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Associate Professor (WS), Mechanical Engineering Department, Dr. Babasaheb Ambedkar Technological University, A state Technological University, Lonere 402103 MS (India)

# **Teaching and Research Experience**: 32 Years

## Education

- Ph.D. (2008) Mechanical Engineering with the specialization in High-speed Machining of Superalloys, Indian Institute of Technology, Powai, Bombay, India.
- M.E. (1997) Machine Tool Engineering, P. S. G. College of Technology, Coimbatore, Bharathiar University, Coimbatore, TN (India).
- B.E. (1989) Mechanical Engineering, Government College of Engineering, Karad, 415 110 MS (India).

## No. of Projects Guided

- PhD 06 (Completed), 04 (In progress)
- M. Tech. 37
- B. Tech. 50

## **Details of Student Projects**

S1.	Students	Date of	Joining	Thesis Title	Any Outcome/	
No	Name	Viva-voce	Date		Recognition of	
					significance	
01	Narendra	09/10/2015	13/02/20	Surface Integrity	Research publications	
	N.		09	Characterization of	useful for machining of	
	Bhopale			High Speed Ball	thin wall components	
				End Milling of	Int. Journal =04	
				Inconel 718	Int. Conference =03	
02	Ketan A.	06/08/2018	12/02/20	Investigation on	Research publications	
	Jagtap		12	Machined surface	useful for manufacturing	
	_			integrity in CNC	of Quality bio-implants	
				Turning of	for Indian use.	
				Biocompatible Co-	Int. Journal =04	
				Cr-Mo alloy	Int. Conference=05	
03	Ganesh S.	20/11/2019	26/09/20	Investigation on	Research publications	
	Kadam		12	Surface integrity in	useful for green	
				High speed	manufacturing	
				machining of	Int. Journal = $02$	
				Inconel 718 under	Int. Conference =06	

			different machining	
			environment	
04	Kuldeep	20/0	Effect of vibration	Int. Journal =05
	Mahajan	4/2022	on diamond turning	Int. Conference=01
			of	
			Polymethymethacra	
			te (PMMA)	
05	Avinash	04/05/2022	Experimental	Int. Journal =03
	Khadtare		Investigation and	Int. Conference=02
			Modelling in Micro-	
			drilling of Thermal	
			Barrier Coated	
			Inconel 718	
			Superalloy	
06	Babasahe		Machinability	Int. Journal =02
	b Shinde		Assessment of Low	Int. Conference=02
			Electrically	
			Conductive	
			Ceramics by Using	
			Wire EDM	

	Details of M.E./M. Tech. Scholars Guided							
S1. No.	Students Name	Date of Viva- voce	Joining Date	Thesis Title	Co-Supervisor if Any	Any Outcome/ Recognition of significance		
01	Pawar Rajendra H.	August 2011	August 2009	Modeling and Analysis of Surface Integrity in Dry High Speed Machining of Ti- 6Al-4V		Int. Conference paper – 2 Nos.		
02	Gaikhe Yogesh S.	August 2011	August 2009	3D Surface Characterization of Electrophoretic Deposition Polishing (EPDAP) of SS316L		Int. Journal paper – 2 Nos., Int. Conference paper – 1 No.		
03	Sanap Sunil M.	August 2011	August 2009	Multi-objective Optimization of Helical Ball End Milling of		Int. Journal paper – 1 No.		

				Inconel 718 Using Taguchi Utility Concept	
04	Bharambe Sonal J.	August 2014	August 2012	Numerical Modeling of Turning of Titanium Alloy (Ti-6Al-4V)	
05	Mhatre Mitali S.	August 2014	August 2012	Multi-Objective Optimization and Prediction of Rotary EDM Parameters	 Int. Journal paper – 2 Nos., Int. Conference paper – 2 Nos.
06	Haseen Sheikh	August 2014	August 2012	Study of Metrological Parameters of Diamond Turned Aspheric Lens	 Int. Conference paper – 2 Nos.
07	Khatekar Nikhil	August 2014	August 2012	Analysis and Modelling of Surface Characteristic in Elecrtophoretic Deposition Assisted Polishing of AISI 304 Steel	 Int. Journal paper – 1 No.
08	Waikar Rahul	August 2014	August 2012	Some Studies on Chip Formation And Shear Angle in Micro Cutting of Low Carbon Steel	 Int. Conference paper – 1 No.
09	Sonawane Pankaj	August 2015	August 2013	Experimental Analysis of Micro-Machined Surface Features Of AISI1215 Steel	 Int. Conference paper – 1 No.
10	Sakharkar Sagar	August 2015	August 2013	Some Experimental Investigation in Turning of Austempered Ductile Iron	 Int. Journal paper – 1 No., Conference paper – 1 No.

				Using Dry, MQL and Flood Lubrication Environment	
11	Desai Sandeep	August 2015	August 2013	Experimental Studies in Face Milling of Mg- Ca1.0 Biodegradable Alloy	 Int. Conference paper – 5 No.
12	Giradkar Karansagar	August 2015	August 2013	Electrochemical Investigation on Corrosion Behaviour of Machined and Non-Machined Co-Cr-Mo Alloy	 Int. Journal paper – 2 Nos.
13	More Kiran R.	August 2015	August 2013	Some Studies to Optimize and Improve the Robotic Roller Hamming Process	 Int. Conference paper – 3 Nos.
14	Nanadkumar Nagotkar	August 2017	August 2015	Thermal aspects in Ultra- Precision Diamond Turning	
15	Jyotsna Bhole	August 2017	August 2015	Surface roughness prediction using Wavelet Transform and Correlation with AE signals in Turning	
16	Abhishek Patil	August 2017	August 2015	Effect of MQL using Nanofluid on Turning of Austempered Ductile Iron: A comparative study	
17	Chaudhari Madhuri	August 2017	August 2015	Comparative study of part classification built using	 Int. Conference paper - 2 Nos.

				Additive Manufacturing		
				(FDM)		
18	Pankaj Mohire	August 2018	August 2016	Surface Integrity Assessment and its Correlation with AE Signal in Face Milling of Mg Ca 1.0 alloy		Int. Conference paper – 1 No.
19	Shruti Banait	August 2018	August 2016	Investigating Laser Additive Manufacturing of Functionally graded Ni-Cr-B- Si and SS 316 L	Dr. C. P. Paul, Laser additive Manufacturing Lab, RRCAT Indore	Int. Journal paper – 1 No., Int. Conference paper – 1 No
21	Ganesh Kadam	August 2012	January 2009	Analysis and Modelling of the Effect of Machining Environment on Surface Integrity in High Speed Turning of Inconel 718		Int. Journal paper – 3 Nos., Int. Conference paper – 5 Nos.
22	Amit Sangoi	July 2017	July 2015	Some studies in Magneto Elasto based spiral finishing		Int. Journal paper – 2 No.
23	Varsha Chopade	July 2011	July 2009	Application of Genetic Algorithm for Cutting Force Optimization in Helical Ball End Milling of Inconel 718		Int. Conference paper – 1 No.
24	Bhushan Nikam	August 2017	August 2015	Macro Rod Arrayed Structure Fabrication using Powcer- mixed REDM		Int. Conference paper - 1 No.
25	Omkar Pansare	August 2021	August 2019	Experimental Investigation in Mechanical Micro drilling of		

