Dr. Kanwal Jit Singh

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Academic Qualification:

Ph.D. (Mechanical Engineering), Thesis Supervisor: Prof. (Dr.) Inderpreet Singh Ahuja & Co-Supervisor: Prof. (Dr.) Jatinder Kapoor, August 2013- February 2018

Ultrasonic Machining (Non-Conventional Machining), Punjabi University, Patiala, India

Thesis Title: Experimental investigation into Ultrasonic machining of Polycarbonate Bullet proof and Acrylic Heat resistant Glass

Master of Engineering (M.E) (Mechanical Engineering, Thesis Supervisor: Prof. (Dr.) Vinod Kumar Singla & Co-Supervisor: Prof. (Dr.) Bikramjit Sharma, August 2010 – October 2012

Ultrasonic Machining (Non-Conventional Machining), Thapar University, Patiala, India

Thesis Title: Finite Element Analysis and optimization of process parameters involved in Ultrasonic machining process

Bachelor of Technology (B.Tech) (Mechanical Engineering, 1st Class) July 2005- August 2009 Giani Zail Singh College of Engineering & Technology, Bathinda, Punjab, India

Experimental and Instrumental Skills

- Ultrasonic drilling machine (USM)
- Rotary ultrasonic machine (RUSM)
- Electric discharge machine (EDM)
- Scanning electron microscopy (SEMs): JEOL 6500 & Hitachi S-4700
- X-Ray Microanalysis: JEOL 6500 & Hitachi S-4700
- X-Ray Diffraction: Rigaku High power powder diffractometer & Bruker D8 with GADDS 2 dimensional detector
- Computer numerical control: Router 3 Axis DIY & Lathe CNC

Publications:

1. Sharma, H., Singh, C.D., **Singh, K.J.** (2024) Technological competencies attributes analysis using qualitative techniques in Indian manufacturing industry, Published in *International Journal of Process Management and Benchmarking*, (**InderScience UK**) ISSN: 1460-6739, eISSN" 1741-816X, Vol. 16, No. 1. Page. 91-110, DOI. https://doi.org/10.1504/IJPMB.2024.135753

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- 4. Sharma, H., Singh, C.D., **Singh, K.J.** (2023) Analysis of objective criteria weighing techniques in different MCDM methods on technological competencies factor selection, Published in *International Journal of Process Management and Benchmarking*, (InderScience UK), ISSN: 1460-6739, eISSN" 1741-816X, Vol. 15. No.2, Page 218-235. DOI: https://doi.org/10.1504/IJPMB.2023.133152
- 5. Shrkiant, K.A., Singh, K.J., (2023) Friction Stir Welding Of Aluminium Alloy Aa2219 With Tensile Load And Lowest Hardness Distribution Profile Analysis, Published in the *International Journal of Emerging Technologies and Innovative Research* (www.jetir.org), ISSN: 2349-5162, Vol. 10, Issue 12, pages b274-b289, December 2023. Available at: http://www.jetir.org/papers/JETIR2312133.pdf
- 6. Shrkiant, K.A., **Singh, K.J.**, (2023) Short Review On Friction Stir Welding And Machining Parameters Published in the *International Journal of Emerging Technologies and Innovative Research* (www.jetir.org), ISSN: 2349-5162, Vol. 10, Issue 12, pages a699-a709, December 2023. Available at: http://www.jetir.org/papers/JETIR2312089.pdf
- 7. Shrkiant, K.A., **Singh, K.J.,** (2023) Short and Brief Review on Friction Stir Welding, *International Journal for Multidisciplinary Research* Volume 5, Issue 6, November-December 2023. DOI10 . 36948 / ijfmr . 2023 . v05i06 . 10052 https://doi.org/10.36948 / ijfmr .2023.v05i06.10052
- 8. Shrkiant, K.A., Singh, K.J., (2023) Friction Stir Welding Of Aluminium Alloy Aa2219 And Tensile Load Analysis, Published in the *International Journal of Emerging Technologies and Innovative Research* (www.jetir.org), ISSN: 2349-5162, Vol. 10, Issue 12, pages a785-a800, December 2023. Available at: http://www.jetir.org/papers/JETIR2312098.pdf
- 9. Shrkiant, K.A., Singh, K.J., (2023) Friction Stir Welding-Recent Advancement, Process Parameters, Metallurgical Structure, Properties, Applications, Advantages, and Disadvantage: A review (CDLU-AIMT International Conference on August 17-18, 2023) (Accepted).
- Narinder Gupta and **Singh.K.J.**, (2022) Experimental Analysis of Piston Ring to Reduce Friction by Using Different Lubricants (Sae15w And Sae30w) for a Four Stroke Four Cylinder Petrol Engine, *Efflatounia-Multidisciplinary Journal*, ISSN 1110-8703, Vol. 5, No. 1. http://www.efflatounia.com/index.php/journal/article/view/667
- 11. Singh.K.J. and Sidhu. R.S., (2021) "Analyzing of mechanical properties and microstructure of friction stir welding AZ31 magnesium alloy joint", *Material Today: Proceedings*, Elsevier, UK, (Accepted), Article in Press.

