

## CURRICULUM VITAE

**Dr. Balbir Singh**, Associate Professor

Date of Birth: 10<sup>th</sup> April, 1966

Email: balbir.isst@smvdu.ac.in, balbirsingh.me@gmail.com

Mobile: 9906224982

### 1. Educational Qualification

#### a. Academic:

Sl. No.	Exam.	Year of passing	University/Board	Division
1.	Matric	1982	J&K Board	1 <sup>st</sup>
2.	Higher Secondary	1984	J&K Board	1 <sup>st</sup>
3.	BA	1987	Jammu University	1 <sup>st</sup>
4.	MA (Pol. Sc.)	1992	Osmania University	2 <sup>nd</sup>
5.	DBM	1997	Pune University	1 <sup>st</sup>

#### b. Technical:

1.	Diploma in Mechanical Engg	1989	MTI, IAF Chennai	1 <sup>st</sup>
2.	AMIE	1996	IE (I) Kolkata	2 <sup>nd</sup>
3.	M.Tech. (Production)	2002	P.T.U Jalandhar	1 <sup>st</sup>
4.	Ph.D. (Production)	2016	NIT Kurukshetra	Awarded

#### c. On line Course (MOOC):

- i. ET601Tx: Educational Technology for Engineering Teachers”, 07 Jan - 07 Mar, 2016 from IIT Bombay.
- ii. edX : TUMx’s QPLS1x Six Sigma : Define and Measure, 08 week Course from w.e.f. 01Jun 2017 from Technical University of Munich (TUM), Germany.
- iii. edX : TUMx’s QPLS2x Six Sigma : Analyze, Improve, control, 08 week Course from w.e.f. 01Oct 2017 from Technical University of Munich (TUM), Germany.
- iv. edx: TUMx’s QPLS3x: Lean Production, 06 week Course from w.e.f. 01 Feb 2018 from Technical University of Munich, Germany.
- v. Completed “Technical University of Munich Lean Six Sigma Yellow Belt” after completing 22 weeks Professional Series of course on “Six Sigma and Lean: Quantitative Tools for Quality and Productivity” through the edX, Apr 2018.
- vi. IITBombayX: FDP101x Foundation Program in ICT for Education, Apr 2018

#### d. Professional Certification:

- i. Six Sigma Green Belt (Indian Statistical Institute, New Delhi)
- ii. Internal Auditor for QMS, EMS, OHSMS (NITS BIS, Noida)
- iii. Ultrasonic Testing Level-II (MSME TDC Agra)
- iv. ZED Master Trainer, Quality Council of India (QCI)
- v. Technical University of Munich Lean Six Sigma Yellow Belt

## 2. Work Experience:

Sl. No	Organization	Designation	Period	Nature of Work
1.	Indian Air Force	Sergeant	16 Jul 1984- 04 Sep 2000	Maintenance of Avionics equipment
2.	Lingaya's Institute of Mgt. & Tech., Faridabad (LIMAT)	Lecturer	08 Jan 2001- 18 Dec 2004 17 Jan 2005- 16 Jul 2006	Teaching UG
3.	M.B.S college of Engg. & Tech. Jammu	Lecturer	02 Jan 2004 - 16 Jan 2005	Teaching UG
4.	Gold Field Institute of Tech & Mgt, Faridabad (GFITM)	Asst. Professor	17 Jul 2006- 03 Apr 2007	-Teaching UG -HOD
5.	Shri Mata Vaishno Devi University, Katra, Jammu	Asst. Professor	04 Apr 2007 and onward	-Teaching UG and PG -HOD & as faculty member
6.	Shri Mata Vaishno Devi University, Katra, Jammu	Associate Professor	01 Mar 2017	-HoD till 25 Jan 2018 -Teaching UG and PG