				Ti6Al4V/CFRP		
				Stack Material		
26	Rahul Kundia	August	August	Experimental		
		2022	2020	Analysis and		
				Modelling in		
				Micro drilling of		
				CFRP-Ti6Al4V		
				Stacked		
				Composite		
27	Akash Belure	August	August	Development of	Dr. A. K.	Int. Journal
		2019	2017	process for	Biswas, Super-	Paper -01
				super-smooth	smooth	Int.
				surface for high	Polishing Lab,	Conterence
				reflectivity flat	Advance Laser	Paper - 01
				mirror substrate	and Optics	
					Division,	
28	Robit Walada	Anonet	Anorret	Export Export	KKCAI Indore	National
20		2020	2018	Investigation		Conference
		2020	2010	with Parametric		ranger = 01
				Optimization		paper - 01
				using Teaching-		
				Learning-Based		
				Optimization in		
				WEDT process		
29	Ratnparkhi	August	August	FE analysis of		
	Sachin S	2007	2005	cylinder bore		
				distortion due to		
				assembly loads		
30	Bhide Gajanan	August	August	Statistical		
		2005	2002	analysis of		
				dimensional		
				vibration in		
				internal grinding		
01		A	A	of bevel gears		
31	Khatate Sushil	August	August	Predictive		
	5	2005	2002	Inaintenance of		
				vvinA-i plant		
				centinugai air		
				using vibration		
				spectrum		
				analysis		
32	Sandesh	August	August	Analysis of		
	Bhadane	2009	2007	microhardness		
				and residual		
				stresses in		

				machining of	
				Titanium allovs	
33	DSN Reddy	August	August	Machinability	
		2007	2006	Study of Ti-6Al-	
			_000	4V allov in High	
				Speed Turning	
				Process using	
				Steam as a	
				Coolant	
34	Mahesh	August	August	Some	
01	Ravate	2007	2006	investigations on	
	itayate	2007	2000	surface	
				characteristics of	
				SS304 using	
				Electro phorretic	
				deposition	
				assisted	
				polishing	
35	Prakalp Patil	August	August	Investigation on	
	1	2006	2004	machinability	
				assessment of	
				Al-Si alloy in	
				CNC turning	
36	Nilesh Nikam	August	August	Surface integrity	
		2013	2011	analysis in ball	
				end milling of	
				cantilever	
				shaped thin	
				Inconel 718 plate	
37	Bhosale	August	August	Statistical	
	Shrikrushna B	2008	2006	analysis of	
				ultrasonic	
				machining of	
				ceramic	
				composite	
				(Al2O3 ZrO2)	

## **Books Authored - 01**

Energy and Environment Engineering, Synergy Publishers, Mumbai, First Edition, August 2018

## Book Chapter - 05

 Production of surface roughness and its correlation with Acoustic emission parameters n AISI 3030 Steel in Monitoring of Machining Processes, March 2020, LAPP, Lambert Academic Publishing ISBN 978-620-2-51716-4

- Machining Performance Evaluation of Ti-6Al-4V Alloy in CNC Turning using CBN Insert, Apple Academic Press, CRC Press, October 2021.
- Modelling of Surface Roughness Using ANN and Correlation with Acoustic Emission Signals in Turning of AISI 303 Steel, Springer Nature Singapore Pte. Ltd. N. Sharma et al. (eds.), Data Management, Analytics and Innovation, Lecture Notes on Data Engineering and Communications Technologies 70., September 2021.
- Parametric evaluation in context to functional role of Eco-friendly Water Vapour Cutting Fluid through Chip Deformation analysis in HSM of Inconel 718, Manufacturing and Processing of Advanced Materials, Edited by Ricardo Dias, Antonio A. Martins, Rui Lima and Teresa M. Mata (Eds), Bentham Science Publishers, 2021, 3-19.
- Cutting force assessment in HSM of Inconel 718 aided with water vapour as an eco-friendly cutting fluid, Recent advances in Manufacturing Processes and Systems, Edited by Harshi K Dave, Uday Shankar Dixit, Dumitru Nedelcu, Springer, 2022, ISBN 978-981-16-7787-8

# **Research Interest**

- Machining of difficult to cut materials
- Micromachining
- Machining process optimization
- Non-conventional machining
- Design of Experiments, Taguchi and RSM
- Multi objective optimization using Evolutionary Algorithms

## Publications - Total 202

(No. of citations = 2000, h-index=17, i-10 index = 30)

Referred Journals – 63, National Journal -5, International Conferences – 105, National Conferences – 33

## **Major Publications:**

## International Journal

- 1) R. S. Pawade, Suhas S. Joshi, P. K. Brahmankar, M. Rahman, An Investigation of Cutting Forces and Surface Damage in High-Speed Turning of Inconel 718, Journal of Materials Processing Technology, 2007, Vol. 192-193, pp. 139-146.
- 2) R. S. Pawade, Suhas S. Joshi, P. K. Brahmankar, Effect of Cutting Edge Geometry and Machining Parameters on Surface Integrity of High-Speed Turned Inconel 718, International Journal of Machine Tools and Manufacture, 2008, Vol. 48 (1), pp. 15-28.
- 3) R. S. Pawade, Harshad Sonawane and Suhas S. Joshi, An Analytical Modeling to Predict Specific Cutting Energy in Shear Deformation in High-speed Turning of Inconel 718, International Journal of Machine Tools and Manufacture, 2009, Vol. 49 (12-13), pp. 979-990.
- 4) R. S Pawade, Suhas S. Joshi, Mechanism of Chip Formation in High-speed Turning of Inconel 718, Machining Science and Technology, Vol. 15 (1), 2011, pp.1532-2483,

- R. S Pawade, Suhas S. Joshi, Multi-objective Optimization of Surface Roughness and Cutting Forces in High-speed Turning of Inconel 718 using Taguchi Grey Relational Analysis (TGRA), International Journal of Advanced Manufacturing Technology, Vol. 56, No. 1, pp.47-62, 2011.
- 6) R. S Pawade, Suhas S. Joshi, Analysis of Acoustic Emission Signals and Surface Integrity in High-speed Turning of Inconel 718, Journal of Engineering Manufacture, Institution of Engineers, Part B, Vol. 126 (1), 2012, pp. 3-27.
- 7) Harshad Sonawane, Raju S. Pawade, Effects of Powder Mixed Dielectric on Electrodischarge Machining (PMEDM) of HSS Tool Steel, International Journal of Mechatronics and Manufacturing Systems, Special Issue on Electric Discharge Machining, Vol. 5 (5-6), 2012, pp. 431-454.
- 8) Nandkumar N. Bhopale, Raju S. Pawade, Investigation of Surface Integrity in High-sped Ball End Milling of Cantilever Shaped Thin Plate of Inconel 718, Journal of Achievements in Materials and Manufacturing Engineering, Vol. 55 (2), December 2012, pp. 616-622.
- 9) Nandkumar N. Bhopale, Raju S. Pawade, Effect of ball end milling parameters on surface and subsurface of Inconel 718, International Journal of Basic and Applied Sciences, 4 (1) 2015, 66-72.
- Yogesh S. Gaikhe, Arvind M. Chavan, R. S. Pawade, 3D Surface Characterization of Electrophoretic Deposition Assisted Polishing of Stainless Steel 316L, Materials and Manufacturing Processes, Vol. 28, pp.676–682, 2013
- 11) Nandkumar N. Bhopale, Suhas S. Joshi & Raju S. Pawade, Experimental Investigation into the Effect of Ball End Milling Parameters on Surface Integrity of Inconel 718, Journal of Materials Engineering and Performance, ASM International, 2015, Vol 23 (12), pp. 4163-4176.
- 12) Nandkumar Bhopale, Raju Pawade, Suhas Joshi, Surface quality analysis in ball end milling of Inconel 718 cantilevers by response surface methodology, Proceedings ImechE, Part B: Journal of Engineering Manufacture, 2015, pp. 1-13.
- 13) Ganesh Kadam, Raju S. Pawade, Sustainability modelling and assessment in high-speed turning of Inconel 718, International Journal of Precision Technology, Inderscience, Special Issue on Modelling and Simulation of Precision Machining Processes, Vol. 6, Nos. 3/4, 2016, pp. 249-261.
- 14) Ganesh Kadam, Raju S. Pawade, Surface integrity and sustainability assessment in highspeed machining of Inconel 718 – An eco-friendly green approach, Journal of Cleaner Production, Elsevier, Vol. 147, 2017, pp. 273-283.
- 15) Sagar Sakharkar, Raju S. Pawade, Effect of Machining Environment on Turning Performance of Austempered Ductile Iron, CIRP Journal of Manufacturing Science and Technology, May 2018, Vol. 22, pp. 49-65, Elsevier.
- 16) Sagar Sakharkar, Raju S. Pawade, Prakash K. Brahmanakar, Model Development and Sustainability Assessment of Minimum Quantity Lubrication Technique in Turning of 700/3 Austempered Ductile Iron, Asian Journal of Convergence in Technology, Vol. II, Issue III, ISSN No. 2350-1146.
- 17) S M Banait, Jinoop A N, H Kumar, Raju Pawade, Kushvindre Bindra, C P Paul, Experimental Investigation on Laser Directed Energy Deposition of Functionally Graded Layers of Ni-Cr-B-Si and SS316L, Journal of Optics and Laser Technology, Vol. 121, pp. 105787, Elsevier.
- 18) Raju Pawade, Avinash Khadtare, Dhanashree Dhumal and Vishal Wankhede, Machinability Assessment in High Speed Turning of High Strength Temperature Resistant Superalloys,