12. Chhabra. A. and Singh.K.J., "Engine Oil Dialysis of heavy duty engine oil 5W50", Material Today: Proceedings, Elsevier, UK, (Accepted), Article in Press. **13.** Sharma. Y., Singh. K.J. and Vasudev. H. (2021), "Experimental studies on friction stir welding of aluminium alloys", Material Today: Proceedings, Elsevier, UK, (Accepted), Article in Press. **14.** Singh.K.J. and Kumar.R., (2021), "Study of agriculture wasted of rice paddy pulp reinforced epoxy for the used composites sheet materials", Advance in Material and Processing Technologies, Taylor and Francis (UK), Print ISSN: 2374-068X, Online ISSN: 2374-0698, https://doi.org/10.1080/2374068X.2021.1949184 **15.** Chhabra, A. and Singh, K.J. (2021), "Analysis of Heavy Duty Engine Oil 5W50", Aegaeum Journal, Vol. 9, Issue 6, pp 119-127, ISSN No 0776-3808. Chhabra, A. and Singh, K.J. (2021), "Examination of Physico-Chemical Properties of Motor **16.** Oil 5W50", Aegaeum Journal, Vol. 9, Issue 6, pp 60-70, ISSN No 0776-3808 **17.** Chhabra, A. and Singh, K.J. (2021), "Review of Physical & Chemical Properties of Heavy Duty Engine Oil 5W50", WHJJ Journal, Vol. XVII, Issue V, pp 201-207, ISSN No 1001-1749. Sidhu. R.S. and Singh.K.J., (2021), "Evaluating Mechanical Properties and Microstructure **18.** of Friction Stir Welding AA6061 Amuminum Alloy Joint", Solid State Technology, (US) ISSN: 0038-111X, Vol. 64 (2), pp. 2131-2142. **19.** Sidhu. R.S. and Singh.K.J., (2021), "Analysis of Mechanical Properties of Friction Stir welded AZ91 Magnesium Alloy Joints", Solid State Technology, (US) ISSN: 0038-111X, Vol. 64 (2), pp. 1618-1626. 20. Singh. K.J., (2021), Some Studies on Rapid Prototyping in Context to E-Manufacturing, Efflatounia-Multidisciplinary Journal, No. (2021),Vol. 1 http://efflatounia.com/index.php/journal/article/view/665 21. Singh, K., Singh, K.J., (2021) Research Outcomes Of Reverberation Of Steel Fibers On Dynamic Mechanical Properties, Turkish Journal of Computer and Mathematics Education, Vol.12 No.12 (2021),**ISSN** 1309-4653, 4839 4847, https://turcomat.org/index.php/turkbilmat/article/view/12394/8969 22. Kumar, N., Singh, K.J., (2021) Design And Implementation Of Piston Bowl Geometry On Combustion And Emissions Of A Direct Injected Diesel Engine, International Journal of Psychosocial Rehabilitation, Volume 25, Issue 2, Page No: 1454-1465, ISSN:1475-7192, https://www.psychosocial.com/article/39273/ Singh K.J. (2021) Design and Analysis of Universal Gripper for Robotics Applications, 23. International Journal of Advance Research in Science and Engineering, Print-ISSN 2319-