## 3. Subjects Taken:

Level	Field	Subjects
B.Tech. (Mechanical Engg.)	Production	-Manufacturing Process -Machining Processes -Material Science and Engineering -Engineering Graphics - Machine Drawing -Automobile Engineering -Statistical Quality Control
B.Tech. (Mechanical Engg.)	Thermal	-Thermodynamics - Thermal Engineering - IC Engine - Fluid Mechanic
B.Tech. (Mechanical Engg.)	Electives	- Automobile Engineering - Maintenance Engineering - Computer Integrated Manufacturing System (CIMS)
M.Tech. (Manufacturing & Automation)	Production	- Maintenance Engineering - Advanced Machining Processes - Quality and Reliability Engineering - Foundry Technology - Computer Integrated Manufacturing System (CIMS)
Ph.D. Course Work	Production	- Micro Machining Processes - Advanced Machining Processes

#### 4. Short Term Course/Seminar/Workshop attended

Sl.No	Course Description	Hosting Institution	Time Period
1.	Experimentation Methods & Analysis	Applied Mech. Deptt., IIT Delhi	01- 12 Jul 2002
2.	Development of Attitude, Behaviour & Non Technical Competencies in Engineering Students	Technical Teachers' Training Institute, Chandigarh	06 - 10 Jan 2003
3.	Non Traditional Machining Processes	Mech. Deptt, Thapar Institute of Engg. & Tech, Patiala, Punjab	17-18 Mar 2006
4.	Emerging Trends in Modern Manufacturing	Beant College of Engg. & Tech., Gurdaspur, Punjab	26-30 May 2008
5.	Micro and Nano Composite Materials	Mech. Deptt. NIT Hamirpur, HP	28 Dec 2009 - 01 Jan 2010
6.	Perspectives of Metal Cutting : Present and Future	Ind. & Production Engg. Deptt., NIT Jalandhar, Punjab	12-16 Jul 2010
7.	Introduction to MATLAB and Matrox Imaging Library (MIL) with Emphasis on hands on Practice (WMMIL'11)	School of Electronics and Communication Engineering, SMVDU	16-29 Dec 2011
8.	Innovation in Maintenance Management	Mech. Engg. Deptt., IIT Delhi	21-25 May 2012
9.	Introduction to Research Methodology	National Mission on Education through ICT (NMEICT) (MHRD, GOI) Conducted by IIT Bombay at SMVDU	25 Jun – 04 Jul 2012
10.	Aakash for Education	Two day ISTE workshop by IIT Bombay under NMEICT conducted at SMVDU	10-12 Nov 2012
11.	Condition Monitoring of Plant and Machinery	TEQIP sponsored STC at Mech. Deptt., NIT Hamirpur, HP	17-21 Jul 2013
12.	Engineering Mechanics	NMEICT (MHRD, GOI) Conducted by IIT Bombay at SMVDU	26 Nov- 06 Dec 2013
13.	Optimization Techniques	NITTTR, Chandigarh	11-15 Aug 2014
14.	Advanced Material Characterization	Applied Mechanics Deptt., IIT, Delhi.	12-14 May 2015
15.	Product Design and Innovation Workshop	IIT Mandi, HP	18-19 Dec 2015
16.	CNC Machines: Operation and Programming	NITTTR Chandigarh	18-22 Jan 2016
17.	New trends in Industrial Engineering (NITE 2016, TEQIP-II)	NIT Surat	1-5 Jul 2016
18.	11 National Quality Conclave on 'Improving Quality for our 1.2 billion citizens	Quality Council India, New Delhi	19-20 Aug 2016