Journal of Advanced Manufacturing Systems Vol. 18, No. 4 (2019) 595–623, World Scientific Publishing Company, DOI: 10.1142/S021968671950032X

- 19) Kuldeep A. Mahajan, Raju Pawade, Effect of machining parameters and vibration on Polymethylmethacrylate (PMMA) curved surface in Single point diamond turning, Journal of Micromanufacturing, Sage Publications, 2020, Page 1-10, https://doi.org/10.1177/2516598420941728
- 20) Nikhil V Khatekar, Raju S Pawade, Analysis and modeling of surface characteristics in electrophoretic deposition-assisted internal polishing of AISI 304 steel, The International Journal of Advanced Manufacturing Technology, (2019) 104:3083–3094, Springer.
- 21) Raju Pawade, Avinash Khadtare, Dhanashree Dhumal and Vishal Wankhede, Machinability Assessment in High Speed Turning of High Strength Temperature Resistant Superalloys, Journal of Advanced Manufacturing Systems Vol. 18, No. 4 (2019) 595–623, World Scientific Publishing Company, DOI: 10.1142/S021968671950032X
- 22) Avinash Khadtare, Raju Pawade, Alwin Verghese, S S Joshi, Micro-drilling of Strait and Inclined holes on Thermal Barrier Coated Inconel 718 for Turbine Blade Cooling, Materials and Manufacturig Processes, 2020, Vol. 00, No. 00, 1–14, Taylor and Francis.
- 23) Avinash N.Khadtare, Raju S.Pawade, Suhas S.Joshi, Surface integrity studies for straight and inclined hole in micro-drilling of thermal barrier coated Inconel 718: A turbine blade application, Precision Engineering, Elsevier, July 2020.
- 24) Vinod Mishra , Rohit Sharma, Kuldeep Mahajan, Jayant Kumar, Neha Khatri, Aniket Gupta, Harry Garg, Vinod Karar, Raju Pawade and Ramagopal V. Sarepaka, Experimental investigations on ultraprecision machining of polycarbonate and related issues, Journal of Micromanufacturing, Sage Publications, 2020, Page 1-13, DOI: 10.1177/2516598420938495
- 25) Pawade Raju & Shinde Babasaheb (2021) Study on analysis of plasma resistance variation in WEDM of insulating zirconia, Materials and Manufacturing Processes (Taylor & Francis), 36:1, 59-72, DOI: 10.1080/10426914.2020.1813898
- 26) Babasaheb Shinde & Raju Pawade (2021) Study on analysis of kerf width variation in WEDM of insulating zirconia, Materials and Manufacturing Processes (Taylor & Francis), 36:9, 1010-1018, DOI: 10.1080/10426914.2020.1854468.
- 27) Bhushan Nikam, Avinash Khadtare, Raju Pawade , Machinability Assessment Of AISI 4140 Hardened Steel using CBN Inserts in Hard Turning, International Journal of Modern Manufacturing Technologies, ISSN 2067–3604, Vol. XIII, No. 1 / 2021
- 28) Raju Pawade, Ganesh Dhurde, Wire EDM of Aerospace grade 17-4 PH Stainless Steel: Application of Evolutionary JAYA Algorithm, International Journal of Mechatronics and Manufacturing Systems, Accepted for Publication.
- 29) Kuldeep A. Mahajan, Raju Pawade, Vinod Mishra, Tool Vibration Effect on Surface Roughness of Polymethylmethacrylate in Diamond Turning, Materials and Manufacturing Processes, Taylor & Francis, pp. 1-13, DOI: 10.1080/10426914.2021.1973029.
- 30) K Mahajan, V Mishra, R Sharma, J Kumar, N Khatri, Raju Pawade, "Experimental investigations on ultra-precision machining of polycarbonate", and related issues, Journal of Micromanufacturing, 4(1) 61–73, 2021.
- 31) Ganesh S. Kadam, Raju S. Pawade, Water Vapour assisted machining of Inconel 718 incorporating through-tool cutting fluid delivery approach, International Journal on Interactive Design and Manufacturing (IJIDeM), Springer Nature, 2023, doi: 10.1007/s12008-023-01335-3.

- 32) Ganesh S. Kadam & Raju S. Pawade, Water vapor cutting fluid assisted productive machining of Inconel 718, Materials and Manufacturing Processes, Taylor and Francis, 2023, DOI:10.1080/10426914.2023.2190389
- 33) A.R. Belure, A.K. Biswas, D. Raghunathan, Rishipal, S. Bhartiya, Rashmi Singh, S.K. Rai, R.S. Pawade, M.P. Kamath, N.S. Benerji, Development of super-smooth flat silicon mirror substrates using bowl-feed chemical-mechanical polishing, Materials Today: Proceedings, 26,(2020),2260-2264,Elsevier, doi.org/10.1016/j.matpr.2020.02.490
- 34) Ganesh S. Kadam, Raju S. Pawade, Comparative assessment of machining induced hardening in HSM of Inconel 718 with aid of eco-friendly cutting fluids, Materials Today: Proceedings, 62 (2022) 7528-7533
- 35) Ganesh S. Kadam, Raju S. Pawade, Chip Deformation Aspects in Relative Eco-friendly HSM of Inconel 718, Procedia Manufacturing 20 (2018) 35-40.
- 36) Raju S. Pawade, D.S.N. Reddy, Ganesh S. Kadam, Chip segmentation behavior and surface topography in high-speed turning of titanium alloy (Ti-6Al-4V) with eco-friendly water vapour, International Journal of Machining and Machinability of Materials 13 (2/3) (2013) 113-137.
- 37) Ketan A. Jagtap and Raju S. Pawade, Monitoring of Surface Topography in CNC Turning of Co-Cr-Mo Biomaterial by Using Acoustic Emission Signals, International Journal of Surface Review and Letters, Vol. 29 No. 08 (2022), 2250108 pp 1-12 (SCI & Scopus Indexed, IF =1.24)
- 38) Ketan Jagtap and Raju Pawade, Some Investigations on Surface Roughness and Cutting Force in Face Turning of Biocompatible Co-Cr-Mo Alloy, Advanced Materials Proceedings, VBRI Press Sweden, 3 (4), 2018, pp 289-297.
- 39) Ketan A. Jagtap and Raju S. Pawade, Some Studies on Chip Formation Mechanism in CNC Turning of Biocompatible Co-Cr-Mo Alloy, Elsevier Procedia Manufacturing, 20, 2018, pp 283-289.
- 40) Ketan A. Jagtap and Raju S. Pawade, 'Experimental Investigation on Surface Roughness of Face Turned Co-Cr-Mo Biocompatible Alloy Followed by Polishing', Journal of Material Science and Surface Engineering, 5 (4), 2017, pp 585-592.
- 41) K. A. Jagtap, R. S. Pawade and K. V. Giradkar, 'Investigations on Surface Integrity and Electrochemical behaviour of Machined Co-Cr-Mo Bio-implant Alloy', International Journal of Advanced Design and Manufacturing Technology, Vol. 9/ No. 4, 2016, pp 51-58.
- 42) Jagtap K. and Pawade R., "Experimental Investigation on the Influence of Cutting Parameters on Surface Quality in SPDT of PMMA", International Journal of Advanced Design and Manufacturing Technology, Vol. 7/ No. 2, 2014, pp. 53-58.
- 43) K. A. Mahajan, R. S. Pawade, A. M. Mandale, P. P. Chikorde, M. A. Nawale, S. N. Birari, "Prediction of vibration effect on Surface Roughness of Polymethyl methacrylate (PMMA) by using ANN", IOSR Journal of Mechanical and Civil Engineering, Vol.3, 2019, PP. 55-60
- 44) KA Mahajan, R Pawade, R Balasubramaniam "Experimental Study of Effect of Machining Parameters on PMMA in Diamond Turning", Advances in Manufacturing Processes, Springer link, 2020, pp.19-27
- 45) KA Mahajan, R Pawade, "Effect of machining parameters and vibration on polymethylmethacrylate curved surface in single-point diamond turning", Journal of Micromanufacturing, 4(1) 74–83, 2021.
- 46) KA Mahajan, R Pawade, R Balasubramaniam, "Experimental Investigation of Influence of Machining Parameters on Profile Error in Diamond Turning of PMMA" Current Advances in Mechanical Engineering, Springer link, pp 715-724.