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24.	Singh K.J. and Singh, K. (2021) Design and Fabrication of Active Steering in Automobiles, International Journal of Advance Research in Science and Engineering, Print-ISSN 2319-8346, Online-ISSN 2319-8354, Vol No. 10, Issue No. 11, PP. 62-68.
25.	Kumar, N. And Singh K.J. (2021) Thermal Management of Electrified Propulsion System for Low-Carbon Vehicles, International Journal of Advance Research in Science and Engineering, Print-ISSN 2319-8346, Online-ISSN 2319-8354, Vol No. 10, Issue No. 11, PP.196-201.
26.	Singh, K.J., (2021), Improvement in machining process performance using solid lubricant assisted minimum quantity lubrication, International Journal of Advance Technology in Engineering & Science, ISSN 2348-7550, Vol. No. 09, Issue No. 08, PP. 109-114.
27.	Singh, K.J. (2021) Two Axis Movement of Portable Platform for Material Handling, International Journal of Innovative Research in Science and Engineering (IJIARSE), ISSN 2455-0663, Vol;. 07, Issuse 10, PP. 19-22.
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- Singh K.J. (2020) Using Microbial Desulfurization of a Crude Oil Middle Distillate Fraction: Analysis of the Extent of Sulfur Removal and the Effect of Removal on Remaining Sulfur, International Journal of Advance Research in Science and Engineering (IJARSE), ISSN 2319-8346, Vol No. 09, Issue No. 05 PP. 205-212.
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- **38. Singh.K.J.,** (2020), "Experimental investigation on Mechanical Properties of Wheat Husk Pulp Rein Forced Epoxy Composites", *Advanced Engineering Forms*, (*Scientific. Net Trans Tech Publications*, *Switzerland*), *ISSN*: 2234-991X, Vol. 36, pp. 114-125. doi:10.4028/www.scientific.net/AEF.36.114
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45.	Singh, K.J., (2019), "Multi-objective optimization of high carbon steel (en-31) and low carbon steel (sae-1020) using grey taguchi method in rotary friction stir welding, <i>Grey Systems: Theory and Application,</i> (<i>Emerald</i>) (Accepted 18-04-2019) (ISSN: 2043-9377) Vol.9, No.04, pp.385-400. https://doi.org/10.1108/GS-10-2018-0047
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51.	Singh, K.J. , Ahuja, I.P.S. and Kapoor, J. (2017), "Chemical assisted ultrasonic machining of Polycarbonate glass and optimization of process parameters by Taguchi and Grey Relational Analysis", <i>Advances in Materials and Processing Technologies,</i> (<i>Taylor & Francis</i>). Vol.3 (4), pp. 1-23, DOI. dx.doi.org/10.1080/2734068X.2017.1350022. Accepted 29-06-2017,

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- **Singh, K.J.,** Ahuja, I.P.S. and Kapoor. J. (2017), "Experimental investigation and study the effect of Hydro Fluoric Acid in Ultrasonic machining of Polycarbonate bullet proof UL-752 and Acrylic heat resistant BS-476 Glass", *Advanced Engineering Forum*, (*Scientific. Net Trans Tech Publications*, *Switzerland*), Vol.24, pp. 24-39. https://doi.org/10.4028/www.scientific.net/ AEF.24.24 (Accepted- 18-9-2017) (ISBN-13: 978-3-0357-1286-5).
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- 81. Singh, K.J., Ahuja, I.P.S. and Kapoor. J. (2015) "Study the effect of abrasive and acid in ultrasonic machining of plain glass material" TEQIP-II Sponsored National Conference on *Latest development in material, manufacturing and quality control*, 19th -20th Feb 2015, GianiZail Singh Campus College of Engineering and Technology, Bathinda, Punjab, India, pp. 183-187 (ISBN: 978-93-5196-055-3).
- 82. Sharma, M., Singh, K.J. and Singh, C. (2015) "Friction Stir welding by doping of material-Review" *TEQIP-II Sponsored National Conference on Latest development in material, manufacturing and quality control,* 19th -20th Feb 2015, GianiZail Singh Campus College of Engineering and Technology, Bathinda, Punjab, India, pp. 198-205, (ISBN: 978-93-5196-055-3).
- **83. Singh, K.J.** and Singh, M. (2015) "Hydromegnetic Mixed Convection Flow through porous medium in an hot vertical channel with spanwisecosinusoidal temperature and heat radiation" *TEQIP-II Sponsored National Conference on Latest development in material, manufacturing and quality control,* 19th -20th Feb 2015, GianiZail Singh Campus College of Engineering and Technology, Bathinda, Punjab, India, pp.263-269, (ISBN: 978-93-5196-055-3).
- **84.** Kaur, S. and **Singh, K.J.** (2015) "Preparation and photo degradation analysis of substituted

flavones-Review paper", *TEQIP-II Sponsored National Conference on Latest development in material, manufacturing and quality control*, 19th -20th Feb 2015, GianiZail Singh Campus College of Engineering and Technology, Bathinda, Punjab, India, pp.463-468, (ISBN: 978-93-5196-055-3).

