.00
	Mechatronics	2013	0.00	52.00	48.00	0.00
	Mechatronics	2012	0.00	42.42	57.58	0.00

Prog	Branch	Year	% Of Students From The Same University	% Of Students From Other Universities Within State	% Of Students From Universities Outside The State	% Of Students From Other Countries
	INE	2013	0.00	50.00	50.00	0.00
	INE	2012	0.00	30.00	70.00	0.00
	INE	2011	0.00	51.61	48.39	0.00
	INE	2010	0.00	54.55	45.45	0.00
	INE	2009	0.00	34.38	65.63	0.00
ME	Production Engg	2014	0.00	32	68	
	Production Engg	2013	0	55.17	44.83	0.00
	Production Engg	2012	4	72.00	24.00	0.00
	Production Engg	2011	0	78.26	21.74	0.00
	Production Engg	2010	0	65.10	34.90	0.00
	Production Engg	2009	2.94	32.35	64.71	0.00
ME	CAD & CAM	2014	0.00	45.83	54.17	
	CAD & CAM	2013	0	44.83	55.17	0.00
	CAD & CAM	2012	3.85	38.46	57.69	0.00
	CAD & CAM	2011	4.35	73.91	21.74	0.00
	CAD & CAM	2010	0	28.57	71.43	0.00
	CAD & CAM	2009	0	26.09	73.91	0.00
ME	Thermal	2014	0.00	42.30	57.70	
	Thermal	2013	0.00	42.86	57.14	
	Thermal	2012	3.70	48.15	44.44	3.70
	Thermal	2011	0.00	47.83	52.17	0.00
	Thermal	2010	3.33	13.33	83.33	0.00
Ph.D.	MED	2014		84	16	
	MED	2013	2		3	0
	MED	2012	4	1	3	0
	MED	2011	2		2	0
	MED	2010	2	1	5	0
	MED	2009	7	1	2	0

Student diversity state wise

State	2012	2013	2014
Andhra Pradesh	5	4	5
Assam	2	0	3
Bihar	14	7	16

Chandigarh	34	60	32
Chhattisgarh	0	1	3
Delhi	76	54	51
Gujarat	3	3	9
Haryana	106	167	135
Himachal Pradesh	11	14	15
Jharkhand	3	0	0
Jammu & Kashmir	10	8	27
Madhya Pradesh	7	5	18
Maharashtra	2	2	4
Mizoram	1	0	1
Odisha	0	1	1
Punjab	477	574	631
Rajasthan	41	28	125
Tripura	1	0	1
Uttar Pradesh	112	52	127
Uttarakhand	14	13	18
West Bengal	3		1

34.

35. How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.

36. Student progression

Student progression (program to program and year)		Percentage against enrolled
UG to PG	2009	2%
	2010	
	2011	
	2012	
	2013	
	2014	
PG to M.Phil.	2009	NA
	2010	
	2011	
	2012	
	2013	
	2014	
PG to Ph.D.	2009	6%
	2010	
	2011	
	2012	
	2013	
	2014	

Ph.D. to Post-Doctoral		2009	None
		2010	
		2011	
		2012	
		2013	
		2014	
Employed			
☐	Campus selection	2009	96%
		2010	97%
		2011	95%
		2012	97%
		2013	94%
		2014 -15 till date	65%
☐	Other than campus recruitment	2009	2%
		2010	2%
		2011	2%
		2012	2%
		2013	2%
		2014	2%
Entrepreneurs		2009	2%
		2010	2%
		2011	2%
		2012	2%
		2013	2%
		2014	2%

36. Diversity of staff

Percentage of faculty who are graduates	2009	2010	2011	2012	2013
of the same university	42.5	45	44.5	50	40
from universities with in the states	7.5	6.5	7.5	8	7
from the universities outside the States	50	42	44.5	34	46
universities outside the country	0	6.5	3.5	8	7

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period

The following faculty were awarded PhD during the assessment period:

- Dr. Tarun Nanda
- Dr. J. S. Saini
- Dr. Sandeep Kumar sharma
- Dr. Satish Kumar
- Dr. Anirban Bhattacharya

38. Present details of departmental infrastructural facilities with regard to
a) Library

	Books	M.E.Thesis	PhD Thesis	B.E Projects (3 years)
Numbers	280	Nil*	Nil*	360

*All the students have digital access to ME and PhD students via e-resources of TU Library.

The list is given in the following for books and selected project reports:

Title/author names/publisher/edition/year for books

Title of Book	Authors	Publisher	Edition	Year
DIES	Joseph V. Woodworth	The Normann Henley	7/1926	1926
Automatic and semi automatic lathes	Blboguslavsky	Foreign language publisher		
Automobile engines	Kuns-plum-ridge	American technical society	7/1952	1952
Automobile ignition and electrical equipment (vol. 111)	Kuns Plumridge	American technical society	7	1951
Motion and time study	Ralph M barnes		4	1965
Hydra tool steels	Hall and Pickles	Hall and Pickles Ltd.	8	1956
Steam locomotion	Edward cecil Poultney	The caxton Pub.	1	1951
Mechanical engine ERS handbook	Robert Thurston kent		11	1945
Metals in service of man	William Alexander	Modern world	1	1964
Heat treatment	I.Kamenichny	Peace publishers Moscow		
Heat treatment of metals	B. Zakharov	Foreign language publisher		
Fits tolerances and engineering measurements	Y. Tarasevich and E. Yavoish	Peace publishers Moscow	1	
Die design handbook	ASTE	MGH		
Steam locomotion	Edward cecil Poultney	The caxston publishing co.	1	1951
Applied thermodynamics	William robinson		2	1937
Hardening, tempering, annealing and forging of steel	Joseph V woodworth	The Norman W. Henley Pub.	5	1919
Metal turning	J Horner	Whittaker and Co.	3	

Title of Book	Authors	Publisher	Edition	Year
Report writing	John Ball	The Ronald Press Company		1955
Workshop practice	JE Baty	British Standard Institution		
RAC guide	Edwin P. Anderson	Theoaudel & vo.		1963
Metal cutting tool production	M.Palay	MIR pub. Moscow		
Handbook of oxyacetylene welders		The British oxcompany		
Strength of materials	Morley	Longmans Green and Co.	9	1940
Oxyacetylene welding repair manual				
Welders guide	FRANK d.Graham			
Corrosion and its prevention	S. Ramanujam	Railway testing and rec. centre		1960
Modern foundry practice	ED Howard	Odhams Press Ltd.		
Thermodynamics applied to heat engines	Lewitt	Sir Isaac ditman and sons ltd.		1938
Railway carriage and wagon manual	AP Handa	Asia book centre	2	1938
Sheet metal workers	Frank D. Graham and EP Anderson	D.B. Taraporevala Sons co.	2	
Motivation and productivity	Saul W gellerman	D.B.Taraporevala sons and Co.	2	1970
Heat engines	DA Low			
Engineering economics	TH Burnham	Sir ISSAC Pitman	4	1938
General metallurgy	B.Kuzuetsov	Peace publishers		
Machine elements	V.Dobrovolsky	Foreignlanguages pub. House		1962
Fundamentals of automobile chasis and power transmission	Kuns Plumbridge	American technical society		1951
Direct Hardening Nickle alloy steels		Thames house		1958
Wrought Steels		British standards instutions		1955
Pressworking of Metals	CW Hinman	MGH	2	1950
Corossion and temporary protectives	Shell	Shell		
Quenching	E.F.Houghton	Hardcastle, waud and co.		1955
How engines work	Michael Gibson	Collins paper books		
Nickel alloy steels		Thames House		
Nickel alloy steels		Thanmes House		
Lubrication of oil engines	Shell	Shell		

Title of Book	Authors	Publisher	Edition	Year
The melting of cast iron and non ferrous alloys	A Lipnitsky	Peace Publishers		
A power primer		General Motors		
Mechanical engineer's handbook	Kents	Wiley		1936
Materials handling equipment	N. Rudenco	Peace Publisher		
The science of precision measurement				1953
Manual of office procedure for supplies, inspection and disposals		Govt. of India		1922
Boiler plant testing	David Brownlie	Chapman and Hall		1922
Designing for mass production	JR Fawcett	Sir ISSAC Pitman		1930
Engineering manufacturing processes	D. Maslov V. Denilevsky V. sasov	Peace Publisher	1	
Jigs, tools and fixtures	P. Gates	The technical press		1939
The factory	G. Schlesinger	The new Era publishing		
Diesel traction		British Railways		1962
Quality control and statistical methods	Edward M Schrock	Asia Publishing		1961
The practical sheet metal worker	JS Murphy	Odhams press		
Marketing principles and practice	MA Sahaf	Anmol Publication	1	1989
Industrial management	KK Ahuja	Khanna Publishers		1978
Industrial management	KK Ahuja	Khanna Publishers		1978
A management guide to PERT/CPM	Ierome D. Wiest, Feroimand D Levy	PHI		1972
Consumer Product development		Roderick white		1973
Machine design data book	K Kumar	Khanna Publishers		1976
Fundamentals of tool design	Frank W Wilson			
Strength of Materials	S. Timoshenko	Affiliated East west		1956
System Dynamics	Shshil	Wiley		
Intermediate engineering design	Parkinson	TMH		1979
Conceptual and policy framework for appropriate industrial technology		UN		1979
Rolling Mill Practice	P. Polukhin Fedosov	Peace Publishers		
Fundamentals of tool design	Frank W. Wilson	PHI		1964
Intermediate Engineering drawing	Parkinson	Sir ISSAC Pitman	3	
Mech. Measurements and control engineering	D. S. Kumar	Metropolitan Book Co.		1979

Title of Book	Authors	Publisher	Edition	Year
Milling machine work	D.B. Taraporevala	Delmar Publishers		1953
Engineering drawing	PS Gill			
Experimental techniques in metal cutting	VC Venkatesh H. Chanra Shekhran	PHI		1987
Design data hand book	DP Mandal	SK Kataria and Sons		1998
Design of machine elements	Abdulla Shariff	Dhanpat Rai and sons 1990		
System dynamics	Sushil	Wiley		1993
Automobile engineering (vol 1)	Kirpal singh	Standard publishers		1993
Production planning control and industrial management	KC Jain LN Aggarwal	Khanna Publishers		1980
ISTE handbook		ISTE		
Internal combustion engine	LC Lichty	MGH	6	
Forging practice	G. Kamensachikov	Foreign languages house		
Forging and forming metals	Rusinoff	Americal Technical Society		1964
Workshop management	Karamjit singh	BD Kataria and sons		1970
Welding and welding technology	Richard L Little	TMH		1979
Industrial engineering	B. Kumar	Khanna Publishers		1982
Theory of machines	GH Ryder	BI Publications		1963
World Industry since 1960		UN		1979
Assembly practice	A.KRYsin	Mir Publishers		1963
Thermodynamics	Virgil Moring Fairs	Mcmillan Company		1962
Hydraulic and fluid mechanics	EH Lewitt	SIRISSAC Pitman	10	
The structure of technical English	AH Herbert	London Group		1965
Machine Drawing	PS gill	Katson Publishing house		
The management organization and control	Paul E Holden	MGH		1951
Theory of structures	S. Ramamrutham	Dhanpat rai	1993	
Mechanical vibration	VP singh			
Concepts in management science	Donald J Clough	PHI		1968
Business management	John A shubin	BI Publications		1953
Theory of structures	S Ramamurthan			
Strength of materials	Surendra singh	Vikas Publishing House	2	1982
Introduction to mechanics of solids	Egor Popov	PHI		1973
Applied stress analysis	Sadhu singh	Khanna Publshers	1	1979