- 47) P. Pawase, P. Brahmankar, R. Pawade, R. Balasubramanium, Analysis of Machining Mechanism in Diamond Turning of Germanium Lenses, Procedia Materials Science, Elsevier, 5 (2014) 2363-2368.
- 48) N.G.Patil, Ameer Asem, R. S. Pawade, D.G. Thakur, P.K. Brahmankar, Comparative study of high speed machining of Inconel 718 in dry condition and by using compressed cold carbon dioxide gas as coolant, Procedia CIRP Vol. 24, 2014, pp. 86 91
- 49) A. D. Bagawade, P. G. Ramdasi, R. S. Pawade, P. K. Brahmankar, Machining optimization models for hard turning: A review, International Journal of Mechanical Engineering and Research, Vol. 1 (1), 2012, pp. 55-60.
- 50) Sandeep Huddedar, Pankaj Chitalkar, Arvind Chavan and Raju S. Pawade, Effect of Cooling Environment on Grinding Performance of Nickel Based Superalloy Inconel 718, Journal of Applied Sciences, Vol. 12 (10),2012, pp. 947-954
- 51) Arvind Chavan, Yogesh Gaikhe, Sandeep Huddedar and Raju Pawade, 3D Surface Characterization of Electrophoretic Deposition Assisted Polishing of SS316L. Journal of Applied Sciences, Vol. 12 (10), 2012, pp. 929-937
- 52) A. D. Bagawade, P. G. Ramdasi, R. S. Pawade, P. K. Brahmankar, Evaluation of Cutting Forces in Hard Turning of AISI 52100 Steel by using Taguchi Method, International Journal of Engineering Research and Technology, Vol. 1 (6), 2012, pp. 1-5.
- 53) D. Bagawade, P. G. Ramdasi, R. S. Pawade, P. K. Brahmankar, The effects of Cutting Conditions on Chip Area Ratio and Surface Roughness in Hard Turning of AISI 52100 Steel, International Journal of Engineering Research and Technology, Vol. 1 (10), 2012, pp. 1-6.
- 54) Mitali S. Mhatre, Sagar U. Sapkal and Raju S. Pawade, Electro discharge machining characteristics of Ti-6Al-4V alloy: A grey relational optimization, International Conference on Advances in Manufacturing and Materials Engineering, AMME, Procedia Materials Science, Elsevier Vol. 5, pp. 2014 2022, 2014
- 55) Ganesh Sonawane, Raju Pawade, Analysis of cutting forces in high speed turning of Inconel 718 by using ceramic tools, International Journal of Research and Scientific Innovation, Vol. 1, Issue 6, 2014, pp. 107-112.
- 56) Nandkumar N. Bhopale, Raju S. Pawade, Modelling and analysis of ball end milling parameters of Inconel 718 cantilever using RSM, International Journal of Innovative Research in Science, Engineering and Technology, Vol. 3, Issue 12, 2014, pp. 18336-18343, Impact Factor:1.682
- 57) Sunil Sanap, Sagar Sakharkar, Pankaj Sonawane, Raju Pawade, Multi-objective optimization of ball end milling of Inconel 718 using Utility concept, International Journal of Mechanical Engineering and Material Science, Vol. 8 (1), January-June 2015, pp. 27-33, ISSN: 0974-584X
- 58) Ramesh Guttedar, Amit Patil, A. A. Jadhav, V. B. Satve, Raju Pawade, Design and Development of Horn and Slurry Circulation System in Ultrasonic Machining, International Journal For Technological Research In Engineering (IJTRE), Volume 2, Issue 7, March-2015, ISSN: 2347-4718
- 59) Mitali S. Mhatre, Raju S. Pawade, Sagar U. Sapkal, Fauzia Siddiqui, Prediction of EDM process parameters by using Artificial Neural Network (ANN) A Prediction Technique, International Journal of Scientific & Engineering Research, Volume 5, Issue 12, December-2014 pp. 29-33, ISSN 2229-5518.
- 60) Nandkumar N. Bhopale, Nilesh Nikam and Raju S. Pawade, Parameter Optimization of Ball End Milling Process on Inconel 718 Using RSM and TLBO Algorithm, Journal for Manufacturing Science and Production, DE GRUYTER, pp. 1-8, DOI 10.1515

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- 62) Prasad Unde, M. D. Gayakwad, N. G. Patil, R. S. Pawade, D. G. Thakur and P. K. Brahmankar, Experimental investigations into abrasive waterjet machining of carbon fiber reinforced plastic, Journal of Composites, Hindawi Publishing Corporation, 2015, 9 pages
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#### **National Journal**

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- 94) Sagar N. Sakharkar, Ganesh S. Kadam, Raju S. Pawade, Prakash K. Brahmankar, Sustainability Assessment to Minimise Energy Consumption in Green Machining, Proceedings of ENACT 2014- Energy : Needs and Current Trends- 2014, Dr. B. A. Tech. University, Lonere, 19-20 December 2014
- 95) Prasad Pawase, P.K. Brahmankar, R.S. Pawade, Multi Objective Optimization of Surface Roughness and Slope Error in Diamond Turning of Germanium Lense using Taguchi Grey Relational Analysis, Proceedings of National Conference on Statistical Analysis and Computing in Engineering and Management, NC-SACEM, 2014, DY Patil COE, Akurdi, Pune, August 7-8 2014.
- 96) Ganesh Dhurde, Raju Pawade, P. K. Brahmankar, Some Investigations into Wire Electro-Discharge Machining of 17-4 PH Stainless Steel Proc. of International Conference on Precision, Meso, Micro and Nano Engineering, COPEN 11, Indian Institute of Technology, Indore, Dec. 12-14, 2019, pp.

- 97) Ganesh S. Kadam1, Raju S. Pawade, Analysis of surface roughness in HSM of Inconel 718 using water vapour as green cutting fluid, Proc. of International Conference on Precision, Meso, Micro and Nano Engineering, COPEN 11, Indian Institute of Technology, Indore, Dec. 12-14, 2019, pp.
- 98) Raju Pawade, Bhushan Nikam1Nishad Ghode1, Pranit Jadhav, Siddhi Bhosale, Akshay Jagtap, Machinability Assessment of AISI 52100 Alloy Steel in Turning using Water Vapour as a Coolant, Proc. of International Conference on Precision, Meso, Micro and Nano Engineering, COPEN 11, Indian Institute of Technology, Indore, Dec. 12-14, 2019, pp.
- 99) Avinash Khadtare, Raju Pawade, Suhas Joshi, Investigation of Micro-Holes Characteristic for Straight and Inclined drilling in Thermal Barrier Coated Inconel 718 Superalloy, Proc. of International Conference on Precision, Meso, Micro and Nano Engineering, COPEN 11, Indian Institute of Technology, Indore, Dec. 12-14, 2019, pp. 103.
- 100) A.R. Belure, A.K. Biswas, Rishipal, S. Bhartiya, R.S. Pawade, M.P. Kamath and N S Benerji, Fabrication of super-smooth flat zerodur substrates for synchrotron x-ray mirrors, International Conference on Precision, Meso, Micro and Nano Engineering (COPEN 2019), IIT Indore,
- 101) Niket Malwade, Raju Pawade, Surface roughness and cutting forces optimization in machining of Biodegradable Magnesium Calcium alloy, National level Conference on Emerging Trends in Engineering Design and Manufacturing ' ETEDM – 2022, 15-16 June 2022.
- 102) Raju S. Pawade, D.S.N. Reddy, Ganesh S. Kadam, High-speed turning of Titanium alloy (Ti-6Al-4V) using water vapour as a coolant, Proceedings of 1st International Conference on Current Trends in Technology (2010) - NUiCONE 2010, 9-11th December 2010, Nirma University, Ahmedabad, Gujarat, India.
- 103) Ganesh S. Kadam, Raju S. Pawade, Analysis and modeling of surface integrity of Inconel 718 machined using different cooling environment, Proceedings of International Conference on Innovations in Design and Manufacturing (2012) – InnDeM 2012, 5-7th December 2012, PDPM Indian Institute of Information Technology, Design and Manufacturing (IIITDM), Jabalpur, Madhya Pradesh, India.
- 104) Ganesh S. Kadam, Raju S. Pawade, Surface topography assessment in high-speed turning of Inconel 718 under different machining environments, Proceedings of 8th International Conference on Precision, Meso, Micro and Nano Engineering (2013) – COPEN-8: 2013, 13-15th December 2013, National Institute of Technology Calicut, Kerala, India.
- 105) Ganesh S. Kadam, Raju S. Pawade, Residual Stresses Analysis in High-speed Turning of Inconel 718 under Different Machining Environments, Proceedings of the International Colloquium on Materials, Manufacturing and Metrology (2014) – ICMMM 2014, 8-9th August 2014, IIT Madras, Chennai, India.
- 106) Ganesh S. Kadam, Raju S. Pawade, A comprehensive model development and its evaluation for sustainability assessment in high speed turning of Inconel 718, Proceedings of 9th International Conference on Precision, Meso, Micro and Nano Engineering (2015) – COPEN-9: 2015, 10-12th December 2015, IIT Bombay, Powai, Mumbai, Maharashtra, India.