Books	Books Published	
1.	Singh, K.J. and Singh, D.J. (2017), "Optimization of process parameters of powder mixed electric discharge machining for D2 Steel" <i>GRIN Publishing</i> , ISBN (eBook): 978-366-8-60033-1 and ISBN (Book) 978-366-8-60034-8, Germany.	
2.	Singh, C.D., Singh, R., Singh, R.D. and Singh, K.J. (2017) "Effect of tool pin profile on microstructure and mechanical properties of AL6063 in Friction Stir Processing" <i>Hamburg, Anchor Academic Publishing</i> , ISBN: 978-3-96067-705-5, Hamburg.	
3.	Singh, K.J., Ahuja, I.P.S. and Kapoor. J. (2017) "Ultrasonic Machining of Glass" <i>LAP LAMBERT Academic Publishing</i> , ISBN: 978-3-659-94579-3, Germany.	
4.	Singh, K.J. and Sharma, M. (2017) "Friction Stir Welding of Aluminium" <i>LAP LAMBERT Academic Publishing</i> , ISBN: 978-3-330-06118-7, Germany.	
5.	Singh, K.J. and Kumar, P. (2017) "Electric Discharge Machining" <i>LAP LAMBERT Academic Publishing</i> , ISBN: 978-3-330-06424-9, Germany.	
6.	Singh, K.J., Ahuja, I.P.S. and Kapoor. J. (2017) "Ultrasonic Machining- Case Studies" <i>LAP LAMBERT Academic Publishing</i> , ISBN: 978-3-330-06883-4, Germany.	
7.	Singh, R., Singh, K.J. and Singh, C.D. (2017), "Investigation of Process Parameters Involved in FSW of Aluminium" <i>LAP LAMBERT Academic Publishing</i> , ISBN: 978-620-2-19964-3, Germany.	
8.	Singh, K.J., Singh, C.D. and Singh, J. (2017), "Evaluation and Optimization of EDM parameters on Al Alloy 7075" <i>LAP LAMBERT Academic Publishing</i> , ISBN: 978-613-4-96560-6, Germany.	

Awa	Awards & Honours	
1.	Best Ph.D. Thesis Award 2021-22, Investigation the friction stir welding joint of Magnesium and Aluminium Alloys, Name of the Candidate: Ramandeep Singh Sidhu (J181831002), Supervisor: Dr. Kanwal Jit Singh (Associate Professor, Department of Mechanical Engineering, Guru Kashi University, Talwandi Sabo, Bathinda, Punjab, India,(Ref.No. GKU/Ph.D./RA/2021/020).	
2.	Best Research Paper Award 2020-21, Study of agriculture wasted of rice paddy pulp reinforced epoxy for the used composites sheet materials, Advance in Material and Processing Technologies, Taylor and Francis (Scopus), ISSN: 2374-068X (Online) ISSN: 2374-0698 (Offline), https://doi.org/10.1080/2374068X.2021.1949184, Powered by Guru Kashi University, Talwandi Sabo, Bathinda, Punjab, India, (Ref.No. GKU/Ph.D./RA/2021/019).	
3.	Emerging Researcher Award 2020-21, Powered by Guru Kashi University, Talwandi Sabo, Bathinda, Punjab, India (Ref.No. IQAC/GKU/20/S-184).	
4.	Person of Year-Research 2019-20 (Engineering Excellence Award) Powered by Society of Manufacturers of Electric Vehicles and Ministry of New and Renewable Energy Government of India on 9 th October 2020.	
5.	Young Scientist Award (RACE-2019' Bangkok) International Association of Research and Developed Organization (IARDO) on 10th February 2019.	
6.	Innovative Technological Research (Mechanical Engineering) & Dedicated Teaching Professional Award From the Society of Innovative Educationalist & Scientific Research Professional (India) Accredited with Innovative Scientific Research Professional Malaysia (India Chapter) on 25th March 2018.	