19.	Nature Inspired Optimization'	Department of Electronics and Communication, MNIT Jaipur	21-23 Oct 2016
20.	DST-NIMAT sponsored FDP on Entrepreneurship Development	EDC, SMVDU, Katra	12-24 Dec 2016
21.	Sig Sigma Green Belt Training Program	Indian Statistical Institute, New Delhi	24-26 May 2017
22.	Internal Audit Training Programme on Integrated Management System(QMS, EMS, OHSMS)	NITS, Noida Bureau of Indian Standard	11-13 Jul 2017
23.	NBA Accreditation workshop by ESCI, Hyderabad	IE(I) Jammu Chapter, Channi Himmat Jammu	8 <sup>th</sup> -10 <sup>th</sup> Dec 2017
24	Ultrasonic Testing Level-II	MSME TDC, Agra at SMVDU, Kakryal	13 <sup>th</sup> -17 <sup>th</sup> Dec 2017
25.	University Enterprise Architecture Framework, Regional Workshop	NIC at ICSSR Panjab University, Chandigarh	12 <sup>th</sup> Jan 2018
26	ZED Master Trainer Training	QCI empanelled Allied Boston at Topic Institute, Gurugram, Haryana	15 <sup>th</sup> -19 <sup>th</sup> Jan 2018
27	TEQIP-III sponsored FDP on Sustainable Design and Manufacturing (SDM-2018)	School of Mechanical Engineering, SMVDU, Kakryal, J&K	12 <sup>th</sup> -16 <sup>th</sup> Feb 2018
28	TEQIP-III sponsored 2 days' workshop on "NBA Accreditation"	SMVDU, Kakryal, J&K	23 <sup>th</sup> -24 <sup>th</sup> Feb, 2018
29	TEQIP-III sponsored 5 days Professional Development Training Program	IIM Udaipur	14 <sup>th</sup> -18 <sup>th</sup> May, 2018

#### 5. National Conference/Conclave/Workshop Organized:

- i. 5 days ICT based workshop on 'Recent Trends in Automobile Engineering from 29 Feb 16 to 04 Mar 2016 from NITTTR Chandigarh in Department of Mechanical Engineering, SMVDU.(Participants: 65)
- ii. Teachers Day Celebration on 05 Sep 2016 at University level for faculty members and section heads of SMVDU (Participants: 130).
- iii. One day workshop on 'Professional Development Program on Enhancement of Computer Skills' for Non-Teaching staff of SMVD on 16 Oct 2016. (Participants: 67)
- iv. National Conference on Innovative Trends in Mechanical Engineering-NCITME 2017 in association with Indian Institution of Industrial Engineering, Navi Mumbai in Department of Mechanical Engineering, SMVDU, March 3-4, 2017.
- v. Industrial Academia Conclave (IAC-2017) conducted in SMVDU, March 04, 2017
- vi. Skill Development 5 Days MSME Workshop on 'Ultrasonic Testing Level-II in Department of Mechanical Engineering, SMVDU, 13<sup>th</sup> – 17<sup>th</sup> Dec 2017.
- vii. Coordinated 2<sup>nd</sup> Industrial Academia Conclave (IAC-2018) in SMVDU, 27 April, 2018.

## 6. Expert Lecture Delivered

- i. Delivered expert lecture on Topic “Teaching how to Teach (Introduction to EKLAVYA Technology Channel) on 29<sup>th</sup> May 2008 during AICTE-ISTE sponsored Short Term Training Programme on “Emerging Trends in Modern Manufacturing” from 26<sup>th</sup>-30<sup>th</sup> May 2008 at Beant College of Engg. & Tech., Gurdaspur, Punjab.
- ii. Wood craft and Technology: guest lecture taken in one day workshop on Human Resource Development Scheme on 11 May 2009, sponsored by Ministry of Textile.
- iii. Delivered lecture on “Appropriate Climate: Responsive technologies for inclusive growth and sustainable development” on the theme given by Institution of Engineers, Kolkata for the year 2012 on Engineer’s day celebrated on 14 Sep 2012 at SMVDU.
- iv. Lecture delivered on “Quality Improvement in Higher Educational Institution” on Teachers Day Celebration at university level on 05 Sep 2016.
- v. Lecture delivered on “How to Improve Performance in Office” in one day IQAC, SMVDU workshop on ‘Enhancement of Soft Skills’ for Non Teaching Staff on 05 Nov 2016.
- vi. Lecture delivered on “Project Planning” at DST-NIMAT Project Sponsored National Entrepreneurship Development Program, 27<sup>th</sup> Nov- 23<sup>rd</sup> Dec, 2017 at SMVDU.
- vii. Lecture delivered on “Quality Control” at DST-NIMAT Project Sponsored National Entrepreneurship Development Program, 27<sup>th</sup> Nov- 23<sup>rd</sup> Dec, 2017 at SMVDU.
- viii. Lecture delivered on “Quality Control Trends in Industries” in FDP on Sustainable Design and Manufacturing (SDM-2018), 12<sup>th</sup> Feb – 16<sup>th</sup> Feb 2018.