Title of Book	Authors	Publisher	Edition	Year
Theory of elasticity	M. Filonenko Borodich	Foreign Languages pub		
School of engineering and applied science				1965
Structural mechanics	PS Sawhney	S. Chand		1990
Hydraulic machinery	Abdulla Shariff	Engineering book Company		
Machine design	RS Khurmi JK Gupta	Eurasia	10	1990
Computing III	VB Aggarwal	Piyush Printers		1988
Design and production				
Industrial organization and engineering mechanics	TR Banga SC Sharma	Khanna Publishers		1978
Automobile engineering	SK Sharma	Rashtriya book depot		
Graphic statics	PS Gill	Katson Publishing House		1982
Mechanical vibrations analysis	CS Sharma	Khanna Publishers	3	1988
Industrial engineering and organization management	SK Sharma Savita Sharma	RBD Publishers		
Value Engineering	SSIyer	New age international	2	2000
Manufacturing science and technology	K Vara Prasada rao	New age international		2002
Cases in production/ operations management	KN Krishnaswamy	PHI		1999
Thermal science and engineering	Dr. DS Kumar	SK Kataria	1	2000
Classical Mechanics	Golostein poolf safco	Pearson Publ.		2002
Fundamentals of momentum, heat and mass transfer	Welty, wicks, Wilson			
Gas turbine theory	Sarwanaa muttoo Rogers, Cohen	Pearson	1	2001
Quantitative techniques	Tulsian Pandey	Pearson	1	2002
Operations research	R. Panneer Selvam			
Automation, production systems and computer integrated manufacturing	Mikell P. Groover	Pearson	1	2001
Modern control Engineering	Katsuhiko Ogata	Pearson	1	2002
Engineering mechanics of solids	Egor P. Popov	Pearson		2001
Machine design	PC Sharma DK Aggarwal			
Designing with ProE	Sham Tikkoo			
Heat Transfer	JPHolman	TMH	8	2002
Advanced machining processes	VK Jain	Allied Publishers		2002
Internal combustion engines	Mathur Sharma	Dhanpat Rai	6	1993
Automobile engineering	Kirpal singh	Khanna Publishers	1	1979

Title of Book	Authors	Publisher	Edition	Year
Mechanical engineering		Khanna Publishers		
Projects	P. Chandra	TMH	5	2002
Marketing management	Rajan Saxena	TMH	2	2002
Managerial economics	ML Trivedi	TMH	2	2002
Fundamentals of corporate finance	Ross W Jordan	TMH		2002
Machine design	Sharma Aggarwal	SK Kataria	8	1998
Heat transfer	PK Nag	TMH		2002
Fundamentals of heat and mass transfer	RC Sachdeva	New Age		1998
Production engineering	Suresh Dalela Ravi Shankar	Galgotia		2000
Manufacturing planning and control system	Volmann, Berry, Whypark	Galgotia		1989
CNC programming	SK Sinha	Galgotia		2001
Consumer behavior	Hawkins, Best, Coney	TMH		
Pro Engineer wildfire for engineers and designers	Prof. Sham Tickoo	Dreamtech	1	2002
Pro Engineer Instructor	David S Kelly	TMH		2003
Visual C++ 6	Michael J young			
Introduction to interactive computer graphics	Ihtiram Raja Khan	Cyber Tech		2003
Fundamentals of information technology	Chetan Srivastava	Kalyani Publishers		
Internet for everyone	Alexis Leon and Mathew Leon	Leon Techworld		1998
A textbook of machine drawing	RK Dhawan	S. Chand	1	1996
A textbook of machine drawing	RK Dhawan	S. Chand	1	1996
Strength of materials	RK Rajput	S. Chand	1	1996
Design of machine elements	VB Bhandari	TMH		1994
A text book of machine design	Dr. Rajendra Karwa	Laxmi Publisher (P) Ltd.	3	1999
A text book of strength of materials	Dr. RK bansal	Laxmi Publisher (P) Ltd.		1999
Mechanical vibration and shock measurements	Bruel and Kjaer	Bruel and Kjaer		1972
A text book of machine design	Rajendra Karwa	Laxmi Publisher (P) Ltd.		
Mechanical engineering design	Joseph E. Shigley	TMH		1963
Mechanics of materials	EP Popov	Prentice hall of India (PHI)	2	1993
Strength of materials	RS Khurmi	S. Chand	20	1989
Mechanical machine design	RC Bahl VK Goel	Standard Publishers and distributors	2	1996
Strength of materials	RS Khurmi	S. Chand	1	1996
Hand book of properties of engineering materials and data for machine elements	Abdulla Shariff	Dhanpat Rai & co.		1999

Title of Book	Authors	Publisher	Edition	Year
Engineering mechanics of solids	EP Popov	PHI	5	2000
Machine design	Abdul Mubeen	Khanna Publishers	2	1995
Machine design	RC Patel SS Sikh	C.Jamnadas & co.	12	1998
A textbook of machine design	Dr. Rajendra Karwa	Laxmi Publisher (P) Ltd.		
A textbook of machine design	RS Khurmi JK Gupta	Eurasia publishing house (P) Ltd.	1994	
Strength of materials	Dr. Sadhu Singh	Khanna Publishers		
Machine design	SG Kulkarni	TMH	1997	
Strength of materials	RK Rajput	S.Chandand co. Ltd		
A textbook of engineering drawing	RK Dhawan	S. Chand and co. Ltd	2	2001
Engineering physical metallurgy	Nicholas Einstein	MIR publishers		
a textbook fo metrology	M. Mahajan	Dhanpat Rai & co.	1	2001
Metrology and Instrumentations	OP Khanna	DhanpatRai & co.	1	2000
The essence of measurement	Alan S. Morris	PHI		1997
Mechanical measurement and control	DS Kumar	Metropolitan	3	1998
Automatic control engineering	Francis H. Raven	MGH		
Mechanical engineering	RS Khurmi JK Gupta	Eurasia publishing house(P) Ltd.	4	1996
Vibration and noise for engineers	Kewal Pujara	Dhanpat Rai & sons	4	1992
Principles of vibration control	Ashok Kumar Mallik	East west press		1990
Mechanical vibration	VP singh	Dhanpat Rai &sons.		
Vibrations, dynamics and structural systems	Madhujit Mukhopadhyay	Oxford and IBH Publisher Co.(P) Ltd.		
Mechanical vibration	VP singh	Dhanpat Rai &sons.		
Introductory course on theory and practice of mechanical vibrations	JS Rao K. Gupta	New age International		
Experimental stress analysis	VN Vazirani SP Chandola	Khanna Publishers		
Thermal engineering	PL Balany	Khanna publishers		
Mechanical and industrial measurements	RK Jain	Khanna publishers		
A text book of Metrology	M Mahajan	Dhanpat rai and co.		
Industrial organization and engineering economics	TR Banga SC Sharma	Khanna Publishers		
Personnel management and industrial relations in India	RS Davar	Vikas Pub. House		

Title of Book	Authors	Publisher	Edition	Year
Industrial organization and engineering economics	TR Banga SC Sharma	Khanna Publishers		
Industrial management	KK Ahuja	Khanna publishers		
Industrial engineering and management	OP Khanna	Dhanpat rai and sons		
Human resource management concepts and issues	TN Chhabra	Dhanpat rai and sons		
Organization development	Wendell L. French	PHI		
Personnel management	Arun monappa	TMH		
Master catalogue electronic instruments	Bruel and kjaer	B&K		
The career guide	Jayant Ghose	UBS Publishers and distributors		
Theory of elasticity	Timoshenko and Goodier	MGH		
Applier thermodynamics	SK Mohapatra and S Sharma	TU(DDE)		
Theory of machines II	SK Sharma	TU(DDE)		
Heat and mass transfer	SK Mohapatra and S Sharma	TU(DDE)		
Instrumentation and metrology	Ravinder aggarwal Gaurav bartarya	TU(DDE)		
Heat and mass transfer	SK Mohapatra and S Sharma	TU(DDE)		
Machine design 1	VK Jadon			
Instrumentation and metrology	Ravinder aggarwal Gaurav bartarya	TU(DDE)		
Advanced strength of materials	JS Saini			
Advanced strength of materials	JS Saini			
Theory of machines II	SK Sharma	TU(DDE)		
Materials and metallurgy	Tarun Nanda	TU(DDE)		
Materials and metallurgy	Tarun Nanda	TU(DDE)		
Theory of machines I	SK Sharma Vijay kumar	TU(DDE)		
Theory of machines I	SK Sharma Vijay kumar	TU(DDE)		
Manufacturing Technology	Ajay Batish Gaurav bartarya	TU(DDE)		
Manufacturing Technology	Ajay Batish Gaurav bartarya	TU(DDE)		
Elements of heat engines vol II	RC Patel CJ Karamchandani			
Machine design	NC Pandey CS Shah			

Title of Book	Authors	Publisher	Edition	Year
Engineering methods for analyzing strength and rigidity	G. Glushkov			
Computer programming in Fortran	V Rajaraman			
Computer programming in Fortran	V Rajaraman			
Mechanics of structures vol II	SB Junnarkar			
Collection of problems in theoretical mechanics	IV Meshchersky			
Mathematical statics	JN Kapoor HC saxena			
Fundamentals of heat transfer	M. Mikheyev			
Engineering thermodynamics	S. Roy			
A course in control engineering	A Subbarao Parag R. Desai			
Heat engines	Pandey and shah			
Strength of materials	V. Feodosyev			
Advanced mathematics for engineers	HW Reddick FH Miller			
Heat and mass transfer	S. Domkundwar			
Heat engines	Pandey and Shah			
Elements of applied mecahanics	Junnarkar			
Thermal engineering	I.Shvetes M. Kondk			
Strength of materials	S. Timoshenko			
Engineering mechanics	Irvinght shames			
Strength of materials & mechanics of structures	BC Punmia			
Dynamics of structures	Raywclough Joseph Penzien			
The finite element method	OC Zienkiwice			
Theory of structures	A.Morley			
Theory of elasticity	M. Filonenko			
Fundamentals of machine design	P.Orlov			
Operations management	John. O. Mcclain			
Power plant engineering	GR Nagpal			
Alternative energy sources	T. Nezat Veziroglu			
Thermal engineering	PL Ballaney			
Thermodynamics for chemists	Samuel glass tone			
How to prepare GRE	Samuel C. Barronstein			
Prepare for MBA	RP Datason BL sadana			
Engineering mechanics static & dynamics	AK Tayal			
Machine design exercises	SN Trikha			
Machine design	M. Movnin D. Gloltziker			