- 107) Ganesh S. Kadam, Raju S. Pawade, Amit M. Patil, Cleaner Machining of Inconel 718 with Water Vapour as an Eco-friendly Cutting Fluid, Proceedings of 6th International & 27th All India Manufacturing Technology, Design and Research Conference (2016) – AIMTDR 2016, 16-18th December 2016, College of Engineering (COEP), Pune, Maharashtra, India.
- 108) Ganesh S. Kadam, Raju S. Pawade, Influence of Machining Environment on Surface Integrity in HSM of Inconel 718 with Productivity Perspective, Proceedings of 1st International Conference on Materials, Manufacturing and Design Engineering (2016) – iCMMD 2016, 20-21th December 2016, Dr.Babasaheb Ambedkar Technological University (DBATU), Lonere, Raigad, Maharashtra, India.
- 109) Ganesh S. Kadam, Raju S. Pawade, Mechanics of CLF through Chip Deformation in Ecofriendly Machining of Inconel 718, Technology Drivers: Engine for Growth (Taylor & Francis CRC Press) – Proceedings of 6th International Conference on Current Trends in Technology (2017) - NUiCONE 2017, 23-25th November 2017, Nirma University, Ahmedabad, Gujarat, India.
- 110) Ganesh S. Kadam, Raju S. Pawade, Completely Neat Eco-friendly HSM of Inconel 718, Proceedings of 10th International Conference on Precision, Meso, Micro and Nano Engineering (2017) – COPEN-10: 2017, 7-9th December 2017, IIT Madras, Chennai, India.
- 111) Ganesh S. Kadam, Raju S. Pawade, Chip Deformation Aspects in Relative Eco-friendly HSM of Inconel 718, Proceedings of 2nd International Conference on Materials, Manufacturing and Design Engineering (2017) – iCMMD 2017, 11-12th December 2017, Marathwada Institute of Technology (MIT), Aurangabad, Maharashtra, India.
- 112) Ganesh S. Kadam, Raju S. Pawade, Machining Induced Residual Stresses in Green Machining of Inconel 718, Proceedings (Springer) of 2nd International Conference on Advanced Technologies for Societal Applications (2018) – Techno-Societal 2018, 14-15th December 2018, SVERI's College of Engineering Pandharpur, Solapur, Maharashtra, India.
- 113) Ganesh S. Kadam, Raju S. Pawade, Analysis of surface roughness in HSM of Inconel 718 using water vapour as green cutting fluid, Proceedings of 11th International Conference on Precision, Meso, Micro and Nano Engineering (2019) – COPEN-11: 2019, 12-14th December 2019, IIT Indore, Madhya Pradesh, India.
- 114) Ganesh S. Kadam, Raju S. Pawade, Cutting Force assessment in HSM of Inconel 718 aided with Water vapour as an Eco-friendly Cutting Fluid, Proceedings (Springer) of 2nd International Conference on Recent Advances in manufacturing (2021) – RAM-2021, 10-12th June 2021, SVNIT Surat, Gujarat, India.
- 115) Ganesh S. Kadam, Raju S. Pawade, Parametric evaluation in context to functional role of Eco-friendly Water Vapour Cutting Fluid through Chip Deformation analysis in HSM of Inconel 718, Proceedings of International Conference on Advanced Manufacturing and Materials Processing (2021) – CAMMP 2021, 24-25th July 2021, MNIT Jaipur, Rajasthan, India.
- 116) Ganesh S. Kadam, Raju S. Pawade, Comparative assessment of machining induced hardening in HSM of Inconel 718 with aid of Eco-friendly cutting fluids, Proceedings of International Conference on Advancements and Futuristic Trends in Mechanical and

Materials Engineering (2021) - AFTMME 2021, 9-11th December 2021, IIT Ropar, Punjab, India.

- 117) Raju Pawade, Yogiraj Dama, Bhagwan Jogi, Some Studies on Hole Feature Recommendation for Additive Manufacturing Processes " in the 4th International Virtual Conference on "Recent Trends in Engineering and Technology" on 27th & 28th November, 2021 at Vishwakarma Institute of Information Technology, Pune.
- 118) Ketan Jagtap and Raju Pawade, Effect of Machining Parameters on Machined Flatness for Optical PMMA by Single Point Diamond Turning (SPDT), 7th International Conference on Recent Trends in Engineering & Technology (ICRTET-21), SNJBs COE, Chandawad, Nashik, India, Nov. 2021. (Best Paper Award)
- 119) Ketan Jagtap and Raju Pawade, Some Investigations on Specific Cutting Energy in Precision Machining of Co-Cr-Mo Biomaterial as a Perspective of Productivity, International Conference on Precision, Meso, Micro and Nano Engineering (COPEN 2019), IIT Indore, 2019.
- 120) Ketan Jagtap, Chandrakant Seemikeri and Raju Pawade, 'Some Investigations on Cutting Forces in Face Turning of Co-Cr-Mo Biocompatible Alloy by RSM', 2nd International Conference on Advanced Technologies for Societal Application (Techno Societal-2018), SVERI, Pandharpur, MS, India, 2018
- 121) Ketan Jagtap and Raju Pawade, 'Some Studies on Chip Formation Mechanism in CNC Turning of Biocompatible Co-Cr-Mo Alloy', 2ndInternational Conference Materials, Manufacturing and Design (iCMMD-2017) at MIT, A'bad (M.S.), India, December 2017.
- 122) K. A. Jagtap, V. S. Narkhede, S. R. Wankhede and R. S. Pawade, "Some Investigations on Cutting Forces in Face Milling of Mg-Ca1.0 Alloy", International Conference on Manufacturing Excellence (ICMAX-2017), KKWIEE&R, Nashik (MS), India, 2017.
- 123) Ketan A. Jagtap and Raju S. Pawade, "A Comparative Analysis of Cutting Forces in Precision Turning of Co-Cr-Mo Bio-implant Alloy in Dry and Wet Machining Environments", International Conference on Materials, Manufacturing and Design (iCMMD-2016) at Dr. BATU, Lonere (M.S.), India, December 2016. (Published in Springer Atlantis Procedia)
- 124) Ketan A. Jagtap and Raju S. Pawade, "On the Influence of Cutting Forces in Precision Turning of Co-Cr-Mo Bio-implant Alloy", 9thInternational Conference on Precision Micro Meso and Nano Engineerting (COPEN-9) at IIT Bombay, India in Dec. 2015.
- 125) Ketan A. Jagtap and Raju S. Pawade, "Effect of Machining Environment on Surface Integrity in Precision Turning of CoCrMo Bio-implant Alloy", International Conference on Precision, Meso, Micro and Nano Engineering (COPEN- 8), NIT Calicut, Kerala, India, Dec. 2013
- 126) Ketan Jagtap and Raju Pawade, "Experimental Investigations on Surface Characteristics in Single Point Diamond Turning of PMMA", International Conference on Global Innovations in Technology and Sciences (ICGITS- 2013), Kottayam, Kerala, India, April 2013.