## 7. Publications- International Journal:

- i. Mohd. Junaid Mir, Khalid Sheikh, Balbir Singh and Navdeep Malhotra, “Modeling and analysis of machining parameters for surface roughness in powder mixed EDM using RSM approach” International Journal of Engineering, Science and Technology Vol. 4, No. 3, 2012, pp. 45-52.
- ii. Balbir Singh, Jatinder Kumar and Sudhir Kumar, “ Investigating the influence of Process Parameters of ZNC EDM on Machinability of A6061/10% SIC composite” Advances in Materials Science and Engineering, Volume 2013, doi.org/10.1155/2013/173427. ISSN: 1687-8442 (SCI indexed, Hindawi Publishing)
- iii. Balbir Singh, Jatinder Kumar & Sudhir Kumar, “Experimental Investigation on Surface Characteristics in Powder-Mixed Electro discharge Machining of AA6061/10%SiC Composite” Materials and Manufacturing Processes, 29: 287–297, 2014 (SCI indexed, Taylor & Francis Group).
- iv. Balbir Singh, Jatinder Kumar & Sudhir Kumar, “Influences of Process Parameters on MRR Improvement in Simple and Powder Mixed EDM of AA6061/10%SiC ” Materials and Manufacturing Processes, DOI:10.1080/10426914.2014.93088 (SCI indexed, Taylor & Francis Group).
- v. Balbir Singh, Jatinder Kumar and Sudhir Kumar, “Optimization and surface modification in electrical discharge machining of AA 6061/SiC<sub>p</sub> composite using Cu-W electrode. Proc I MechE Part L: Journal of Materials: Design and Applications 0(0) 1-17 DOI: 10.1177/1464420715596544” (SCI indexed, SAGE Publication).
- vi. Balbir Singh, Jatinder Kumar, and Sudhir Kumar, “Investigation of the Tool Wear Rate in Tungsten Powder-Mixed Electric Discharge Machining of AA6061/10%SiC<sub>p</sub> Composite” Materials and Manufacturing Processes, 0: 1–11, 2015, DOI:

- 10.1080/10426914.2015.1025965, (SCI indexed, Impact factor : 1.486, Taylor & Francis Group).
- vii. Akshay Bhat, Ashutosh Jha, Balbir Singh and Deepak Byotra, "Optimization of Machining Parameters in Turning Operation of EN13 Steel using Response Surface Methodology" International Journal of Engineering Technology, Management and Applied Sciences, March 2015, Volume 3 Special Issue, ISSN 2349-4476, www.ijetmas.com.
  - viii. Vineet Dubey, Balbir Singh, "To investigate the influence of process parameters on material removal rate in Electric Discharge Machining of HCHCr Steel" BLB-International Journal of Science & Technology, Special Issue November 2015 (ISSN 0976-3074).
  - ix. Sanjay Mohan, Sehijpal Singh, Balbir Singh, Mohd Javaid, Mohammad Asjad, "Some Investigations On Low Back Pain Amongst Workers Involved In Lifting Tasks" International Journal of Procurement Management (in press), August 2015.
  - x. Varun Dutta, Sanjay Sharma, Kapil Chopra and Balbir Singh, "Hybrid Electric Discharge Machining Processes for Hard Materials : A Review", American Scientific Journal, Vol. 5, pp. 202–208, 2016, ISSN: 2169-429X.
  - xi. Pranav Dev Srivivas, Sahil Singh, Balbir Singh, "Study of various maintenance approaches types of failure and failure detection techniques used in hydraulic pumps: A Review", Industrial Engineering Journal, Vol. X & Issue No. 5 May – 2017, pp: 27-35.
  - xii. Balbir Singh, Sudhir Kumar and Jatinder Kumar, "Multi-Objective Optimization in Electrical Discharge Machining of 6061 Al/SiC<sub>p</sub> using RSM and NSGA-II", Key Engineering Materials Vol. 748, pp 207-211(Socup Indexed), ISSN: 1662-9795.
  - xiii. Vineet Dubey and Balbir Singh, "Study of Material Removal Rate in Powder Mixed EDM of AA7075/B<sub>4</sub>C Composite" Materials Today: Proceedings 5 (2018) 7466–7475, Elsevier Publication, Socup Indexed.