Title of Book	Authors	Publisher	Edition	Year
Theory of plates and shells	Stephan P. Timoshenko			
Vector Algebra	Shanti Narayan			
Heat and mass transfer	S. Domkundwar			
Elements of heat engines	RC Patel CJ Karamchandani			
Elements of heat engines	RC Patel CJ Karamchandani			
Heat transfer	RC Patel			
Heat and mass transfer databook	CP Kothandaraman			
Heat transfer	SP Sukhatame			
Heat transfer	Benjamin GE Bhart			
Programming the IBM	Robert K louden			
Machine drawing	Jagdish Lala KS satija			
Computational Mathematics	BP Demidovich			
Mathematical tables	Walter F.Robbionsons			
Introductory mathematics for engineers	A. Myskis			
Studies in distance education	G. Ramreddy			
Pro E wildfire instructor	David S. Kelly			
Engineering drawing and computer graphics	JS Layal Amit kohli			
Vehicle dynamics	Reza N Jaszar			
Time and vehicle dynamics	Hars Paejka			
Modeling and simulation in thermal and chemical engineering	J. thoma and bouamama			
Vehicle dynamics, stability and control	D. Karnopp			
Hydrodynamic and hydromagnetic stability	S.chandrashekhar			
High performance handling	Don Alexander			

Title/author name/year for reports

Title	Author Name	Year
Quality issues & tact time reduction	Rahul Tayal (R.No. 101008074)	2013
Direct Consumable Semi dine (WS222t) wastage reduction	Nikhil Aggarwal (R.No. 401007015)	2013
Supplier Performance Improvement	Vishsesh Bali (R.No. 1010058020)	2013
Overall Improvement of Plant Layout	Gagandeep Nain (R.No. 401007010)	2013
Differential Sub-Assembly Area Improvement	Sushant Chawla (R.No. 101008099)	2013

Title	Author Name	Year
Study and introduction of Bimetallic Bushes in the front Axle of the Tractor	Raghav Aggarwal (R.No. 101008069)	2013
Tpes Implementation through Moist and Ergonomics and manpower planning	Divy Krishan Gupta (R.No. 401007009)	2013
Analysis review & Design of HVAC package at substation building	Vibhuti Ratan Shah (R.No. 101008106)	2013
1 Sealer Consumption 2 most	Lalit Negi (R.No. 101008050)	2013
Scrap Reduction due to transportation study & implementation of TPM	Arshdeep Singh Rana (R.No. 101188002)	2013
Efficiency of Boiler Fuel Analysis & water treatment	Jaggeer Singh (R.No. 401007012)	2013
Process Planning & Production of front Engine Diesel Buses	Ribhav Arya (R.No. 101008114)	2013
Elimination of Masking Tape in PVC line	Mohit Garg (R.No. 101008054)	2013
Inspection & Elimination of door fitment defects	Harish Dhule (R.No. 101008036)	2013
Defect Analysis & Troubleshooting ECU Flashing and GMS	Anurodh Sachdeva (R.No. 101008019)	2013
Statistical Process & Control in Length Grinding	Jagveer Singh (R.No. 101008043)	2013
Straight Pass Rotation Improvement	Vaibhav Arora (R.No. 401007028)	2013
Tub Press angle variation remark Reduction in Salisbury Assembly	Charanpreet Singh (R.No. 101008029)	2013
Design of Hydraulic Accumulator for a single span of Military bridging System	Deepak Jindal (R.No. 101008030)	2013
Mechanical system Analysis Coal testing & water treatment	Bibhu Prasad Nayak (R.No. 101188003)	2013
Analysis & Elimination of Warranty Defects	Mridul Sarkar (R.No. 101008056)	2013
Casting Defects & root Cause Analysis	Anmol Ahuja (R.No. 401007004)	2013
Develop & Validate a Metallic Air Cleaner	Prateek Gupta (R.No. 101008066)	2013
Dashboard Development for new vehicle Platform (instrument Panel for 2 M upgrade)	Pulkit (R.No. 401057007)	2013
Increasing the Availability of Side of slip tester modification of design of trolley wheel shaft	Firoz Alam (R.No. 101008033)	2013
Development of leakproof Gear case for diesel locomotive	Aditya Singh (R.No. 101008009)	2013
Inventory management system of jigs and Fixtures	Tanya (R.No. 101008100)	2013
Fixtures & EMS System	Vikash Chandra (R.No. 101008107)	2013
Reduction of Defects through kaizen	Sartaj Singh (R.No. 101008085)	2013
Part Development injectors Failure Analysis of XYZ model vehicle	Dhruv Mittal (R.No. 101058006)	2013
Improving material flow with optimal resource utilization	Ratul Bansal (R.No. 101008079)	2013
Zero Base costing and SAP implementation	Vishal Harchandani	2013
Desing of 120 tonnes Bridge boad testing framePrasad kaushal (R.No. 101188011)	2013
Standardizework workshop of John Dale Assembly Line	Shereyans Jain (R.No. 101058018)	2013

Title	Author Name	Year
Rejection Analysis & correction of holidays in coated pipes	(R.No. 401007001)	2013
Tool cost Reduction, training module, process capability study aim	Guneet Singh Narang (R.No. 101008035)	2013
Quality Issues and Mcr reduction	Vipul Tiwari (R.No. 101008108)	2013
Casting Defects and their analysis and smed	Sumit Sharma (R.No. 101008097)	2013
5S improvements of the shop floor vehicle assembly	Sampan Sahni (R.No. 401007023)	2013
To eliminate pin hole offset defect in D1028	Anmoldeep Singh Sidhu	2013
TITLE	AUTHOR NAME	YEAR
Study and Implementation of SPC, Scrap Reduction	Vikram Singh Sheokand	2012
1. Value Stream Planning 2. Pull System Implementation	Rahul Garg	2012
Capacity Enhancement of Critical Items	Aakash Gupta	2012
Lift Ram Clip;inner Leg Issue; Combination Switch; Operator Seat Failure	Deepanshu Batla	2012
Reduction in Die Changeover Time and Productivity Improvement	Vebhav Madaan	2012
Projects on PAPP Development parts and KAIZEN(S)	Himanshu Mittal	2012
Intershop corridor conveyor,Seat Handling Manipulator, Low Cost Automation and Standardization of Lifting Slings	Balsinder Singh	2012
Improvement in Cabinet Foaming	Harseet Singh	2012
Frame Design and Vehicle Integration of 8X235.31 Cowl Vehicle	Abhishek Goyal	2012
Dual Fuel Engine and Development of Positive Pressure EGR	Navjot Sandhu	2012
ZautikaDevelopment Project, Phase1A Piping Engineering	Rohan Chaundry	2012
To Test Turbo Generators for Defects and Study their Manufacturing Processes	VarunSingh	2012
Project: Improvement in Agricultural Machining and SOP	Hap Akar Singh	2012
Yield Optimization of Sheet Metal Parts Produced by Local Vendors	Animesh Gupta	2012
Modular Arrangement of Predetermined Time Standards	Shobhit Bansal	2012
Green Supply Chain Management and Noise Vibration Harshness	Siddharth Sharma	2012
Dual Fuel Engine and Development of Positive Pressure EGR	Vineet Attal	2012
Process of System Improvement of Orchard DifferentialSubAssembly Area	Prince Singla	2012
Study and Implementation of SPC, Scrap Reduction	Vikram Singh Sheokand	2012
Use of Japanese Tool for Lean Manufacturing To improve Inboard Supply Chain in	Prabhjot	2012

Title	Author Name	Year
Manufacturing		
Reduction in Die Changeover Time and Productivity Improvement	Vebhav Madaan	2012
Alignment of Making of Uffi Filter Value Addition / Value Engineering of Air Filter Element and Oil Filter	Preeti Singla	2012
Total Productive Maintenance	Sourabh Gupta	2012
Kanban anf Material Management	Sourabh Gupta	2012
Prevention of Oil Hole Drill Breakages	Anurag Sharma	2012
Field Failure Analysis	Shakti Nagpal	2012
Capacity Enhancement of Critical Items	Aakash Gupta	2012
Improvement in Agricutural Machining and SOP	Hap Akar Singh	2012
To Test Turbo Generators for Defects and Study their Manufacturing Processes	VannSingh	2012
Vendors Quality Improvements of Transaxle parts	Deepak Kuva	2012
Damaged M12 Threads in RF-90 welding Defects in Spindle Line Chatter Marks on R30 Pad Reduction of WVA Activities	Marik Jindal	2012
Increase the First Time Yield and Reduction of Non Value Addition Activities	Hamang Singh Zath	2012
Process Failure Modes and Defects Analysis Time Study of Power Train Assembly Implementation of Quality Gates	Bhupindra Singh	2012
Scrap Reduction due to Compression Height, Scrap due to PIN HOLE Diameter, SMID	Gurjot Singh	2012
Cost Comparison and Cost Control Vehicle Electrical System	Rajat Gupta	2012
Designs of Suspensions Components Evolution of Ride Parameters of Mesnism DutyTRUCK	Charandeep Singh Rana	2012
Reduction of Defects in Vendors Bought Parts	Gaurav Guleria	2012
Trollry Management System and Design Most on White Body Cine	Ankit Kambol	2012
Painting Process Study and Quality Improvement for Painted Sheet Metal Parts	Himanshu Mittal	2012
OEE Improvement in BWF Through the Approach of SFMC	Ankit Garg	2012
Title	Author Name	Year
Variation in center distance and coordinate shifting of connecting rod	Balkarn Singh	2011
Centralized supermarket restructuring work study	AnkurVashishta	2011
To identify root cause of engine overheating	Inderpreet Singh	2011
Filling flash reduction of piston blanks	Nitish Gupta	2011
Product improvement and defect elimination	Rushil Agarwal	2011
Management of EPS and other materials	Nimish Mittal	2011
Engine defect analysis and increase in S.P.R.	MohitTyagi	2011
To reduce scrap and non LGT at main assembly line	Harprabhjot Singh	2011