- 127) Ketan Jagtap and Raju Pawade, "A Comparative analysis of surface topography in ultra precision machining of an optical polymer", International conference on Precision, Micro, Meso and Nano Engineering (COPEN-2011), Pune (M.S), India, Dec. 2011
- 128) K. A. Jagtap, R. S. Pawade, P. K. Brahmankar and R. Balasubramaniam, "Surface characterization of optical polymers in ultra precision machining", International conference on Precision, Micro, Meso and Nano Engineering (COPEN-2007), Kerala, India, Dec. 2007
- 129) K. A. Jagtap and R. S. Pawade, "Diamond Turning of Optical Polymers", National Conference on Innovations in Mechanical Engineering, Lonavala (M.S.), India, April 2012.
- 130) K.A. Mahajan, M.Sadaiah, P.K.Brahmankar and R.S.Pawade, "Effect Of Tool Waviness On Components In Diamond Turning", COPEN, PAPER NO. 45, 2007
- 131) Kuldeep A Mahajan, Raju Pawade, R. Balasubramaniam, "Experimental Investigation of Effect of Machining Parameters on PMMA in Diamond Turning", International Conference on "Recent Advances in Manufacturing" (RAM2020), NIT Surat, 2020.
- 132) Kuldeep A Mahajan, Raju Pawade, R. Balasubramaniam, "Experimental investigation of influence of machining parameters on profile error in diamond turning of PMMA", International Conference on "Recent Advances in Mechanical Engineering Research and Development" (ICRAMERD20), SOA, Bhubaneswar, 2020.
- 133) Babasaheb D. Shinde, Raju S. Pawade, Some investigation into powder mixed dielectric EDM of MMC Al6061/Al2O3/24P, International Colloquium on Materials, Manufacturing and Metrology, IIT Kanpur, August 2014.
- 134) Babasaheb D. Shinde, Raju S. Pawade, Experimental investigations in EDM of low electrical conductive 92.7 % Al2O3 ceramic, International Conference on Design and Manufacturing, IIITDM Chennai, 2016.
- 135) Bhushan Nikam, Babasaheb Shinde, Akash Pandey, Raju Pawade and Prakash Brahmankar, Fabrication of Macro-Arrayed Structure using Reverse EDM: A Multi-Objective Optimization 2nd International Conference on Materials Manufacturing and Design Engineering, 2017.

#### **Invited Lectures**: 21

- 1) Coordinate Measuring Machines 'CMM' A lecture delivered at Two-Week AICTE-ISTE Short Term Training Programme on 'Opportunities and Challenges in High Precision Manufacturing; Vision 2020' at Dr. Babasaheb Ambedkar Technological University, Lonere, November 2002.
- 2) Safety Aspects of Machinery and Toolings A lecture delivered at Four Day Training Programme on 'Maintenance of Machinery and Equipments, for the Laboratory Assistants and Workshop Staff at Dr. Babasaheb Ambedkar Technological University, Lonere, March 2002.
- 3) Machining of difficult-to-machine material Superalloy Inconel 718, A lecture delivered at Five Day STTP on 'Machining of Advanced Materials, at VJTI, Mumbai, February 2009.
- 4) Non conventional machining and different coating techniques, A lecture delivered at DKTE Institute Ichalkaranji for M. Tech. students (9 Hours) during 9-10th October 2010.

- 5) Eletro-discharge Machining Theory and practice- A lecture delivered at Two Day Workshop on 'Electrodischarge Machining, at R I T, Sakharale, March 2011.
- 6) Manufacturing Optimization using Taguchi Methods A lecture delivered at Two-Week AICTE-FDP on 'Nanotechnology Opportunities and Challenges' at Dr. Babasaheb Ambedkar Technological University, Lonere, June 10-21, 2013.
- 7) Machining Characteristics of Superalloys- Inconel 718, A lecture delivered in One week content updating training programme on 'Advances in Manufacturing Processes, Systems and Materials' (AMPSM) sponsored by MSBTE, Mumbai on 28th Dec., 2012 at G. P. Nashik.
- 8) Product and Process Optimization using Taguchi Designs: A lecture delivered in One week STTP on 'Advances in Manufacturing processes, at SVERI College of Engineering, Pandharpur, May 13, 2015.
- 9) Product and Process Optimization using Taguchi Designs: A lecture delivered in Two day workshop on Research Methodology at Walchand College of Engineering, Sangli, April 2015.
- 10) Optimization of Manufacturing Processes, A lecture delivered in STTP on Advances in Manufacturing Technologies and Management (AMTM) at Government Polytechnic Nashik, 11th January 2016.
- 11) Machining of Aspheric Lenses, A lecture delivered in STTP on Advances in Manufacturing Technologies and Management (AMTM) at Government Polytechnic Nashik, 11th January 2016.
- 12) Ultrasonic Machining Processes, A lecture delivered in Two Week Faculty Development Programme at RIT Sakharale on 20 November 2017.
- 13) A lecture delivered on 'Adaptive Optics and Case studies' and Diamond Turning Technology' in Five Days STTP under TEQIP III on Advances in Materials and Manufacturing 2019 at MIT Aurangabad during 1-6 March 2019.
- 14) A lecture delivered on 'Energy Scenario-National and International' in Three days workshop on Energy Conservation and Audit at Sharad Institute of Technology College of Engineering, Yadrav, Ichalkaranji on 30 Sept. 2019.
- 15) A lecture delivered online on Ultraprecision Manufacturing Processes- Single Point Diamond Turning, STTP Programme "Recent Advances in Smart Manufacturing Technologies" on the topics "Ultra precision manufacturing processes" at 12.00 pm on 18/06/2020 at Padmashree Dr. V. B. Kolte College of Engineering, Malkapur Dist Buldana (MS)
- 16) A lecture delivered online on 'Mechanical Microdrilling' Faculty Development Programme on 'Advances in Manufacturing Processes & Systems (AMPS-22)' organized by Dept. of Mechanical Engineering of Government Polytechnic, Nashik, 24 February 2022.
- 17) A lecture delivered online on 'Residual Stress Measurement of Inconel 718' in AICTE-ISTE Induction /Refresher Program 2021-22 on "Recent Advances in Materials Science and Engineering", from 18th – 24th January, 2022 at SVERI, Pandharpur (MS)
- 18) A lecture delivered on 'Energy Scenario-National and International' in Three days workshop on Energy Conservation and Audit at Sharad Institute of Technology College of Engineering, Yadrav, Ichalkaranji on 30 Sept. 2019.
- 19) A lecture delivered on 'Water Pollution' in Three days students workshop on Water Management at Rajiv Gandhi College of Engineering, Research and Technology, Chandrapur on 28 January 2020.
- 20) A lecture delivered on "NBA Process, Committees, Activity and SAR' in One week FDP on Outcome Based Education and NBA at KBP COE, Satara on 14 February 2020.

21) A lecture delivered on 'Machining Characteristics of Superalloys Inconel 718' in Technical Symposium webinar "Advances in Materials and Manufacturing Engineering (AMME 2020)" from 30 June 2020 to 4 July 2020.