## 8. Publications- National Conference:

- i. Balbir Singh, Six Sigma : An Emerging Quality Control & Value Added Tool in Industry" National Conference-2006 on Theme – Technology Management, March 25, 2006 at GJ-IMT, Mohali, Chandigarh.
- ii. Balbir Singh, Navdeep Malhotra 2008 "Study of Effect of Powder Mixed Dielectric Fluid on the Surface Finish and Material Removal Rate of Electro-Discharge Machining" NCETET 2008, Murthal, May 26-27, 2008.
- iii. Balbir Singh, "Relationship study of powder mixed Electro discharge machining parameters and performance characteristics", National Conference on Mechanism Science and Technologies: from Theory to Applications, NCMSTA-08 November 13-14, 2008, NIT, Hamirpur, Himachal Pradesh, 177005
- iv. Ritesh Sharma, Balbir Singh, Navdeep Malhotra & Abhijit Saini,, " Study of Total Productive Maintenance and its applications in the industries", National Conference on Advanced Manufacturing Techniques (NCAMT-2009) November 5-6, 2009 at SMVDU, Katra
- v. Balbir Singh, Sudhir Kumar and Jatinder Kumar "Study of various challenges in the Electro-discharge Machining process (EDM)", National Conference on Emerging trends

- in computational Science and Engineering , ETCSE-2010, Mar 27-28, 2010,KEC Ghaziabad
- vi. Balbir Singh, Jatinder Kumar and Sudhir Kumar “ Experimental Study of Machining Characteristics during Electrical Discharge Machining of EN-8 Carbon Steel” National Conference on Recent Advances in Manufacturing, July 19-21, 2010, Deptt. of Mechanical Engg. SVNIT Surat
  - vii. Balbir Singh and Sanjay Mohan Sharma “ Various challenges in Maintenance of complex equipment in industry” National Conference on Recent Trends in Mechanical Engineering, NCRTME -2011, September 7-8,2011, Department of Mechanical Engineering, Lingaya’s University, Faridabad
  - viii. Balbir Singh, Sanjay Mohan and Varun Dutta “Study of Challenges and Strategies to Sustain Manufacturing Sector in Business Recession” UGC sponsored National Conference on “Contemporary Issues in Business with reference to Global Economic Melt-down” on 29<sup>th</sup> March,2013 at College of Management, SMVDU.
  - ix. Balbir Singh, “Study on Research Trends in Micro-Electrical Discharge Machining - A Review”, National Conference on Recent Trends in Mechanical Engineering, RTME-2016, June 24-25, 2016, Beant College of Engineering and Technology, Gurdaspur, Punjab.
  - x. Anush Charak and Balbir Singh, “An experimental study of electrical discharge machining on AA7075/B<sub>4</sub>C<sub>p</sub> composite using Taguchi Approach”, National Conference on Recent Trends in Mechanical Engineering, RTME-2016, June 24-25, 2016, Beant College of Engineering and Technology, Gurdaspur, Punjab.
  - xi. Sahil Thappa, Pranav Dev Srivyas, Balbir Singh, “Wire Electrical Discharge Machining Research Insights and Its Applications – A Review”, National Conference on Innovative Trends in Mechanical Engineering – NCITME 2017, March 03-04, 2017, SMVDU, Katra.
  - xii. Sahil Singh, Sahil Thappa, Balbir Singh, “Research Insights in Micro-Electrical Discharge Machining – A Review” National Conference on Innovative Trends in Mechanical Engineering – NCITME 2017, March 03-04, 2017, SMVDU, Katra.
  - xiii. Pranav Dev Srivyas, Sahil Singh, Balbir Singh, “Past and Current Status of Hybrid Electric Discharge Machining (H-EDM) Processes”, National Conference on Innovative Trends in Mechanical Engineering – NCITME 2017, March 03-04, 2017, SMVDU, Katra.