Title	Author Name	Year
MHN-LQ process platform	Manish Kumar	2011
Moly layer optimization	GouravGoel	2011
MHN-LQ process platform	P.Priyadarshini	2011
Valve stream mapping of D.V.M piston rings	Mohit Sharma	2011
Vendor managed inventory implementation	Nitin	2011
Resolving lead problem in planet gear	Rattan Anmol Singh	2011
Improvement in rework	Sanjeev Kumar	2011
Branding effectiveness	Gunjan Sharma	2011
Assembly worksheet of 90 HP engine	Raj Luthra	2011
Development of test rig and center of gravity measurement	Aditya Dhiman	2011
Line side feeding strategy with multi model	MilindGoel	2011
Reduction in shell dent, doop dent, back foam check	Yashpal Kumar	2011
Jobs during annual turn round	Mr. D. Kalia	2011
USP development of TSP loading washing machine	Gagandeep Singh	2011
Detailed analysis of competition strategies through ATC reports	Chitvan Gupta	2011
Projects on work measurement and manpower planning	Khushdilsingh	2011
Standardization, implementation and upgradation of jigs and process management system	Taronpreet Singh	2011
Trolley and line improvement	Shashank Mittal	2011
Study of process and process sheet preparation		
Capability analysis tool life monitoring	Mayank Ravi	2011
Productivity Enhancement	Himanshukataria	2011
Project management of supply of heat exchanger for IITB/MNRE	ChiragKhandelwal	2011
Project on total quality circle and productive maintenance	Inderjit Singh	2011
Implementation of clean manufacturing in small scale industry	VarunAlog	2011
SIL issues effectiveness and automation of air balance in paint booth	Arman Singh Grewal	2011
Reducing vehicle unloading time	Gagandeep Singh	2011
Time study of YR9/YU4 line in weld shop	Harjot Singh	2011
Maintenance and study of power home equipment's	ArunMadhabBoirah	2011
Challenges in mechanical and critical success factors	Sgar Bhatia	2011
Design of mechanical assembly for thermal images	VivekSagar	2011
P1 Poka yoke validation	MayankBedi	2011
P2 Statistical process control		
P3 Cycle time study and reduction		
Improving working capital efficiency alternative sourcing of radiators	Kamaldeep Singh	2011

Title	Author Name	Year
Designing of worm gear box and process improvement	Smranjeet Singh	2011

b) Internet facilities for staff and students

Internet facility is available for academic use to 100% for staff and students (i.e. for all, through LAN or Wifi network)

Internet Connectivity Details:

Internet Access: All the labs and faculty rooms having personal computers are having LAN based internet access. There are 2050 connected nodes expanding across - entire academic area, including all labs, offices, faculty chambers, class rooms etc. Internet access across the campus is managed and secured through cyberoam and UTM (Unified Threat Management). The faculty members are provided with laptop can access internet using WLAN also. LAN typically operate at 1 Gbps. The entire campus locations including Hostels TIFAC -CORE, TCIRD, STEP, Workshops, Auditorium and Residences are connected through WiFi.

Availability: In addition to access from labs and the faculty rooms Internet access is available in library and crush hall, where Internet can be accessed through WiFi. In library points are provided for connecting students' laptops to local area networks (LANs).

All labs and faculty rooms are having internet access. Assessment is based upon the widespread availability & quality of internet connectivity.

Speed: All labs and faculty rooms are available with internet connections with 1Gbps network speed.

Duration: The network is available 24 x 7.

c) Total number of class rooms

Class rooms are central/University based; numbers are as follows:

B Block: 13 rooms

C Block: 1 room

D Block: 6 rooms

E Block: 20 rooms

F Block: 16 rooms

There are approximately forty five (45) class rooms where classes for mechanical engineering students are held.

d) Class rooms with ICT facility

Dedicated class rooms with ICT facility do not belong to the department. These are central/University based.

Room description	Usage	Shared/ Exclusive	Capacity	Rooms Equipped with
B107	Lecture	shared	84	Black board, Internet connection
B109	Lecture	shared	72	Black board, Internet connection
B208	Lecture	shared	120	Black board, LCD Projector with Projector Screen, Internet connection
B209	Lecture	shared	84	Black board, LCD Projector with Projector Screen, Internet connection
B301	Lecture	shared	120 each room	White board, LCD Projector
B307- B309	Lecture	shared	120 each room	White board, LCD Projector
C104	Lecture	shared	84	Black board, Internet connection
D115 & D116	lecture	shared	120 each room	Black board, LCD Projector with Projector Screen, Internet connection
D205	Tutorial	shared	60	White board
D206- D207	Lecture	shared	100 each room	White board
E101- E108	Lecture	Shared	84 each room	Black board, LCD Projector with Projector Screen, Internet connection
E201- E212	Tutorial	Shared	64 each room	Black board, Internet connection
F102 & F108	Lecture	shared	120 each room	Black board, LCD Projector with Projector Screen, Internet connection
F103 -F106	Lecture	shared	84 each room	Black board, LCD Projector with Projector Screen, Internet connection
F107	Lecture	shared	80	Black board

e) Students' laboratories

S. No	Name of Laboratory
1.	CAD Lab-I
2.	CAD lab-II
3.	CAM Lab
4.	Fluid Machinery Lab
5.	Heat & Mass Transfer Lab
6.	Industrial Engineering and Metrology Lab
7.	Internal Combustion Engine, and Automobile Engineering Lab
8.	Machine Tool Engineering Lab

9.	Non-Traditional Machining Lab
10.	Refrigeration & Air-Conditioning Lab
11.	Mechatronics lab
12.	Sand Testing lab
13.	Solid Mechanics/ Dynamics of Machines and Vibration and Noise Lab
14.	State Initiated Design Centre
15.	Steam Engineering Lab

d) Research laboratories

The following laboratories are actively contributing to various research and learning opportunities in the department of Mechanical Engineering.

The following table includes the various equipments available in different laboratories and valuation:

S. No.	Name of Lab	Name of Equipment	Cost of equipment (in Rupees)
1.	Automation Lab	Electro-Hydraulic Training Package	3,30,000/-
		Mechatronics training package (LSM Controller)	3,70,700/-
		Electro-pneumatic Training Package	99,000/-
		Hydraulic Trainer (Model 36-500)	1,60,000/-
		Servo Fundamental Trainer (33-001)	2,75,000/-
		Transducer and Instrumentation trainer	1,65,000/-
		a) Electro-Mechanical Transducer(TIC-94IE) b) Measurement Package (2941 M)	
	TOTAL COST	13,99,700/-	
2.	MMC Lab	Strain Indicator (Digital)	32,261/-
		Indication Frequency Control (GF 100)	31,668/-
		Vibration Exciter	65,000/-
		Power Amplifier	57,000/-
		Accelerometer	7,400/-
		Vibration Meter	1,47,221/-
	TOTAL COST	3,40,550/-	
3.	Automobile Engineering Lab		
		Alison Automatic transmission system	3,29,175/
		Actual cut section of radiator	4,711/
		Battery tester	1,778/
		Carburettors	5,245/
		MPFI model	83,555/
		Automobile starter motor	10,000/
		Alternator for automobile	10,000/
		Battery charger	3,000/
		Catalytic convertor	14,000/
		PCV cut section	12,000/
		PCV working	1,05,000/
		Cut section model of an engine assembly (four	60,000/

S. No.	Name of Lab	Name of Equipment	Cost of equipment (in Rupees)
		stroke)	
		Cut section model of an engine assembly for scooter	20,000/
		Cut section model of automobile brake system	10,000/
		Test bench for testing the performance of starter and alternators	75,000/
		Cut section of an intercooler	8,000/
		Differential	23,000/
		Hydraulic brake system	42,000/
		Synchromesh gear box	35,000/
		Constant mesh gear box	40,000/
		Motor car steering model	35,000/
		Six cylinder Truck model	1,85,000/
		TOTAL COST	10,67,289/
4.	CAD Lab-I, and CAD Lab-II	Euro 200 vacuum cleaner	3,650/-
		Computer Wooden table	4,288/-
		Virtual engineer	9,900/-
		Turbo Pascal	13,249/-
		Turbo C++	
		MS Windows 3.1	
		SOFTWARE	
		MS FORTARN 5.1	5,299/-
		Wooden Table 72"x30"x30"	6,750/-
		MS office	14,800/-
		HYDRAUSIM Software	45,000/-
		NASHPACK Software	5,495/-
		Intel Pentium II	4,16,386/-
		Intel Pentium III	5,57,062/-
		Windows NT	9,514/-
		AUTOCAD LT 2000	2,04,000/-
		Intel Pentium III	3,14,540/-
		Pro Engineer software wildfire 3.0	5,60,000/-
		Microsoft Visual C++ 6.0	36,091/-
		Mechanical Desktop 6.0	25,896/-
		Pentium III	84,284/-
		CATIA V5 Software	49,900/-
		Computer Table 5'6"X2'	1,14,102/-
		HP Laser Printer 1005	16,000/-
		Pentium P-IV 1.8GHZ	11,06,546/-
		HP Printer 1005	24,420/-
		UMAX scanner 2500	
		Pentium P-IV, 3.0 GHZ	11,71,089/-
		Microsrib 3-D Scanner	2,03,182/-
		Optoma DLP Projector	1,55,000/-
		IBM Server 226	57,500/-
		Laserjet Printer All in One	16,000/-
		Sony Cyber shot DSC w-35	11,600/-

S. No.	Name of Lab	Name of Equipment	Cost of equipment (in Rupees)
		Revolving Chairs	53,072/-
		Dell optiplex 330 Desktop	6,79,730/-
		HP Laserjet P1505	10,400/-
		Pro-Engineer Wildfire 5.0 University Site License	6,81,389/-
		Microsoft Office Pro Plus 2010	1,02,407/-
		MSDN-AA 2011-12 (YEARLY SUBSCRIPTION)	22,000/-
		DELL Desktop	2,05,222/-
		COMSOL Multiphysics single user CPU along with different module	2,36,320/-
		TOTAL COST	73,32,083/-
5.	CAM Lab	MIRAC Lathe	11,23,000/-
		Move master RVM2	9,48,268/-
		CNC Bench Milling M/C(XL MILL)	8,44,100/-
		Furniture items in CAM Lab	99,028/-
		500 VAUPS	23,500/-
		2TR VERIS SAC (SPLIT)	2,74,000/-
		VPL -EX 50 LCD Projector	1,35,000/-
		Lenovo PC	9,04,659/-
		Godrej visitor chair	81,751/-
		Computer table for PCs +table for instructor	42,529/-
		Powder coating ceiling mounted brackets with swivel joint extension for security of DLP	13,083/-
		3-axis CNC Vertical Milling Center	20,56,000/-
		CNC turning center	15,00,000/-
		TOTAL COST	80,44,918/-
6.	Fluid Machinery Lab	Hook gauge for turbine test	4,551/-
		Pelton wheel turbine test rig	9,482/-
		Francis turbine test rig	15,942/-
		Impact of jet apparatus	3,579/-
		Pitot tube with manometer	182/-
		Cup anemometer	938/-
		R.T.C reciprocating piston pump test rig	4,097/-
		Differential manometer mounted on francis Turbine	981/-
		Starter for(20 hp and 15 hp)	6,284/-
		Kalpan turbine test rig	3,34,553/-
		Engineering fluid machines chart	3,094/-
		Rheometer	8,51,625/-
		Slurry pot tester	2,56,500/-
		Bath opening WXL D	62,653/-
		ARMFIELD Equipment	3,89,344/-
		TOTAL COST	18,43,805