Consultancy

1. Consultancy Farm: N.M. Convent Public School

Consultancy Topic: Preparation of Tender Documents and Estimation of all Civil Works Consultancy Farm Address: N.M. Convent Public School, The BrijLal Memorial Educational Society, MandiDabwani, Sirsa, Pin Code: 125-055, Haryana, +91-85439-78549

Consultancy Service Amount: 3,33,340/- (Three Lakhs Thirty Three Thousand Three Hundred Forty)

Session: 2020-21

2. Consultancy Farm: Think Next Pvt. Ltd

Consultancy Topic: Service for Smart Wheel Chair Design and Prototype.

Consultancy Farm Address: Think Next Technologies Pvt. Ltd. S.C.F. 113, Sector-65,

Mohali, Chandigarh, +9178374-01000, 7837402000

Consultancy Service Amount: 1,50,000/- (One Lakh Fifty Thousand Only)

Session: 2020-21

3. Consultancy Farm: Paras AeroSpacePvt. Ltd

Consultancy Topic: Development of Agriculture Pesticide Sprayer & COVID-19

Sanitization Drone.

Consultancy Farm Address: Paras Aerospace, D-112, TTC Industrial Area, MIDC Industrial Area, Nerul, Navi Mumbai, Maharashtra 400-706, India, +91-8309981501

Consultancy Service Amount: 11,00,000/- (Eleven Lakh Only)

Session: 2021-23

4. Consultancy Farm: Keenon Robotics Co. Ltd

Consultancy Topic: Development of Goods Transport and Stair Climber Robot

Consultancy Farm Address: Plot 859, Sector-8, SadarPatrappa Road, Medarpet,

 $Kumbarpet,\ Dodpere,\ Nagarathpete,\ Bengaluru,\ Karnataka,\ 560002,\ India,\ +91-400-8695-100002,\ Arnataka,\ Arnataka$

859

Consultancy Service Amount: 14,00,000/- (Fourteen Lakh Only)

Session: 2021-23

Research Project (Government/ Non-Government)

1. Project Title: Condition Based Maintenance and Residual Life Prediction by Using Vibration Data

PI: Dr.Chandan Deep Singh (Assistant Professor, Department of Mechanical Engineering, Punjabi University, Patiala)

Co-PI: Dr. Kanwal Jit Singh (Associate Professor, Department of Mechanical Engineering, Guru Kashi University, Talwandi Sabo.)

Amount: 22 Lakhs

	Year of Sanction: 2021
	Duration: 4 Years
2.	Project Title: Solar Sea Water or Hard Water Desalination Machine with RO UV Purifier
	PI: Dr. Kanwal Jit Singh (Associate Professor, Department of Mechanical Engineering,
	Guru Kashi University, Talwandi Sabo)
	Amount: 11.50 Lakhs
	Year of Sanction: 2021
	Duration: 2 Years

Patent

1. Patent Number: 385259-001

Title of the invention: Multi-Utility Sofa Cum Table Set

Date of filing of Application :28/04/2023

Publication Date: 12/01/2024

Intellectual Property India, Controller General of Patents, Design and Trademarks, Department of Industrial Policy and Promotion, Ministry of Commerce and Industry

1. Patent Number: 202111058563 A

Title of the invention: CHARCOAL PILE LIGHTING DEVICE

Date of filing of Application: 15/12/2021

Publication Date: 31/12/2021

Intellectual Property India, Controller General of Patents, Design and Trademarks, Department of Industrial Policy and Promotion, Ministry of Commerce and Industry

2. Design Patent: 353619-001

Cbr Number: 210126

Title of Design: MACHINE FOR SEALING PLASTIC

Date of Registration 24-11-2021

Design Accepted and Publish, Journal No. 01/2022 and Journal Date 07-01-2022 Intellectual Property India, Controller General of Patents, Design and Trademarks, Department of Industrial Policy and Promotion, Ministry of Commerce and Industry