## **9. Publications- International Conference:**

- i. Balbir Singh, “Education : An Emerging Service Sector”, 2<sup>nd</sup> PCMA International Conference-2006 Theme “Service Sector- The Next Wave”, February 25-27, 2006 at DAV College Jalandhar
- ii. Balbir Singh, Sudhir Kumar and Jatinder Kumar “A Review of Electro-Discharge Machining of Aluminium Metal Matrix Composite” 3<sup>rd</sup> International Conference on Advances in Mechanical Engineering, Jan 4-6, 2010, SV NIT Surat
- iii. Balbir Singh, Sudhir Kumar and Jatinder Kumar, “ Investigation of Machining Parameters on Surface Roughness in Electrical Discharge Machining of EN-8 Carbon Steel” 4<sup>th</sup> International Conference on Advances in Mechanical Engineering , September 23-25,2010 at SV NIT Surat.
- iv. Nityanand Jha, Yagyank Srivastava, Balbir Singh and Deepak Byotra, “Investigating the influencing process parameters in conventional Turning of AISI 1020 carbon steel using Taguchi approach”, International Conference on Newest Drifts in Mechanical Engineering, December 20-21, 2014 (ICNDME-2014), Deptt. of Mechanical Engg., MM University, Mullana, Ambala, Haryana.

- v. Vineet Dubey, Anush Charak, Balbir Singh and Sanjay Mohan Sharma, “A study of latest trends in Hybrid Electro Chemical Machining Process-Review” International Conference on Newest Drifts in Mechanical Engineering, December 20-21, 2014 (ICNDME-2014), Deptt. of Mechanical Engg., MM University, Mullana, Ambala, Haryana.
- vi. Anush Charak, Vineet Debey, Balbir Singh and Sanjay Mohan Sharma, “ Study of Various Challenges in Machinability of Hard Materials using Abrasive Jet Machining” International Conference on Newest Drifts in Mechanical Engineering, December 20-21, 2014 (ICNDME-2014), Deptt. of Mechanical Engg., MM University, Mullana, Ambala, Haryana.
- vii. Pranav Dev Srivayas, Sahil Thappa and Balbir Singh, “Study of Various challenges in Submerged Arc Welding- Review” International Conference on Newest Drifts in Mechanical Engineering, December 20-21, 2014 (ICNDME-2014), Deptt. of Mechanical Engg., MM University, Mullana, Ambala, Haryana.
- viii. Avi Gupta, Rahul Sethi, Sanjay Mohan Sharma and Balbir Singh, “Metal Matrix Composites and their fabrication routes- A Review”, International Conference on Newest Drifts in Mechanical Engineering, December 20-21, 2014 (ICNDME-2014), Deptt. of Mechanical Engg., MM University, Mullana, Ambala, Haryana.
- ix. Vineet Duby, Balbir Singh, “Investigation of tool wear rate in electric discharge machining of AA2014/Al<sub>2</sub>O<sub>3</sub> composite”, International conference on Advanced Agile Manufacturing Systems, December 28-29, 2015 (ICAM-2015), Dept. of Mechanical Engineering, KNIT Sultanpur, UP.
- x. Balbir Singh, Sudhir Kumar and Jatinder Kumar, “Multi-Objective Optimization in Electrical Discharge Machining of 6061 Al/SiC<sub>p</sub> using RSM and NSGA-II” 6<sup>th</sup> International Conference on ‘Advanced Materials and Engineering Materials (ICAMEM2017), March 11-12, 2017, Singapore sponsored by BOSI EDU.
- xi. Balbir Singh, Tanvir Hussein, “Study of Critical to Quality Factors for Quality Improvement of Higher Education Institutions using Six Sigma approach” International Conference on Manufacturing and Industrial Engineering (ICMIE-2017) organized by MGM’s JNEC Aurangabad in association with IIIE, Aurangabad chapter, September 14-16, 2017.
- xii. Umesh, Balbir Singh, “Reduction of defects in Automobile Filter Industry using Six Sigma Approach” International Conference on Technology and Trust (ICTT-2017), 28-29 Dec 2017, organized by Greater Noida Institute of Technology, Greater Noida, UP.