S. No.	Name of Lab	Name of Equipment	Cost of equipment (in Rupees)
7.	Heat & Mass Transfer Lab	Natural Convention Heat Transfer	20,660/-
		Critical Heat Flux	17,225/-
		Emissivity Measurement Apparatus	21,885/-
		Heat Transfer through Composite wall	21,265/-
		Heat Transfer in Forced convection	28,845/-
		Thermal conductivity Measurement of Metal Rod	22,950/-
		Two slab Gaurded Hot Plate method	23,630/-
		Heat Transfer from Pin Fin	28,845/-
		Stefan's Boltzman's Apparatus	21,920/-
		Parallel Flow and Counter flow Heat Exchanger	17,435/-
		Heat Transfer Through Lagged Pipe	22,565/-
		Heat Pipe Demonstartor	24,190/-
		Drop and Film Condensation Apparatus	30,000/-
		Two Phase Heat transfer Apparatus	40,000/-
		Thermal Conductivity of Insulating Powder	21,000/-
		Excise Duty @ 5%	18,122.75/-
		C.S.T 4%	15,223.15/-
		Octrio 1%	3,958/-
		Unloading	50/-
		Ultrasonicator	1,36,266/
		Brookfield Viscometer	4,44,000/
		Thermal Property Analyzer (KD2 Pro)	3,58,527/
		Magnetic stirrer and pH meter	10,240/
		Solar Thermal Training Kit	2,96,000/
		TOTAL COST	12,45,033/
8.		Industrial Engineering Lab	Anglo-swiss stop watch
	Precision Sound Level meter		7,697.00/-
	Electronic Digital Caliper		2,668.00/-
	Mechanical model kit assembled		4,370.00/-
	Ventilometer		30,420.00/-
	Spiro meter		6,760.00/-
	Metronome with bell		3,499.00/-
	Digital thermometer		4,174.00/-
	Digital Lux Meter		4,481.00/-
	Human Body Parts & charts		5,122.00/-
	Run Race		2,64,774.00/-
	Precision humidity & temperature meter		9,116.00/-
	Video Cassette Recorder		65,280.00/-
	Color T. V.		53,856.00/-
	Slide Projector		24,378.00/-
	Video Cassettes		4,720.00/-
	Starlet Digital Electronic Venire Caliper		18,800.83/-
	Vibration Meter	11,448.00/-	
	Micro motion Filming Camera	57,732.00/-	
	Electronic thermo hygrometer	3,961.00/-	

S. No.	Name of Lab	Name of Equipment	Cost of equipment (in Rupees)
		Harpenden Anthropometer (with accessories)	57,310.00/-
		Photo Electric Rotary Pursuit	50,444.00/-
		Flicker Fusion Apparatus	17,260.00/-
		Electronic depth Perception Apparatus	41,496.00/-
		E.M.G. Bio-feed back Trainer	15,288.00/-
		E.C.G. Bio-feed back Trainer	12,012.00/-
		Audio system (Akai)	39,900.00/-
		C.C.D. Monochrome Camera (ALBA)	19,000.00/-
		HDD GB Seagate	5,766.00/-
		Automatic Constant Voltage Transformer	33,280.00/-
		Automatic Constant Voltage Stabiliser 2kva	13,728.00/-
		Multimedia Projector	33,600.00/-
		Godrej Overhead Projector with screen	24,903.00/-
		Digital Tong Tester	6,831.00/-
		Digital Electronic Balance (0-5kg) L.C. 2g	7,452.50/-
		Digital Thermometer with Accessories	23,265.00/-
		Stop-Watch	971.00/-
		Spring Balance	45.00/-
		O/S Balance	100.00/-
		Schiller Cardio vit machine	67,726.00/-
		Lactate Analyser (with accessories)	3,86,545.00/-
		Fit mate Pro (with accessories)	6,71,553.00/-
		TOTAL COST	21,12,691.50
9.	Internal Combustion Engine	Single cylinder horizontal type ruston diesel engine	5,351/-
		Kirloskar single cylinder vertical diesel engine	2,187/-
		Krimo engine	2,496/-
		Single cylinder 2 stroke petrol engine	58,000/-
		Thermo gravimetric analyzer	12,08,410/-
		Variable compression ratio test set up	6,29,000/-
		Four Cylinder CRD Engine Test rig	21 lacs
		Duel Fuel Engine Test rig	22 lacs
		TOTAL COST	62,05,584/-
10.	Machine Tool Engineering Lab	Advani Orlikon make welding motor generator (with accessories)	28,169.78/-
		Addison make tool and cutter grinder	22,612.70/-
		Dault directly shaping m/c (model CLD630) with accessories	45,310.00/-
		a) Orbital Sander	8,256.68/-
		b) Circular Saw	
		c) Tapping m/c 5/16"	
		d) Bench grinder	
		Disc Sander with accessories	4,036.00/-
		Power Hacksaw (hydraulic model HS-20) with accessories	22,366.00/-

S. No.	Name of Lab	Name of Equipment	Cost of equipment (in Rupees)
		Bench grinder T6-6 (150 mm)	2,384.00/-
		Lathe tool dynamometer with accessories (model SPL)	29,512.00/-
		Drill dynamometer	14,580.85/-
		Anti vibration mountings	3,215.00/-
		Anti vibration mountings	1,396.20/-
		Vertical milling m/c (mode VM-25A)	75,805.00/-
		Radial drilling m/c (model B5/1000)	1,07,540.00/-
		a) Torque wrench	2,983.30/-
		b) Ronally Center MT-3	
		c) Ronally Center MT-4	
		d) Drill chuck MT-3, MT-4	
		Anti vibration mountings	674.56/-
		M/c Vice with swivel base	2,240.80/-
		a) 160 mm	19,693.31/-
		b) 200 mm	
		ELG air compressor	40,124.00/-
		GERRAD Air plasma m/c (model P-16A) with accessories	61,764.04/-
		Pedestal Grinder	29,500.00/-
		Carbide tool lapping grinder (TT-200)	35,750.00/-
		Collets	4,461.00/-
		a) 3mm, 4mm, 5mm, 6 mm, 8mm, 10 mm, 12mm	
		b) 14 ,16, 18, 20, 25 mm	
		c) ¼", 5/16", 3/8", ½"	
		d) 5/8", ¾", 7/8", 1"	
		Working table (wooden)	34,128.00/-
		Slide charts	1,358.00/-
		Vernier calliper	22,247.00/-
		a) 12" (300 mm)	
		b) 6" (150 mm)	
		Dial vernier calliper (150 mm/ 0.02 m)	
		Dial Indicator	
		Magnetic stand	
		Portable drilling m/c with accessories	18,753.79/-
		Center Lathe (HMT) with accessories	55,094.88/-
		TOTAL COST	6,93,956.89/-
11.	Metrology Lab	Automatic Voltage Transformer	4,461/-
		Surface Roughness Tester (Mahr)	2,23,019/-
		Profile Projector (Nikon)	3,93,548/-
		Slip Gauges	1,01,857/-
		Inside Micrometer	4,669/-
		Dial Indicator	7,789/-
		Outside Micrometer	6,708/-
		Electronic Dial Gauge	15,080/-
		Digital Vernier Calliper	5,772/-
		Vernier Depth Gauge	2,912/-
		Vernier Calliper	6,240/-

S. No.	Name of Lab	Name of Equipment	Cost of equipment (in Rupees)
		Outside Micrometer	4,568/-
		Dial Gauges	2,419/-
		Micrometer	1,698/-
		Micrometer	2,048/-
		Micrometer	2,198/-
		Inside Micrometer	6,998/-
		Inside Micrometer	7,598/-
		Screw Thread Micrometer	18,746/-
		Internal Dial Calliper	9,498/-
		Dial Bore Gauge	5,098/-
		Gear Tooth Vernier Calliper	4,898/-
		Snap Gauge	1,367/-
		Plain Plug Gauge	3,765/-
		Plain Ring Gauge	4,520/-
		Thread Plug Gauge	2,000/-
		Thread Ring Gauge	3,830/-
		Dial Bore Gauge (without Dial)	5,098/-
		Universal Bevel Protractor	8,748/-
		Comparator Stand	2,009/-
		Granite Surface Plate	18,894/-
		Vernier Height Gauge	1,672/-
		Dial Height Gauge	791/-
		Surface Plate (C.I)	1,574/-
		Precision Dial Bore Gauge	2,408/-
		Radius Gauge	1,025/-
		Digital Calliper	12,660/-
		Combination Set	2,668/-
		Sine Table	17,634/-
		Spirit Level	2,042/-
		Microhardness Tester	4,47,494/-
		Gas Cylinder Argon	34,622/-
		Vacuum Spectrometer	12,58,227/-
		Image Grabber card for micro hardness tester	10,500/
		Surface roughness tester	5,25,000/
		Double disc metallurgical polishing machine	56,678/
		Tri colour Measuring microscope	5,96,837/
		Granite Surface plate with stand	6,578/
		Ultrasonic flaw detector	2,91,638/
		Surface Profile meter	15,05,027/
		TOTAL COST	56,43,444/
12.	Non-Traditional Machining Lab	Ultrasonic Drill Machine	10,84,000/-
		Electric Discharge Machine	2,90,000/-
		Laser Beam Drilling Machine	4,73,000/-
		Ultrasonic flaw detector	2,93,000/-
		Laser cutting Machine	29,48,625/
		Air Compression machine	29,800/
		Shot blasting machine	7,87,040/