https://search.ipindia.gov.in/DesignSearch/DESIGNSEARCH/Searchtility?page=1#

H-Index and Citations

- Scopus H Index 14
- Scopus Citations 869

Ph.I	D. Awarded
1.	Investigation friction stir welding joints of Magnesium and Aluminium alloys, Ramandeep Singh Sidhu, Registration No: J181831002, Department of Mechanical Engineering, Guru Kashi University, Talwandi Sabo, Bathinda
2.	Enhance the Reliability of Heavy Duty Diesel Engines through Measurement of Engine Oil 5w50 Parameters, AnshulChhabra , Registration No: A181831002 , Department of Mechanical Engineering, Guru Kashi University, Talwandi Sabo, Bathinda
3.	Studies on Friction Stir Welding and Metal Inert Gas Welding of Aluminium Alloys, Yogita Sharma, Registration No: J181831004, Department of Mechanical Engineering, Guru Kashi University, Talwandi Sabo, Bathinda
Ph.I	D. Registered
1.	Performance Feasibility of Manufacturing Military Vehicles Body using AluminumAlloyes and its Effect of Process Parameters in Friction Stir Welding. Kudale Amit Kumar, Registration No: J191831001, Department of Mechanical Engineering, Guru Kashi University Talwandi Sabo.
2.	Chemical assisted rotary Ultrasonic machining of polyvinyl butyral (PVB) laminated glass and optimization through Grey Relational Analysis, Jaspreet Singh, Registration No: UCE (P) 2010-734, Department of Mechanical Engineering, Punjabi University Patiala.
3.	Strategic impact of technological competencies on manufacturing performance of Indian manufacturing firms, Harpreet Sharma, Registration No: UCE (P) 2009-684, Department of Mechanical Engineering, Punjabi University Patiala.
Mas	ter of Engineering Thesis/ Project Guided
1.	Investigation of effects of cryogenic thermal assisted machining technique on turning D2 steel (2018), Jaspreet Singh, Registration No. 100317682867, GianiZail Singh Campus College of engineering & technology Bathinda, Punjab, India.
2.	Optimization of process parameters of cryogenic, wet and dry machining in turning of AISI430 stainless steel (2018), Gurjit Singh, Registration No. 15190080, GianiZail Singh Campus College of engineering & technology Bathinda, Punjab, India.
3.	Optimization of process Parameters of Rotary Friction Welding of Low Carbon Steel (SAE-1020) and High Carbon Steel (EN-31) (2017), Rahul Sharma, Registration No.

	15190087, GianiZail Singh Campus College of engineering & technology Bathinda, Punjab, India.
4.	Optimization of process parameters involved in Powder Mixed Electric Discharge Machining of D2 Alloy Steel (2017), Dharamjeet Singh, Registration No. 15190079, GianiZail Singh Campus College of engineering & technology Bathinda, Punjab, India.
5.	Optimization of machining parameters for Powder Mixed Electric Discharge machining of High Speed Steel (T1 Grade) (2017), Depinder Singh, Registration No. 15190078, GianiZail Singh Campus College of engineering & technology Bathinda, Punjab, India.
6.	Friction Stir welding of Cu and Al (2017), Vijay Kumar, Registration No. 1458957, GianiZail Singh Campus College of engineering & technology Bathinda, Punjab, India.
7.	Friction stir welding by Insitu tool with doping of Zn and Pb in aluminium (2015), Ashu Jindal, Registration No. 1238, Guru Nanak Dev engineering college, Ludhiana, Punjab, India
8.	Optimization of process parameters in ultrasonic machining of double layer bullet proof glass (2014), Loveneesh Dadwal, Registration No.1275, Guru Nanak Dev engineering college, Ludhiana, Punjab, India
9.	Study the effect of abrasive and hydrofluoric acid in ultrasonic machining of plain glass material (2014), Pardeep Kumar, Registration No. 1317, Guru Nanak Dev engineering college, Ludhiana, Punjab, India
10.	Friction Stir welding by doping of material Zn and Mg (2014), Mohit Sharma, Registration No. 11273023, Punjabi University, Patiala, Punjab, India