#### **10. National Seminar:**

Sanjay Kumar, Balbir Singh “Study of Niosh Equation and its applications in Manual Load Lifting Jobs in Industries” All India Seminar on Ergonomics for Improved Productivity Nov 21-22, 2009 at AMU, Aligarh

#### **11. Ph.D Guidance:**

- i. Mr. Vivudh Gupta enrolled in Aug 2017 completed course work in Micro Machining Processes. (Supervisor)
- ii. Mr. Pawandeep Singh enrolled in Jan 2018 completed course work in Advanced Machining Processes ( Co-Supervisor)

#### **12. Project Guided (M.Tech):**

- i. M.Tech 2010, Jyoti Sharma 2008EMA02, Automation of Cement Plant under joint supervision of Balbir Singh and Rajesh Bushan



- ii. M.Tech 2011, Mohd. Junaid Mir, Experimental Investigation of Power Mixed Electric Discharge Machining of AISI H11.
- iii. M.Tech 2013, Akhil Khajuria, Optimization of machining parameters in electrical discharge machining of 2014Al/Al<sub>2</sub>O<sub>3</sub> composite.
- iv. M.Tech 2016, Vineet Dubey, Experimental study of machining parameters in powder mixed electrical discharge machining of AA7075/B<sub>4</sub>C composite
- v. M.Tech 2016, Anush Charak, Study of electrical discharge machining on AA7075/B<sub>4</sub>C composite and optimizing the process parameters using Taguchi method
- vi. M.Tech 2017, Rajesh Kumar, Experimental investigation on Machinability of Inconel 718 using ZNC EDM.
- vii. M.Tech 2018, Umesh, Enhancing Productivity of Filter Industry using Six Sigma and ZED Approach, (Industrial Project under joint supervision with Mr. Taranvir Singh, MD, T. V. Super Filter Industry, Jammu)

### **13. Technical Session Chaired:**

Technical Session on 'Quality & Engineering Economics' at International Conference on Manufacturing and Industrial Engineering (ICMIE-2017) organized by MGM's JNEC Aurangabad in association with IIIE, Aurangabad chapter, September 14-16, 2017.

### **14. Reviewer of Journal Paper:**

- i. Particulate Science and Technology, An International Journal, Taylor and Francis
- ii. International Journal of Research in Mechanical Engg. (IJRME), ISRD International Allied Journal

### **15. Examination and Paper Setter and Evaluation of B.Tech and M.Tech**

- Routine paper setting and evaluation duties at SMVDU for B.Tech and M.Tech students
- Paper setter for Thermal and Production subjects by University of Jammu and MM Mulana University, Haryana

### **16. Appointment of External Examiner for evaluation of M.Tech Viva Voce:**

Punjab Technical University appointed external examiner for M.Tech final Viva Voce at BCET, Gurdaspur, Punjab.