S. No.	Name of Lab	Name of Equipment	Cost of equipment (in Rupees)
		TOTAL COST	59,05,465/-
13.	Refrigeration & Air-Conditioning Lab	Refrigeration Tutor	46,449/-
		Absorption Refrigeration Tutor	42,400/-
		Working Model of Cold Storage	88,487/-
		Experimental Conditioning Unit Duct Type	1,80,571/-
		Experimental Rail Coach Trainer	1,91,003/-
		Comptuersised Cascade Refrigeration System	4,50,000/-
		Vapour Absorption Refrigeration System Three Fluid	2,05,184/-
		Vapour Compression based Ice Plant Set-Up	
		Refrigeration Cut Section Model	
		RAC Sectional Cut Model Board with Basic Control and Components	49,728/-
		Working Model of Natural draft Cooling Tower	
		Working Model of Forced Draft cooling Tower	
		Working Model of Induced Draft Cooling Tower	4,23,369/-
		Computerized Air conditioning Trainer	
		TOTAL COST	22,28,391/-
14.	Research Lab	Multimedia projector	1,94,255/-
		DELL poweredge server	55,490/-
		1 Flow vis and phoenics , 2 torision,3 trnsys ,4 cad fix	1,13,594/-
		P4 PCs	2,77,600/-
		MS OFFICE 2003 and media for office	21,920/-
		Quest software	1,70,000/-
		Scanner	6,400/-
		ANSYS S/W	6,43,500/-
		FLUENT S/W	6,50,000/-
		CEILING KIT FOR LCD PROJECTOR	5,000/-
		LBP 3300 CANON LASER PRINTER	9,500/-
		Dell vastro 220 desktop	1,44,950/-
		Dell optiplex desktop	Transferred from computer department
		TOTAL COST	20,97,954/-
15.	Sand Testing lab	Sand Muller	44,564/-
		Sieve Shaker(Quantity=02)	2,52,480/-
		Clay Washer (Quantity=02)	67,850/-
		Rapid Moisture tester (Quantity=02)	59,000/-
		Green Compression strength tester	64,000/-
		Permeability tester	24,000/-
		Mould hardness tester	09,308/-
		core hardness tester	10,556/-
		Shatter index tester	00,000/-

S. No.	Name of Lab	Name of Equipment	Cost of equipment (in Rupees)
		Laboratory rammer	10,504/-
		Universal sand testing machine (Quantity=02)	3,08,952/-
		Rapid Dryer	
		Weighing balance(Quantity=02)	
		Core baking oven (Quantity=02)	
		Combined section cutting grinding and polishing machine	22,927/-
		Higher spekker telescope	45,170/-
		Metallurgical microscope	23,540/-
		Metallurgical microscope c bake-model	17,010/-
		Density Indicator	20,500/-
		TOTAL COST	9,80,361/-
16. (a)	Solid Mechanics/ Dynamics of Machines Lab	Rockwell Hardness Tester	3,403/-
		Tensometer	1,732/-
		Tensile Testing M/c	10,740/-
		Fatigue Tester	8,379/-
		Torsion Testing M/c (Capacity 60,000 Kgcm)	31,356/-
		Universal Testing M/c (50T)	45,769/-
		Tensile Testing M/c (Capacity 5000Kgf)	42,900/-
		Electronic Universal Testing M/c (10T)	2,75,863/-
		Vickers Hardness Testing M/c	1,08,826/-
		Rockwell cum Brinell Hardness Tester	27,778/-
		Vernier Calliper	240/-
		Diamond Cone Indicator	950/-
		Steel Balls	750/-
		Dial Gauge (Range 0.01-10mm)	1,040/-
		Magnetic Stand for Dial Gauge	2,090/-
		Steel Ball Indenter (1/16" dia)	630/-
		Extensometer with two dial gauges	16,000/-
		TOTAL COST	5,78,446/-
16.(b)	DOM lab	Balancing M/c for Rotating & Reciprocating Masses	3,328/-
		Centrifugal Force Mechanism	3,395/-
		Crank & Connecting rod Mechanism	540/-
		CAM Appratus	97/-
		Motorized Gyroscope	3,373/-
		TOTAL COST	10,733/-
17.	State Initiated Design centre	Dell Optiplex 360n Desktop	1,78,500/-
		SolidWorks Education Bundle	5,00,000/-
		CNC Milling Lathe (PBG- 2048)	75,28,997/-
		Projector (Sony India)	5,00,00/-
		Air Conditioner	2,99,387/-
		Furniture (Computer Table+ computer table lab-30 seats+ chairs)	1,43,450/-
		TOTAL COST	87,00,334/-

S. No.	Name of Lab	Name of Equipment	Cost of equipment (in Rupees)
18.	Steam Engineering Lab	Simple steam engine model	185.62/-
		Single cylinder vertical steam engine	1,320.50/-
		Steam trap	200.00/-
		Unit Superheater	17,695.00/-
		Separating and throttling calorimeter	4,140.90/-
		Green wood and Batley turbine	21,024.83/-
		Non-IBR boiler model with accessories	2,90,851.58/-
		Steam trap rig	7,87,500.00/-
		D.C regulated supply	3,600.00/-
		Pneumatic conveying system	13,81,167/
		TOTAL COST	25,07,685/
19.	Vibration and Noise Lab	Vibration Measurement using Accelerometer	1,21,690/-
		Sound Level Meter with Vibration Module with Accessories & Microphone	5,54,650/-
		Universal Vibration Test Apparatus	85,000/-
		Whirling of Shaft Apparatus	27,400/-
		Stroboscope	14,800/-
		Sound Level Meter Type -1 with real time frequency analyser with Accessories	4,36,248/-
		450 kgf Vibration Exciter with accessories	12,15,000/-
		TOTAL COST	24,54,788/-
20	Mechatronics Lab	8051 students practice Board	1,67,625/
		PLC trainer kits	2,53,125/
		LEGO Mind stress education box	1,35,603/
		LEGO Mind stress education box software	5,999/
		Brick AUR Kt 333	94,500/
		LEGO Tetrix set	53,215/
		LEGO transformer 10 V DC	8,648/
		LEGO Tetrix set with sensors	5,05,370/

Details of computing facilities (hardware and software) are attached below:

S. No.	Details of the Hardware/Software	Name of the Laboratory
1.	<p>Hardware Destop Computer Core 2 Duo, 2.4 GHZ with 19" TFT Screen = 32 Destop Computer Core 2 Duo, 2.93 GHZ with 19" TFT Screen = 32 LCD Projector: 2 (one in each Lab) 3D scanner: 01 Plotter A0 size: 01 IBM Server: 01</p> <p>Software: 1. Pro/Engineer Wildfire 5.0 – University license: 500 seats I. Pro/Engineer Foundation II. Pro/Engineer (structure, thermal, Motion & Vibration analysis) III. Pro/Mesh, Pro/FEM post IV. NC Machining option (2, 3 & 5) V. Advance Surface Extension VI. Tool Design option 3. Pro desktop 8.0 4. MSDN-Academic Alliance (Operating System and Software Loaded Under MSDN-AA : Window Xp, Microsoft Access 2003, Visual Studio) 5. CATIA V 5-R10: 01 Seat 6. Mechanical Desk Top 6.0 (Power Pack): 01 Seat 7. AutoCAD LT 2000 (Drafting Package): 13 Seats 8.Virtual Engineer (Modelling Package): 01 Seat 9. SolidWorks-2009: 20 seats 10. DWG Editor: 90 seats 11. Math CAD: 01 Seat 12. HSM works: 10 Seats</p>	CAD lab-1, CAD lab-II,
2.	<p>Hardware: P-IV 3.0 GHZ Computer with 17" Screen = 10 P-IV 2.4 GHZ Computer with 15" Screen = 10 Core 2 Duo, 3.0 GHZ, Dell Vastro Destop PC, with 19" TFT= 05 Dell Server: 01 Silicon Graphics Work stations: = 03 DLP projector = 01 HP Scanner: 01 Laser Printer: 03</p> <p>Software: Quest: one seat Symantec Antivirus Corporate Edition 2010: 50 Seats Adams: one seat Edina: one seat IDEAS: one seat Flowvis and Phenics, CadFix: 01 seat Ansys analysis software:)5 seats Ansys Fluent 6.0 (CFD software): 05 seats</p>	Research lab

S. No.	Details of the Hardware/Software	Name of the Laboratory
3.	Hardware P-IV 3.0 GHZ Computer with 17" Screen = 20 LCD Projector: 01 Software: CNC Simulator for Turning Center and Milling Centers (freeware)	CAM lab
4.	Hardware: P-IV 1.8 GHZ Computer with 17" Screen = 27 P-III 600 MHZ Computer with 15" Screen = 03 Software: VRsim; Hydrasim; Hsimulator; Psimulator; RoboX	Automation lab
5.	Hardware: P-IV 3.0 GHZ Computer with 17" Screen = 01 Software Ergo-Master	Industrial Engineering Lab
6.	Hardware: P-IV 3.0 GHZ Computer with 17" Screen = 02 Laser Printer: 02 Software Variable Compression Ration Test rig software	Automobile Lab and IC Engines Lab
7.	Hardware: P-IV 3.0 GHZ Computer with 17" Screen = 03 LX-300 Dot Matrix Printer Laser Color Printer: 01 HP Multifunction Laser Printer: 01 Software Ergo-Master	Metrology Lab and Industrial Engineering Lab.
8.	Hardware: Destop Computer Core 2 Duo, 2.4 GHZ with 19" TFT Screen = 12 Dell Precision Workstation Labtops = 2 Software CNC simulator, and Machine interface software for Three Axis Ornamental wood Carving Milling Lathes: 06 Seats SolidWorks-2009: 10 Seats HSM works: 10 Seats	State Initiated Design Centre

Laboratory space, working condition of instruments are provided in the following table

Sr. No	Core Lab Description	Existing Space Area (Approx. Sq feet)	Space Area (Sq m.)	No. of students	No. of experiment/assignment	Quality of equipment	Lab Manual
1	Automation Lab	32x39 = 1248	80	30	11	Very Good	Available
2	CAD Lab-I	32x29 = 928	60	30	12	Very Good	Available
3	CAD lab-II	32x24 = 768	50	30	12	Very Good	Available
4	CAM Lab	32x24 = 768	50	30	1	Very Good	Available
5	Fluid Machinery Lab	71x39 = 2769	178	30	09	Very Good	Available
6	Heat & Mass Transfer Lab	60x21 = 1260	81	30	15	Very Good	Available
7	Industrial Engineering and Metrology Lab	60x20 = 1200	78	30	12	Very Good	Available
8	Internal Combustion Engine, and Automobile Engineering	71x39 = 2769	179	30	07	Very Good	Available
9	Machine Tool Engineering Lab	36x27 = 972	63	30	12	Very Good	Available
10	Mechatronics Lab	22x23 = 506	33	30	10	Very Good	Available
11	Non-Traditional Machining Lab	20x15 = 300	20	30	05	Very Good	Available
12	Refrigeration & Air-Conditioning Lab	60x21 = 1260 + 19x29 = 551	117	30	10	Very Good	Available
13	Sand Testing lab	29x20 = 580	38	15	10	Very Good	Available
14	Soft Computing Lab	22x9 = 198	12	10	Research Lab	Very Good	Available
15	Solid Mechanics/ Dynamics of Machines Lab, and Vibration and Noise Lab	71x39 = 2769	179	30	09	Very Good	Available
16	State Initiated Design Center for Ornamental Wood Carving	198x30 = 5940	384	30	Research Lab	Very Good	Available
17	Steam Engineering Lab	80x59 = 4720	305	30	07	Very Good	Available