Semin	Seminars/ Short term course	
1.	Nano Scale Characterization and Analysis, Organized by National Institute of Technical Teacher Training and Research Chandigarh, Ministry of Education, Government of India, 10 th March to 11 th March 2022.	
2.	Innovations and Challenges in Research Publishing, International E-Conference, Organized by Chitkara University Publication, 22 nd February to 23 rd February, 2022.	
3.	Artificial Intelligence in Industry 4.0, Organized by Department of Mechanical Engineering, Institute of Engineering & Management (IEM) Kolkata, West Bengal, 14 th February to 18 th February, 2022.	
4.	Artificial Intelligence, Organized by Microsoft India and SAP India Faculty Development program under Tech-Saksham Program, 7 th February to 11 th February 2022.	
5.	Emerging Trends and Modeling in Advanced Functional Material & Devices, Organized by Dr. B.R. Ambedkar National, Institute of Technology Jalandhar, Punjab, India, 28 th March to 1 st April 2022.	
6.	A Faculty Development Programme on Intelligent Computing and Communication, Organized by Centre for Artificial Intelligence, BanasthaliVidyapith, Under the scheme of Consolidation of University Research for innovation and excellence-Artificial Intelligence Department of Science and Technology, Government of India, 21 st March to 26 th March 2022.	
7.	Optimization Techniques: Recent Trends and Application in Engineering, Organized by Mechanical Engineering Department (NBA Accredited) of MCKV institute of Engineering, 5 th October to 10 th October 2020	
8.	Computer Aided Design and Manufacturing (CAD/CAM), Organized by National institute of technical teacher training and research Chandigarh, Sponsored by Ministry of Human Resources Development, Government of India, 27 th April, 2020 to 1 st May 2020.	
9.	Waste Management, Organized by National institute of technical teacher training and research Chandigarh, Sponsored by Ministry of Human Resources Development, Government of India, 11 th May, 2020 to 15 th May, 2020.	
10.	Conference skills for researchers, Seminar, Organized by Researcher Academy, Elsevier, 22th May, 2020.	
11.	Scholarly writing and Intellectual Ethics, Organized by University of Kashmir and Elsevier, 13 th April, 2020 to 17 th April, 2020.	
12.	Basics of COVID-19, Training, Organized by Department of Personnel and Training,	

	Government of India, successfully completed on dated 27 th April, 2020.
13.	COVID-19 Training for NCC Cadets, Organized by Department of Personnel and Training, Government of India, successfully completed on dated 25 th April, 2020.
14.	Why write a book?, Seminar, Organized by Researcher Academy, Elsevier, 21th May, 2020.
15.	COVID-19: Operational Planning Guidelines and COVID-19 Partners Platform to support country preparedness and response, Organized by World Health Organization, Heath Emergencies Programme, 27 th April, 2020.
16.	Standard Precautions: Hand Hygiene, Organized by World Health Organization, Heath Emergencies Programme, 27 th April, 2020.
17.	Guide to reference managers: How to effectively manage your references, Seminar, Organized by Researcher Academy, Elsevier, 21th May, 2020.
18.	Recent Advancements in Material, Manufacturing and Safty, Sponsored by ISTE and AICTE organized by Department of Mechanical Engineering at GianiZail Singh Campus College of Engineering & Technology, Maharaja Ranjit Singh Punjab Technical University Bathinda from 25th – 30th June 2018.
19.	Contribution of Institute for Better Employability, Organized by Maharaja Ranjit Singh Punjab Technical University, Bathinda, Conducted by Dr.Sohan Singh Chandel, 1st -2nd February, 2018.
20.	Optimization using MATLAB through ICT, Organized by National institute of technical teacher training and research Chandigarh, Sponsored by Ministry of Human Resources Development, Government of India, 24th- 28th October, 2016
21.	Recent trends in automobile engineering through ICT, Organized by National institute of technical teacher training and research Chandigarh, Sponsored by Ministry of Human Resources Development, Government of India, 16th -20th March, 2015
22.	Advanced research in material, manufacturing and mechanical engineering, Organized by GianiZail Singh Punjab Technical University, Bathinda, Punjab, India, 27th -31st October, 2014
23.	Renewable energy technology and energy conservation method, Organised by Rayat institute of engineering and information technology Ropar, Punjab, India, 9th-13th June, 2014
24.	Teaching with MATLAB and SIMULIKA, Organized by Guru Kashi University, Talwandi Sabo, Bathinda, Punjab, India, 17th-22nd June, 2013