### **17. Lab Development:**

- i. Development of Engineering Graphics and Machine Drawing wooden Models at LIMAT
- ii. Development of steam engine piston cylinder wooden teaching aid in LIMAT
- iii. Development of Fluid Mechanic and Fluid Machinery Lab at GFITM
- iv. Development of IC Engine Lab at GFITM
- v. Development of Fluid Mechanic and Fluid Machinery Lab at SMVDU
- vi. Development of Thermal Engineering Lab at SMVDU
- vii. Development of IC Engine Lab at SMVDU
- viii. Development of Automobile Lab at SMVDU
- ix. Designed and fabricated two stroke petrol engine test rig using scooter engine in central workshop, used as experimental teaching aid in IC Engine lab at SMVDU.
- x. Designed and fabricated two stroke petrol engine model of wood in central workshop and used as teaching aid in IC Engine Lab at SMVDU

- xi. Prepared car window lass raising –lowering mechanism model in central workshop at SMVDU as teaching aids.
- xii. Prepared drum brake model in workshop at SMVDU used as teaching aid.
- xiii. Prepared Ericsson Test Set used as experimental teaching aid in Material Sc. Lab
- xiv. Preparation of Lab Manual on Production Engineering Lab
- xv. Fabrication of Cantilever based Centrifugal Casting Set up under B.Tech Project, May 2018.

**18. Administrative Experience:**

- i. LIMAT: Deptt. Secretary, Member of Training and Placement cell and NSS
- ii. GFITM: Head, Department of Mechanical Engg.
- iii. SMVDU:
  - a) HOD Sep and Oct 2007
  - b) HOD from Aug 2010 to 19 Oct 2012
  - c) HOD from 1 Sep 2013 to 16 May 2014
  - d) HOD from 29 Jan 2017 to 25 Jan 2018
  - e) B.Tech and M.Tech Project I/c 2012-2013
  - f) Coordinator, Production Club
- iv. Member of Various Committees:
  - a) Department Purchase Committee
  - b) Department Technical Expert Committee
  - c) PG Admission Committee
  - d) Academic Council, (2012-2014), SMVDU
  - e) Training and Placement 2007-2009
  - f) Anti Ragging Committee since 2013, 2014
  - g) IQAC, Administrative committee
  - h) SMVDU, IQAC Member Secretary
  - i) Coordinator, Equal Opportunity Cell, (EOC, UGC)
  - j) TEQIP Phase-III, Nodal Officer (Academic)
  - k) Waste Management in SMVDU

**19. Industrial Visits for Students undertaken:**

- Maruti Udyog Ltd, Gurgoan, Haryana
- HMT Pinjor, Punjab
- Thermal Plant Lehra Begga, Bhatinda, 2015 and 2016
- Railway Coach Factory, Kapurthala, 2016
- Salal Hydel Project, Reasi, Jammu (02 times)
- Kashmir rolling Mills, Bari Brahamna, Jammu (05 times)
- Narbada Casting Unit, Bari Brahamna, Jammu (05 Times)
- Campa Cola, Hindustan Beverage Ltd, Gangyal, Jammu
- National Fertilizer Limited, Bhatinda, Punjab 16-17 Nov 2016
- Dabur Group, Bari Brahamna and Shuvam Industries, Industrial Estate, Jammu, (M.Tech students) Apr 2017.
- Emcure Pharmaceutical and Sarveshwar Rice, Jammu, (M.Tech students), Mar 2018.

**20. Professional Society Memberships:**

- i. ISTE : LM -42489
- ii. IE(I) : M/135464/1 MIE
- iii. IIE (Mumbai): SM10647(99)
- iv. QCI : LM/NR/5255

I certify that all the information mentioned above is true to my belief and understanding.

Sd/-  
(Dr. Balbir Singh)  
Associate Professor  
School of Mechanical Engg.  
SMVDU, Katra