#### **Organized Conferences/Workshops**: 16

- 1) First International Conference on Materials, Manufacturing and Design (ICMMD 2016) during December 2016 at Dr. Babasaheb Ambedkar Technological University, Lonere
- 2) Second International Conference on Materials, Manufacturing and Design (ICMMD 2016) during December 2017 at Maharashtra Institute of Technology, Aurangabad.
- 3) Organized a Four Day Training Programme on 'Maintenance of Machinery and Equipments, for the Laboratory Assistants and Workshop Staff at Dr. Babasaheb Ambedkar Technological University, Lonere, March 2002.
- 4) Organized a Two-Week AICTE-ISTE Short Term Training Programme on 'Opportunities and Challenges in High Precision Manufacturing; Vision 2020' at Dr. Babasaheb Ambedkar Technological University, Lonere, November 2002.
- 5) Organized a One Week TEQIP- Short Term Training Programme on 'Advanced in Materials and Manufacturing Processes' at Dr. Babasaheb Ambedkar Technological University, Lonere, June 2011.
- 6) Organized a One Week TEQIP- CEP on 'Interdisciplinary aspects in modeling of manufacturing processes' at IIT Powai, Mumbai, 2-6 November 2013.
- 7) Organized a One Week TEQIP III Short Term Training Programme on 'Advances in Materials and Manufacturing' (AMMT 2019) at MIT Aurangabad during 1-6 March 2019.
- 8) Organised a One day workshop on University Governance and Examination Reforms on 3 June 2019 at HPTU, Hamirpur (HP) under TEQIP III.
- 9) Organised a One day workshop on Outcome Based Education on 4 June 2019 at HPTU, Hamirpur (HP) under TEQIP III.
- 10) Organised a Two day workshop for Students (30) on 'Water Management'at DBATU Lonere on 20-21 September 2019.
- 11) Organised a three days workshop for Students (70) on Energy Conservation and Audit at Sharad Institute of Technology College of Engineering, Yadrav, Ichalkaranji on 28-30 Sept. 2019.
- 12) Organised a Two days workshop for students (70) on Welding Technology at DBATU, Lonere during 5-6 October 2019.
- 13) Organised a three days workshop for Students (50) on Water Management at Rajiv Gandhi College of Engineering, Research and Technology, Chandrapur during 28-30 January, 2020.
- 14) Organized a one-week STTP on Micromachining for future products at SIT College of Engineering, Yadrav, Ichalkaranji, Kolhapur during 11-15 January 2020.
- 15) One Week TEQIP III FDP on 'Interdisciplinary Aspects in Modelling of Manufacturing Processes' jointly with IIT Bombay in online mode, 21-23 & 27-29 November 2020.
- 16) Competency Skills and SAE BAJA Guidelines, by Mr. Sanjay Chopane, Manager, R&D, Eaton Technologies, Pune, November 2013

## **Expert Lecture Organised:** 7

- 1) Competency Skills and SAE BAJA Guidelines, by Mr. Sanjay Chopane, Manager, R&D, Eaton Technologies, Pune, November 2013
- 2) Dr. RamaGopal Sarepaka on Diamond Turning Opportunities and Challenges

- 3) Madhav Kadam, Mahindra & Mahindra, Mumbai Automotive lighting system designs and studio
- 4) Professor Shiv G. Kapoor, University of Illinois, Urbana Champaign, USA on Research and Pedagogy for Faculty, August 7, 2017
- 5) Professor Shiv G. Kapoor, University of Illinois, Urbana Champaign, USA on Advanced Research and Education opportunities, August 8, 2017
- 6) Recent Advances in Automotive Powertrains, by Sanjay Chopane, Manager, R&D, Eaton Technologies, Pune, September 2018
- 7) Webinar on "Metal Additive Manufacturing' on 5 August 2021 by Mr. Utkarsha Ankalkhope, CTO, EXCEL3D Advanced Technologies, UK.

## Participated in International/National Conferences: Paper presentation and session chairs: 11

- 1) Session chair for one session of short presentations in International Conference on Precision, Meso, Micro and Nano Engineering, COPEN 11, Indian Institute of Technology, Indore, Dec. 12-124, 2019
- 2) Webinar on DTM Technology Development in India Taking stock to way forward, 31 July 1 August 2020 conducted by CMTI Bangalore
- 3) Attended AICTE AQIS sponsored Short Term Training Program on Advances in Additive Manufacturing organized by Siemens Centre of Excellence for Advanced Manufacturing and Robotics under NAFETIC at Yeshwantrao Chavan College of Engineering, Nagpur conducted between 20th to 25th of July, 2020.
- 4) Attended NAAC workshop organised by DBATU and RUSA, Maharashtra on 28th July 2020 at 9.30 am
- 5) One Week TEQIP III FDP on 'Interdisciplinary Aspects in Modelling of Manufacturing Processes' jointly with IIT Bombay in online mode, 21-23 & 27-29 November 2020.
- 6) One Day Workshop on OBE Concepts & Implementation and Digital preparedness for NBA on 29 May 2021 organized by MIT Aurangabad
- 7) Three day National Workshop on 'Administrative staff professional Development' during 27-29 May 2021 organized by College of Education Barshi.
- 8) Session Chair for One Session in Second International Conference in Advances in Manufacturing RAM 2021 at SVNIT Surat (online mode) June 12, 2021.
- 9) Attended One week AICTE- ATAL- FDP on "Numerical simulation and soft computing techniques in advanced manufacturing processes" under a thrust area as "3D printing & Design" during 05th 09th of July 2021.
- 10) Attended Two-Day Online Workshop on "3D Printing Solutions for Medical Innovation" (3DPSMI-2021) at NIT Calicut, during 17th & 18th July, 2021.
- 11) Attended One week AICTE- ATAL- Elementary FDP on "Design Thinking and Creativity for Educators" under a thrust area as "3D printing & Design" during 27<sup>th</sup> September 2021 to 1<sup>st</sup> October 2021.

## FDP/STTP Attended - 21

- 1) Winter school on "Total Quality Management" at SPCE, Andheri, Mumbai, 1998
- 2) SERC school on "RAM in Manufacturing" at IIT, Kharagpur, 1998
- 3) Winter school on "Computer Fundamentals and Office Automation" at KIT's College of Engineering, Kolhapur, 1999

- 4) Winter school on "Education Technology" at Dr. Babasaheb Ambedkar Technological University, Lonere, 1999
- 5) Winter school on "Design for Manufacturability" at Regional Engineering College, Warangal, 1999
- 6) A four day course on "Synergogy for improving Teaching and Learning Skills, Conducted by Scientific Methods", USA at Dr. Babasaheb Ambedkar Technological University, Lonere
- 7) QIP Short Term Course on Advanced Machining Processes, at IIT, Kanpur, 18-23 October, 2004.
- 8) One Week CEP on Metal Forming at SVNIT, Surat during 22-26 December 2014.
- 9) Four days Continuing Education Programme on Solidification, Welding and Advanced Casting, at IIT, Mumbai, 28-31 October, 2015.
- 10) Two days workshop on Migration to Free and Open ware Software, at Dr. Babasaheb Ambedkar Technological University, Lonere, 6-7 January 2016.
- 11) First SERC School on Micromachining jointly organized by IIT Bombay and BARC, Mumbai during 2-7 June 2008
- 12) Two days CEP course on Manufacturing Optimization using Design of Experiments at IIT Bombay during 18-19 December 2007.
- 13) Three days CEP couse on 3D Printing by IIT Bombay during 20-22 May 2013.
- 14) One week CEP Course on Institution Building Through Appreciative Mindset by IIT Bombay during August 29, September 2-4, 16, 2013.
- 15) One Week Short Term Training Programme on Advances in Materials and Manufacturing Processes, at DBATU Lonere during 27 June to 1 July 2011.
- 16) Two Week FDP on Nanotechnology: Opportunity and Challenges at DBATU Lonere during 10-21 June 2013.
- 17) One Week Training Programme on Automation Technologies organized by VTU-Bosch Rexroth Center of Competence in Automation Technology, Mysuru from 17-21 October 2016.
- 18) One Week AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Numerical simulation and soft computing techniques in advanced manufacturing processes" from 2021-07-05 to 2021-07-09 at Lakshmi Narain College of Technology, Bhopal.
- 19) One Week AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Advanced Manufacturing of Biomedical Devices for Precision Health Technologies" from 13/12/2021 to 17/12/2021 at Indian Institute of Technology Tirupati.
- 20) One Week AICTE Training And Learning (ATAL) Academy Online Elementary FDP on" Design Thinking and Creativity For Educators" from 27/09/2021 to 01/10/2021 at Vels Institute of science Technology and advanced studies.
- 21) Two Day Online Workshop on "3D Printing Solutions for Medical Innovation (3DPSMI-2021)" organized by the Department of Mechanical Engineering, National Institute of Technology Calicut in collaboration with MVRCCRI Calicut during July 17-18, 2021.