25. Advanced manufacturing process, Organized by Thapar University Patiala, India, 16th-23rd March,2012

Profes	Professional Activities	
1.	Dean Research, Department of Research at Guru Kashi University, Talwandi Sabo, 30 th May 2022 to 02 nd October 2022.	
2.	Deputy Dean Research, Department of Research at Guru Kashi University, Talwandi Sabo, 6 th April 2022 to 30 th May 2022.	
3.	Assistant Dean Research, Department of Research at Guru Kashi University, Talwandi Sabo, 2 nd September 2019 to 6 th April 2022.	
4.	National Programme on Technology Enhanced Learning (NPTEL) Single Point of Contact (SPOC) from 06 th February, 2020 to till date.	
5.	Intellectual property rights (IPR), Nodal Officer of Guru Kashi University-IPR Cell as per Reference Letter No. PSCST/1652 from the office of Senior Scientific Officer &Incharge, Punjab State Council for Science & Technology from 10 th September 2020 to Till Date.	
6.	Editorial Board Membership in "American Journal of Mechanical and Material Engineering (AJMME)" of Science Publishing Group, New York, NY 10018, U.S.A.	
7.	Reviewer of "Industrial Engineering (IE)" ISSN: 2640-110 (Print), ISSN: 2640-1118 (Online), Journal of Science Publishing Group, New York, NY 10018, U.S.A.	
8.	Reviewer of IEEE Access The Multidisciplinary Open Access Journal USA and Canada.	
9.	Expert Lecture on topic Ultrasonic Machining on 30-06-2018 in ISTE & AICTE sponsored Faculty Development Programme on "Recent Advancements in Materials Manufacturing and Safety from 25th to 30th June 2018, Organized by department of Mechanical Engineering at GZSCCET, Maharaja Ranjit Singh Punjab Technical University Bathinda.	
10.	Reviewer of Taylor & Francis International Journal of Machining Science and Technology (IJMST).	
11.	Reviewer of Inderscience International Journal of Management Concepts and Philosophy (IJMCP).	
12.	Reviewer of Inderscience International Journal of Research, Innovation and Commercialisation (IJRIC).	
13.	Reviewer of Journal of Mechanical Engineering and Science (JMES).	

14.	Reviewer of International Journal of Automotive and Mechanical Engineering (IJAME).
15.	Observer for UGC NET July 2018 Examination on 8th July, 2018 conducted by the Central Board of Secondary Education (CBSE) Delhi, India.
16.	Observer for JEE Main Exam April 2018 Examination on 8th April, 2018 conducted by the Central Board of Secondary Education (CBSE) Delhi, India.
17.	Observer for UGC-NET November 2017 Examination on 4th-5th Nov-2017, conducted by the Central Board of Secondary Education (CBSE) Delhi, India.
18.	Assistant Training and Placement Officer at GianiZail Singh Campus College of Engineering & Technology Cum Maharaja Ranjit Singh Punjab Technical University Bathinda, Punjab, India, From 18th January 2017 to 2nd September 2019
19.	Co-organizing secretary in International Conference in Latest Development in Material, Manufacturing and Quality Control, 12th -13th February, 2016, ISBN: 978-9-5212-858-7, Organized by Department of Mechanical Engineering of GianiZail Singh campus college of engineering & technology (Maharaja Ranjit Singh Punjab Technical University), Bathind, Punjab, India
20.	Reviewer of research paper, TEQIP II sponsored two day International Conference in Latest Development in Material, Manufacturing and Quality Control, 12th -13th February, 2016, ISBN: 978-9-5212-858-7, Organized by Department of Mechanical Engineering of GianiZail Singh campus college of engineering & technology (Maharaja Ranjit Singh Punjab Technical University), Bathinda, Punjab, India.
21.	PR Associates of Editorial Board for session 30th October 2015 to 2nd September 2019 for the purpose of publishing College Magazine, Admission Brochure, Annual Reports and Newsletters.
22.	Assistant President Sports of GianiZail Singh Campus College of Engineering & Technology cum Maharaja Ranjit Singh Punjab Technical University Bathinda, From 31th Aug 2015 to 2nd September 2019.
23.	"Chairing the Session" TEQIP II sponsored two day International Conference in Latest Development in Material, Manufacturing and Quality Control, 12th -13th February, 2016, ISBN: 978-9-5212-858-7, Organized by Department of Mechanical Engineering of GianiZail Singh campus college of engineering & technology (Maharaja Ranjit Singh Punjab Technical University), Bathinda, Punjab, India.
24.	"Key Note Speaker" TEQIP II sponsored two day International Conference in Latest Development in Material, Manufacturing and Quality Control, 12 th -13 th February, 2016, ISBN: 978-9-5212-858-7, Organized by Department of Mechanical Engineering of GianiZail Singh campus college of engineering & technology (Maharaja Ranjit Singh

	Punjab Technical University), Bathinda, Punjab, India.
25.	Faculty Advisor with the undersigned to assist in work related to QIP Minor centre at GZSCCET, Bathinda Since 27-05-2016 to 02-09-2019.
26.	Faculty Advisor with the undersigned to assist in work related to Internal Quality Assurance Cell (IQAC) at GZSCCET, MRSPTU Bathinda Since 27-05-2016 to 02-09-2019.