39. List of doctoral, post-doctoral students and Research Associates

List of Post-Doctoral students-----Nil

Research Associates -----Nil

List of doctoral students

a) from the host institution/university

b) from other institutions/universities

This information is provided in the following tables:

List of Ph.D. students from host institution (2009 onwards)

S. No.	Name of Student	Ph.D. Reg. No.	Status (Regular/PT)
1.	Mr Sandeep Sharma	90608503	Part Time
2.	Mr. Ravindra Pratap Singh	90708507	Part Time
3.	Mr. Deepak Bhandari	950808001	Part Time
4.	Mr. Deepak Jain	950808007	Part Time
5.	Mr. Ravinder Kumar Duvedi	950808011	Part Time
6.	Mr. Ajayinder Singh Jawanda	950808012	Part Time
7.	Mr. Supreet Singh	950908005	Part Time
8.	Mr. Kishore Khanna	950908006	Part Time
9.	Mr. Anish Kumar	950908010	Part Time
10.	Mr. Pakesh Bansal	950908011	Part Time
11.	Mr. Susheel Kumar Mittal	950908016	Part Time
12.	Mr. Daljet Singh	951008006	Part Time
13.	Mr. Gagandeep Singh	951108002	Part Time
14.	Mr. Mohit Garg	901208001	Regular
15.	Mr. Gautam Setia	951208002	Part Time
16.	Ms. Rashmi Arora	901208002	Regular
17.	Gurpinder Singh Dhindsa	901308004	Regular
18.	Sohan Lal	951308002	Part time

List of Ph.D. students from other institution (2009 onwards)

S. No.	Name of Student	Ph.D. Reg. No.	Status (Regular/PT)
1.	Mr. V. Sita Ram Prasad	90708501	Part Time
2.	Mr. Satish Kumar	90708502	Part Time
3.	Mr. Kapil Gupta	950808003	Part Time
4.	Mr. Rajeev Kamal Sharma	950808004	Part Time
5.	Mr. Sanjeev Kumar	950808005	Part Time
6.	Mr. Amit Sarda	950808006	Part Time
7.	Mr. Sarabjeet Singh	950808009	Part Time
8.	Mr. Sivakoti Shyam Kumar	950808010	Part Time
9.	Mr. Ishbir Singh	950908001	Part Time

S. No.	Name of Student	Ph.D. Reg. No.	Status (Regular/PT)
10.	Mr. Ashish Malik	950908001	Part Time
11.	Mr. Sumeet Sharma	950908003	Part Time
12.	Mr. Pramod Kumar Purandare	950908018	Part Time
13.	Mr. Hemant Kumar	951008001	Part Time
14.	Mr. Charanjit Singh Kalra	951008002	Part Time
15.	Mr. Kundan Lal	951008005	Part Time
16.	Mr. Vikas Sharma	951108001	Part Time
17.	Mr. Devender Kumar	951108003	Part Time
18.	Mr. Arvind Kumr Kaushal	951108006	Part Time
19.	Mr. Karanbir Singh	951208001	Part Time
20.	Ms. Anu Mittal	951208003	Part Time
21.	Mr. Manjeet Singh	951208004	Part Time
22.	Mr. Rajmeet Singh	951208005	Part Time
23.	Mr. Jatinder Kataria	901208003	Regular
24.	Mr. Atul Sharma	951308001	Part Time
25.	Mr. Satnam Singh	901308001	Regular
26.	Mr. Gurmeet Singh	901308002	Regular

40. Number of post graduate students getting financial assistance from the university.

Category	Year	Numbers
Post graduate students getting financial assistance	2008-09	7
	2009-10	4
	2010-11	19
	2011-12	53
	2012-13	81
	2013-14	36 (5-TEQIP-II,31 GATE)
	2014-15	71 (15-TEQIP/Uni, 56 GATE)

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.

New programs are developed on criterias based on: (a) relevant, contemporary and cutting age technology; (b) industrial and scientific requirements of skilled human resources; (c) placement prospect of graduates. These are achieved through study of programs undertaken by other institutes of national and international repute, feedback from current students and alumni representatives, discussion within faculty and governing bodies and seeking appropriate accreditation of the program.

42. Does the department obtain feedback from

- a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

The department faculty members are members of various academic bodies such as Department Academic Affairs Committee, Board of Studies, Senate Undergraduate Committee and the Senate. The faculty provides feedback on academic and curriculum matters as members of these committees. Faculty members also routinely provide feedback and suggest improvements to the academic program at formally scheduled faculty meetings as well as other discussions forums with the department head and other meetings convened by the Dean/Director. Faculty members also write their self-appraisal forms for the year and provide suggestions for improvement of the program. The faculty members participate in Program Risk Assessment group to carry out SWOT (Strengths, weaknesses, opportunities and threats) assessment. Based on this assessment, a risk management program is currently underway. The faculty are encouraged to set targets for themselves for the year and their progress is periodically monitored and rewarded through a performance incentive scheme. The scheme is a unique methodology developed especially for educational institutions to objectively measure an individual's performance. Faculty members review the objectives and the conduct of the academic programs, possible changes, and the progress of the department in many areas during monthly meetings.

- b. students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Student Response Survey (SRS)

Student Response Survey is completed for every course in each semester to get a formal feedback from students for the courses offered in a semester and provide objective information to the faculty for self-appraisal, self-improvement & development. Formal student feedback is obtained online through semester-by-semester mandatory course evaluation using course reaction survey form and also through discussions with individual students as well as student representatives on the Student Consultative Committee (SCC). The Student Response Survey results are made available to the individual faculty member for his feedback. The detailed feedback report on each course is available to the department head, dean and the Director. This feedback is generally for self-improvement of the faculty. However, in cases when there is an issue which has been repeated or some feedback needs immediate attention, action is taken as appropriate. Also faculty members also provide useful feedback as part of their annual appraisals or during promotion reviews. Summaries of the results are open information and available to the department head. Faculty may report more information from the surveys to the department head, and often do as a part of annual reviews and tenure/promotion reviews.

- c. Alumni and employers on the programmes offered and how does the department utilize the feedback?

It is believed that the perception of students change from the time of graduation to some point in their respective careers as they get more matured and has learnt tricks of the trade on the job. At this point of time, they are in a better position to provide more valuable and objective feedback on the learning in their undergraduate program and also how much of the student outcomes (on some scale) have actually been possible. To obtain this information, a survey was conducted for practicing alumni who graduate during the last 2 to 5 years. This survey like the graduating student survey were targeted at the program outcomes achieved. Again, the respondents were asked to rate each outcome on a given scale. The findings of the survey are being processed and will be used for effecting improvements in the program to achieve the program educational objectives and program outcomes.

43. List the distinguished alumni of the department (maximum 10)

44.

Sl No.	Name	Year Of Graduation	City	Country	Position/Organization
1	Valinder Singh Mangat	1986	Virgina	USA	Ceo, Oss Management Inc.,Virginia-20165
2	Punit Gera	1987	Ontario	Canada	Collection Officer
3	Taranjit Singh	1985	New Delhi	India	Icas, Deputy Controller Of Accounts
4	Neeraj Kansal	1984	New Delhi	India	Irs, Joint Commissioner Customs
5	Jayant Davar	1980	Gurgaon	India	Managing Director, Sandhar Locking Devices Ltd., 3, Hsidc, Indl Area, Delhi Road
6	Sanjeev Kumar Gupta	1995	Patiala	India	Engineer, Engineers India Ltd., New Delhi-110 066
7	Jagat Bir Saluja	1990	Gurgaon	India	Deputy General Manager-Opera
8	Vikas Taneja	1989	Faridabad	India	Manager, General Motors India Ltd., Sec.11, Faridabad
9	Madhav Mukand Malhotra	1987	Panchkula	India	Chief Manager- Operations, Escorts Mobile Communications Ltd.
10	Gajinder Singh Bains	1980	Faridabad	India	Vice President, GE Motors India Ltd., Sec.11, Model Town, Faridabad

45. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

Title Of Special Lectures /Workshops/ Seminars	Source Of Funding	Coordinator(S)
Non-Traditional Manufacturing Processes 12th March, 2010, MED, TU	UGC-SAP	Dr. S. K. Mohapatra Dr. Ajay Batish
TU-UW-IIP , 29th January - 20th April 2010	University Of Waterloo	Dr. Ajay Batish And Mr. A. S. Jawanda
Computational Fluid Dynamics, 21st To 22nd February, 2010, MED, TU	TU	Mr. Satish Kumar
Recent Development In Energy Conversion Technology, NWRDEC-2010, 22nd And 23rd March, 2010, MED, TU	DST	Mr. Satish Kumar
Engineering Applications Of Graph Theory, 27th March, 2010, MED, TU	TU	Prof. V. P. Agrawal Mr. Devender Kumar
Solidworks Core Concepts In CAD- Training Program In MED. Training By Ideas Design Solutions, Gurgaon, 21st To 24th September 2009	Ministry Of Textiles GOI	Mr. A. S. Jawanda
CAE Using Solidworks-Training Program In MED, 30th November 2009 To 3rd December 2009	Ministry Of Textiles GOI	Mr. A. S. Jawanda
Advances In Pro-E Wildfire 5.0, 15th To 16th May 2010	TU	Mr. A. S. Jawanda
One Day Short Term Program On "Introduction And Working With 3-Axis CNC Wood Carving Machine" To A Group Of Carpenters And Artisan In Patiala, 23rd February, 2010, State Initiated Design Centre, MED, TU	Ministry Of Textiles, GOI	Mr. R. K. Duvedi
One Day Short Term Program On "Introduction To CAD CAM Technology" To A Group Of Carpenters And Artisan, In Patiala, 15th February, 2010, State Initiated Design Centre, MED, TU	Ministry Of Textiles, GOI	Mr. R. K. Duvedi
Workshop On 2 Stroke Engine Assembly And Disassembly, 25 Sept, 2009, TU, Patiala	TU	Mr. Daljeet Singh
ICTME-2011, 24th -26th February, 2011		Mr. Satish Kumar, Dr. Rahul Chhibber
Two Days Training Programme On Rheology, 13-14, April, 2011, Thapar Institute of Engineering & Technology University, Patiala		Mr. Satish Kumar
One Day Work Shop On "Advanced Manufacturing Processes" , March 16, 2012, Mechanical Engineering Deptt., TU Patiala.	UGC-SAP	Dr. S. K. Mohapatra Dr. Ajay Batish
TEQIP Sponsored Three-Day Short Term Training Program On Advanced Robotics: Design, Planning And Control (STTPAR-2013) MED, Thapar Institute of Engineering & Technology University, Patiala, Punjab, India, Held During March 21-23, 2013.	TEQIP-II	Dr. Tarun Kumar Bera And Dr. Ashish Singla
One Day Workshop On "Introduction To Solid Works 3d Mechanical Cad". Trainers Sponsored From Idspl. 22 September 2012. Under SIDC, Mechanical		Mr. Ajayinder Singh Jawanda