## **Sponsored Projects**

MODROBS - Modernization of Workshops in 1997-2000

Grant received and consumed - Rs. 14 Lakhs

 UGC- MRP – Analysis and modeling of Electrophoretic polishing of stainless steel and ceramics

Grant Sanctioned - 6.58 Lakhs

# MOUs Signed- 04

- 1) Rudrali Toolings Limited, Bhosari, Pune since September 2019
- 2) Rising Sun Technologies, Pune since November 2019
- 3) Infigon Futures, Andheri, Mumbai
- 4) Raja Ramana Center of Advanced Studies, Indore

# Awards/Rewards - 01

Best Paper Award for the research paper titled 'Effect of Machining Parameters on Machined Flatness for Optical PMMA by Single Point Diamond Turning (SPDT)

Date: 16 November 2021

Awarding Agency: SNJB K B Jain College of Engineering, Chandwad in ICERT 2021 Conference

# **Skill Development Initiatives**

- 1) Worked as a Deputy Centre Superintendent for the NEET (UG) 2023 Examination
- 2) National e- Kart Racing Championship 2017, Session II, at RGPV, Bhopal, 29 September to 3 October 2017 representing Team Drifters of the University.
- 3) National Electric Kart Championship 2019, Session II, at RGPV, Bhopal, 26-29 March 2019 representing Team Drifters of the University.
- 4) Virtual Baja SAE India 2014 organised by GTU, Ahmedabad on 1-2 August 2014.
- 5) Three day Awareness Training Workshop on Idea of Innovation and Startup at Dr. BATU, Lonere during 24-26 October 2018.
- 6) Participated as Judge for University level round of Avishkar 2019 held at DBATU Lonere on 3-1-2020
- 7) Participated as Jury in Internal Hackathon for Smart India Hackathon, 2020 at DBATU Lonere
- 8) Implemented Skill Development of Youth in the konkan region under World Bank Scheme of Community Polytechnic as a Project Officer and trained thousands youth in various skills such as Welding, Electrician, Carpentry, etc during 1996 to 2005.

# **Reviewer of Journals/Conference proceedings**

- 1) International Journal of Advanced Manufacturing Technology, (Springer-Verlag, London).
- 2) Journal of Materials and Manufacturing Processes, (Taylor and Francis Publication, London)
- 3) Proceedings of the Institution of Engineers IMechE UK Journal of Engineering Manufacture, Part B (Professional Engineering Publishing, UK)
- 4) Journal of Manufacturing Processes, (Elsevier Publications, London)
- 5) International conference on Production and Industrial Engineering CPIE 2010.

- 6) ASME 2012 International Manufacturing Science and Engineering Conference MSEC2012, June 4-8, 2012, Notre Dame, Indiana, USA
- 7) ASME 2014, International Manufacturing Science and Engineering Conference MSEC2014, June 9-13, 2014, Detroit, Michigan, USA
- 8) International Research Journal of Engineering Science, Technology and Innovation from intersejournals.com
- 9) 6th International & 27th All India Manufacturing Technology, Design and Research Conference" during 16th - 18th December 2016, COE Pune, India
- 10) International Conference on Design and Manufacturing during 16-17 December 2016, Indian Institute of Information Technology Design and Manufacturing, Kancheepuram (IIITDM), Chennai, India.
- 11) Editor for Atlantis Press of Springer for First International Conference on Materials, Manufacturing and Design Engineering iCMMD 2016 during 20-21 December 2016
- 12) International Journal of Mechanical Science, Elsevier since 2017.
- 13) International Conference On 'Advances in Thermal System, Materials and Design Engineering (ATSMDE 2017) at VJTI Mumbai 22 December 2017.
- 14) Editor for Proceedia Manufacturing of Elsevier for Second International Conference on Materials, Manufacturing and Design Engineering iCMMD 2017 during 11-12 December 2017
- 15) Reviewer for Second International Conference on Materials, Manufacturing and Design Engineering iCMMD 2017 during 11-12 December 2017
- 16) Journal of Advanced Manufacturing Systems, Elsevier, 2017, 2021
- 17) Computer Modeling in Engineering & Sciences, International Journal, Tech Science Press, 2017.
- 18) Material Science and Engineering A, Elsevier, 2018 onwards
- 19) 3rd National Conference on Recent Trends in Mechanical Engineering (NCRTME-2018) held at WCE Sangli 21-22 June 2018 4 papers
- 20) 7th International & 28th All India Manufacturing Technology, Design and Research Conference" during 13th - 15th December 2018, Anna University, Chennai India- 4 papers
- 21) SADHANA Academy Proceedings in Engineering Sciences, Springer since 2019
- 22) Optics and Laser Technology, Elsevier, since 2019
- 23) Mathematics in Engineering, Hindawi publications., since August 2019.
- 24) International Journal of Precision Technology, Inderscience, September 2019.
- 25) Journal of Materials Research and Technology, Materials Today, 2020
- 26) 26. Engineering Science and Technology, An International Journal, Elsevier, 2020
- 27) Proceedings of the iMech E part E: Journal of Process Mechanical Engineering, SAGE Publications 2020
- 28) International Research Journal of Engineering Science, Technology and Innovation from intersejournals.com
- 29) Journal of Cleaner Production, Elsevier
- 30) Journal of Advanced Manufacturing Systems, 2021.
- 31) Bentham Publishing Co. for Book Chapter, 2021

#### Administrative Experience at the Institute

- Member, Board of Studies in Mechanical Engineering (June 2001 to June 2005)
- Member, Academic Council (June 1997 to June 2000)

- Member Secretary, University Purchase Committee (September 1991 to 2005)
- Faculty Advisor for M. Tech. (Manufacturing Engineering)
- Incharge, Project Officer, Community Polytechnic, IoPE, Lonere
- Incharge, Store Officer, university
- Judges in various technical events, competitions
- Convener, Committee for design and fabrication of Drawing Desk
- Incharge- University Examination Seating arrangement
- Security Officer from 2012 to Feb. 2017.
- Convenor, University Convocation pandal and seating arrangement
- Officer Incharge, University Examination
- Senior Supervisor, University Examination
- Member, NBA proposal preparation committee
- Member, TEQIP II proposal preparation committee
- Nodal Officer, TEQIP II for procurement since 2012
- Member, Ambedkar Jayanti Exhibition committee
- Convenor, Stall and Exhibition Committee, ISTE Annual Convention
- Convenor, University Annual Social Gathering, pandal/stage and seating arrangement
- Convenor, University Annual Social Gathering, Exhibition committee
- Convener, Transport and Parking Committee, Indradhanushya 2013
- Member, Admission committee, 15% konkan quota
- Member, selection committee for non-teaching staff
- Member, University Canteen Committee
- Member, selection committee for ad-hoc teachers
- Member, Staff Promotion Development Scheme for Non-Teaching Staff
- Member, Rules for deputation to higher studies Committee, 2017
- Coordinator- UGC Cell since 2014
- Nodal Officer Procurement TEQIP III since 2017
- University Coordinator for LIC in 2017 for 3 affiliated colleges
- University Coordinator for LIC in March 2018 for 3 affiliated colleges
- Member University Disposal Committee, since 2018
- Member Tribal Development Cell of the University since 2018
- University Coordinator for LIC in 2021 for 2 affiliated colleges

#### Academic Experience at the Institute

- Development of B. Tech. Workshop, Metrology and Quality Control Laboratory
- Development of Centre for Advanced Machining Technology (CAMT).
- Coordinator, B. Tech. Seminar and projects
- Member, Committee for syllabus preparation, UG and PG (Manufacturing
- Commissioning and testing of Workshop machines and CNC machines, RPT Machine, USM Machine, EDM Machine, Kistler Dynamometer, TIG, SAW and MIG Welding Machines, Wire EDM
- Development of Curricula for B. Tech. Production, M. Tech. Manufacturing Engg., Production Engg. for the Affiliated University
- Member, Research Progress Committee, Mr. Mahesh Pol RS 20160101
- Member, Coordination committee, Collaboration for Research and Development for Practical Solutions with Rajiv Gandhi Commission for Science and Technology, State of

Maharashtra, 2018 Member, Coordination committee for establishment of i2E Centre in the premises of University, 2018

- Faculty Advisor, SAE Collegiate Club
- SPOC, NPTEL, DBATU Lonere

#### Member of Other Institutes

Board of Studies, DKTIET, Ichalkaranji, MS

# **Approved Examiner**

Institution of Engineers India for AMIE Projects