Title Of Special Lectures /Workshops/ Seminars	Source Of Funding	Coordinator(S)
Engineering Dept. TU Patiala.		
Ten Days Expert Lectures And Trainings On The Area Of Design Innovation. By Dr. Sanjeevbedi, Professor Mechanical And Mechatronics Engineering Department, University Of Waterloo, Ont, Canada. 10 Days - 25 June To 8 July 2013, State Initiated Design Centre(SIDC LAB), MED, TU Patiala.	TEQIP-Phase II	Mr. Ajayinder Singh Jawanda
Material Tailoring In Functionally Graded Structures	TEQIP-II And United States-India Educational Foundation (USIEF)	Devender Kumar And Dr. Hiralal Bhowmick
Structural Analysis Using ANSYS "SAA-2013" From 16th - 20th December, 2013 At MED, Thapar Institute of Engineering & Technology University, Patiala	TEQIP-II	RK Devedi SK Sharma
Workshop On Basics And Application Of Computational Fluid Dynamics,30-31, August 2013	TEQIP	Mr. Satish Kumar
Hands On Training Of Computational Fluid Dynamics,18th -20th October, 2013	TEQIP	Mr. Satish Kumar
Exposition To Research Areas In Vibration And Noise	TEQIP	Dr. S.P. Nigam
International Conference on Powder, Granule and Bulk Solid: Innovations and Applications (PGBSIA 2013), November 28-30, 2013, Thapar Institute of Engineering & Technology University	DST,CSIR,TEQIP, BMEA,Fujian Longking,Mecgale Pneumatics etc.	Dr. S.S.Mallick
Prof. Gurvinder S. Virk (Professor of Robotics and the Built Environment, University of Gävle, SE-801 76 Gävle, SWEDEN) has delivered a couple of expert talks in the field of Robotics. Schedule:Venue : C-Hall, Day 1: Feb 5, 2015,3-4 PM : Talk (Past, Present and Future trends of Robotics). Day 2: Feb 6, 2015,9-10 AM: Talk (Research directions in Robotics	TU	Dr. Ashish Singla

46. List the teaching methods adopted by the faculty for different programmes.

Teaching and learning is divided in lecture, tutorial and laboratory components to impart theoretical, problem solving and practical knowledge and skills. The students are provided assignments (on individual/group basis) to develop independent thinking/approach to tackle problems related to the subject. Teaching aids:

- All the class rooms were equipped with facilities like black board, fans, tube lights, benches, chairs and podium.
- Some class rooms are fixed with LCD projectors for conducting presentation sessions.
- Internet connection is provided in every class to enable presentation of online information.
- Department has got one Seminar room fitted with LCD TV to enable presentations.

- Department has got one moveable LCD projector also.

47. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

For every course/subject, course files are prepared and maintained by the faculty/department, where the course objectives are outlined (aligned with program objectives). The course deliveries are mapped to ensure conformity with these objectives. In addition, the evaluation procedures are designed and executed in line with program objectives (i.e. regular evaluation of assignments - performed individually/groups, a committee to review question papers for mid and end semester tests to ensure quality check and completion of syllabus). Feedbacks are obtained from students/graduates to ensure that the overall learning (outcomes) is in accord with program objectives.

48. Highlight the participation of students and faculty in extension activities.

The students and faculty are engaged in the following extension activities:

REC-Renewable Energy Club

The purpose of the club is to create awareness about New and Renewable Sources of Energy (NRSE), its various systems and devices among the students especially those of engineering Colleges, Ministry of non-Conventional Energy Sources (MNES) has approved to set up a "Renewable Energy Club" at TU, Patiala. Activities: Go-green events, Seminars, Short term courses for students.

SAE-Society of Automotive Engineers

The purpose of the society is to create awareness among the students about new technologies in the automotive industry. Activities: Expert Lectures, Seminars, quizzes .

SOMIE-Society of Mechanical and Industrial Engineers

The purpose of the society is to give more practical technical knowledge to the students for their overall development as the quality engineers. Activities: Two and Four stroke Engine Assembly disassembly competitions, Technical Drafting Competitions, Technical Seminars, Technical quizzes, Industrial trips.

ASHRAE-American Society of Heating, Refrigerating and Air-Conditioning Engineers

It allows access to information about state-of- the-art HVAC&R technology and provides many oppurtunities to participate in the development of that technology. Activities: Workshops, Expert Lectures, Technical Events, Industrial Vists etc.

Additional activities:

- Two teams (Team Road Runners & Team Nebula) had participated in Elite Karting 2015/EK-14 Competition, which was held on RPM Racing Circuit, Bhopal, Madhya Pradesh from 25th February 2015 to 28th February 2015. This event was organized by Elite Techno Groups in association with F1 Racing Marshalls. This is a national go-kart designing and

fabrication competition with students participating from all over our country. The team "Road Runners" was formed by the students of 2nd Year Mechanical Engineering, Thapar Institute of Engineering & Technology University to take part. Team "Road Runners" had successfully showcased their design and performance in the Event and secured the overall rank of 16th in INDIA out of 133 participating teams.

- Team GRENADIERS had participated in a ROBOWARS competition of the tech fest "COGNIZANCE", organised by IIT Roorkee, held from March 27 to March 29, 2015.
- A team from Robotic Society had participated in an event "Techkriti", held on 19th-22nd March 2015, at IIT Kanpur

Formula-I Student Car Racing Competition at International Level". Major highlights:

- Instituted by Toyota
- Silverstone, UK

Hybrid Car Won 3rd Prize at Torino, Italy (2010-11)

- Dual Power supply
- Engine coupled to alternator
- Energy to battery and engine
- Even the energy wasted due to brakes is regenerated to charge batteries, thus enhancing fuel efficiency

Participation in NASA, The Great Moon Buggy Real, Hunisicille, Alabama (2012-13).

Schedule of activities:

Year 2012-13	Year 2011-12	Year 2010-11
Formula Student Germany 2013 Hockenheim Ring, Hockenheim Germany	Formula-I Student Car Racing Silverstone, UK	Formula-I Student Car Racing -an International Event at Silverstone, UK
Formula Student Czech Republic 2013 Czech Ring Hradec Kralove, Czech Republic		Formula Hybrid Car Hybrid Car Won 3rd Prize at Torino, Italy
NASA, The Great Moon Buggy Real, Hunisicille, Alabama		ASIA level event at Nasik Team Autogeeks

48. Give details of "beyond syllabus scholarly activities" of the department.

The department has been actively in the following activities:

Name of Society	CAYm1 (2012-13)	CAYm2 (2011-12)	CAY m3 (2010-11)
Renewable Energy club (REC)	Visit to Thermal Power plant	Visit to Thermal Power plant	Visit to Punjab Development Agency ,Chandigarh

Name of Society	CAYm1 (2012-13)	CAYm2 (2011-12)	CAY m3 (2010-11)
	Poster and Technical Papers Writing	Slogan Competition on Renewable Energy Sources	Innovative Writing Competition:
	Quiz on renewable Energy	Seminar on Renewable Energy Sources	Poster and Technical Papers Writing
		Models Blow-ups Competition on Renewable Energy Sources,	Quiz on renewable Energy
			One day training on Computational Fluid Dynamics
Society of Mechanical & Industrial Engineering (SOMIE)	Engine Assembly Workshop	Soap Cutting Competition	Expert Lecture by US embassy officials
	Soap Cutting Competition	Tetrix	Engine Assembly Workshop
	Tetrix		Soap Cutting Competition
American Society for Heating refrigeration and Air conditioning Engineers (ASHRAE)	A Seminar on ASHRAE Student Chapter, India by experts from ASHRAE	Expert lecture ASHRAE Student Chapter, India by experts from ASHRAE	
	A Workshop on Automotive Air conditioning by experts from ASHRAE Student chapter, India	ASHRAE orientation programme for 1 st year students	
	ASHRAE orientation programme for 1 st year students		
Society of Automotive Engineers (SAE)		International Formula Racing Car event at Sliverstone (UK)	International Formula Racing Car event at Sliverstone (UK)
			International Hybrid Car competition in Italy

49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details.

The Mechanical Engineering (B.E.) program is accredited by NBA

1. F. No. NBA/24 BRD/ATR/2002, dated 06-05-2002 (for Five Yeras)

2. No. NBA/AACR-870/06, January 22, 2008(For five years)

Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

Generating New knowledge	Developing Basic Idea	Developing Applied Idea
<ul style="list-style-type: none"> • Development of the Mechatronics Lab to provide inter-disciplinary knowledge • Established a new course and a laboratory in the area of Vibrations and Noise • Introduced new courses at PG level to impart the knowledge of modelling & simulation, Controls and Optimization of Mechanical Engineering Students • Development of pneumatic conveying laboratory that generated new fundamental and applied knowledge on particle-air interactions 	<p>Conducted many short term programmes for developing the basic ideas in Vibrations and Noise</p>	<ul style="list-style-type: none"> • Training to students on new research tools like MATLAB • Research in the new area of noise

50. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

SWOT ANALYSIS: DEPARTMENT OF MECHANICAL ENGINEERING, THAPAR INSTITUTE OF ENGINEERING & TECHNOLOGY UNIVERSITY, PATIALA

<p>STRENGTHS:</p> <ul style="list-style-type: none"> • Young and dedicated faculty • Quality intake at UG and PG level • Well equipped UG labs • Periodic curriculum review • Hands on training through project semester • Uniformly good placement record for UG and PG students. • Transparent evaluation system • Accredited for 5 years by NBA and ISO 9001-2008 certified department • Publication in national & international journals •
<p>WEAKNESSES:</p> <ul style="list-style-type: none"> • Very few senior faculty members • 35-40% faculty working for their PhD degree • Inadequate technical manpower • Shortage of space for new and regular labs. • Lack of research lab in the department having international standard • PG and research infrastructure needs upgradation. •

OPPORTUNITIES:

- Completion of PhD by existing faculty
- Funding through research projects.
- Scope for development of new labs.
- To be a QIP center for other institutes
- Industry participation in lab and curriculum design
- Scope for collaboration with national and international organizations.
- Consultancy

THREATS:

- Regulatory measures
- Increased government support to other institutes
- Competition with established players
- Foreign players likely to arrive – further increase in competition
- Cost of state of art lab setup/up-gradation is high
- Experienced technical staff shifting to other institutes

51. Future plans of the department.

- To setup research labs in each thrust area identified
- To have more regular PhD students in the department
- To increase consultancy activities