

SANJAY KUMAR

Assistant Professor

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Education Qualification:

- 10th** : Government Model Sr. Sec. School, Sector 23 Chandigarh. (CBSE), in year 1992
- 12th** : Government Model Sr. Sec. School, Sector 23 Chandigarh (CBSE), in year 1994
- B.Engg.** : Panjab Engineering College (PEC) Chandigarh. in year 1999
- M.Engg.** : Panjab Engineering College (PEC) Chandigarh. in year 2008
- Ph.D** : J C Bose University of Science and Technology, YMCA, Faridabad in Year 2019

OBJECTIVE:

Seeking a challenging position to utilize and strengthen my skills and make full use of my potentials to be an asset for your organization.

BRIEF:

I Sanjay Kumar, working as an Assistant Professor in department of mechanical engineering at J C Bose University of Science and Technology, YMCA Faridabad, India. I obtained my B. Engg degree from Panjab Engineering College (PEC), Chandigarh and M.Engg degree from the PEC University of Technology, Chandigarh. I have more than 15 years of teaching/industrial experience. Presently, I have submitted my PhD (submitted) from YMCAUST Faridabad. To My credit, I am having numerous papers published in reputed international journals and in national and international conferences. The subjects taught by me are Strength of material, Material Science, Value Engineering, Automatic control, Production & operational management.

In addition to this I have contributed at University level as Coordinator of Mechnext Club.

It is a technical club to promote innovative ideas of student and to provide technical and financial support. I am a member of various committees for corporate life enrichment like youth festival, convocation, University Examination Automation Committee and Batch coordinator etc. I am in-charge of SOM lab and one of team member who developed SOM lab Under TEQIP.

I have guided numerous UG/PG students. I have completed one research and consultancy projects sponsored by University/private agencies in last one year. Recently, I am working on establishing a central research facility laboratory in this university. I am a life member of The Society of Technical Education and a senior member of Indian Institute of Industrial Engineering.

Area of Interest:

- Industrial Engineering:, Quality Engineering, Taguchi's Method, Six Sigma, SPC Tools,QFD
- Joining:, Microwave Joining of Bulk Materials, Composites
- Advanced Manufacturing Processes:, Hybrid Machining, Non-Conventional Processes
- Computer Integrated Manufacturing
- Multiple objective and multi-attribute decision making approaches: ANP, ISM, GTA,AHP, MOORA

National Conference Papers:

1. *"Just in Time Manufacturing and Inventory Management: A retrospective and literature review"* 1st IEEE National Conference on Emerging Trends in Engg & Technology on 3-4 February 2012, SBIT Sonapat Haryana.
2. *"Introduction to JIT Manufacturing; Major Components and Directions for Future Research"* 1st IEEE National Conference on Emerging Trends in Engg & Technology on 3-4 February 2012, SBIT Sonapat Haryana.
3. *"A review on process parameters optimization techniques for advanced machining processes"* National Conference on Trends and advances in Mechanical engineering, YMCA University of Science and Technology Faridabad, Haryana Oct 19-20 2012.
4. *"Managing Inventory through Transshipment – A Case Study"* 2nd International Conference on Production and Industrial Engineering CPIE-2010 NIT Jalandher, Panjab.
5. *"A vibrating system design and analysis in hybrid electrical discharge machining"* National Conference on role of science and Technology towards 'MAKE IN INDIA' YMCA University of science and Technology, Faridabad on March 05-07 2016.
6. *"A Comparative study of optimization strategies implemented in ultrasonic vibration assisted wire EDM"* 3rd National conference on Trends and Advances in Mechanical Engineering (TAME-2017) YMCA University of science and Technology, Faridabad on 16-

17 2017.

International Conference Papers:

1. *“Taguchi’s Technique-An Approach for Identifying Optimum Surface Roughness Performance in CNC turning Operations”* 2nd International Conference on Production and Industrial Engineering CPIE-2010 NIT Jalandher, Panjab.
2. *“Environmental benefits and production of biodiesel from waste cooking oil and from other vegetable oils”* 2nd International Conference on Production and Industrial Engineering CPIE-2010 NIT Jalandher, Panjab.
3. *“Evaluation of cutting rate for ultrasonic work piece vibration assisted Wire-EDM under varying amplitude of Vibration”* 2nd International Conference on sustainable energy resources, Material and Technology (ISERMAT-2019) SSN College of Engineering , Kalavakkam, Tamil Nadu on 14-15 March 2019.
4. *“A Review on Recent Innovations in Electrical Discharge Machining Process”* International Conference ICRIEAT-2016 Aurora's Scientific, Technological and Research Academy Chandrayangutta, Hyderabad.

List of Published Papers in International Journals:

S.No.	Title of the paper along with volume, Issue No, year of Publication	Publisher	Impact factor	Refereed or Non-Refereed	Indexing
1.	Optimisation strategies in ultrasonic vibration assisted electrical discharge machining: a review. Kumar, S, Grover and Walia, R S. 1, (2017), Int. J. Precision Technology, Vol. 7, pp. 51-84.	IJPT, Inderscience Publication, India	Not Mentioned	Refereed	Expanded Academic ASAP (Gale) , Google Scholar
2.	Analyzing and modeling the performance index of ultrasonic vibration assisted EDM using graph theory and matrix approach. Kumar, S, Grover and Walia, R S. (2018), Int. J. Interact. Des. Manuf., Vol. 12, pp. 225–242	IJIDeM, Springer-Verlag France	Not Mentioned	Refereed	SCImago, SCOPUS, UGC Approved
3	Experimental Investigation Erosion rate of Cryogenic Treatment of AISI D2 tool steel Under wire EDM.(2018) Mahesh ¹ , Sanjay Kumar ² 1 PG Scholar at Department of Mechanical Engineering, YMCA University of Science & Technology Faridabad 2Assistant professor Department of Mechanical Engineering, YMCA University of Science &	International Journal of Management, Technology And Engineering	SJI Factor=6.3	Refereed	Google Scholar, UGC Approved

	Technology Faridabad				
4	Experimental Investigation surface roughness of Crygenic Treatment of AISI D2 tool steel Under wire EDM. (2018) Mahesh ¹ , Sanjay Kumar ² 1 PG Scholar at Department of Mechanical Engineering, YMCA University of Science & Technology Faridabad 2Assistant professor Department of Mechanical Engineering, YMCA University of Science & Technology Faridabad	International Journal of Management, Technology And Engineering	SJI Factor=6.3	Refereed	Google Scholar, UGC Approved
5	Effect of hybrid wire EDM conditions on generation of residual stresses in machining of HCHCr D2 tool steel under ultrasonic vibration. Kumar, S, Grover and Walia, R S. 2018, Int. J. Interact. Des. Manuf. https://doi.org/10.1007/s12008-018-0474-8	IJIDeM, Springer-Verlag France	Not Mentioned	Refereed	SCImago, SCOPUS, UGC Approved
6	Evaluation of Cutting Rate for Ultrasonic Work Piece Vibration Assisted Wire-EDM under Varying Amplitude of Vibration (2020). Kumar, S, Grover and Walia, R S. Materials Science Forum ISSN: 1662-9752, Vol. 979, pp 149-156	Journal of Materials Science Forum Scientific.net Material Science and Engineering	0.55	Refereed	SCOPUS, Google Scholar, UGC
7	Simulation of Airfoil shape for optimum wing characteristics. (2020) Krishan Kumar, O P Mishra and Sanjay Kumar , Materials Today: Proceedings 24 (2020) 2231–2237	Journals Elsevier of Materials Today: Proceedings Science Direct	Not Mentioned	Refereed	Scopus Conference Proceedings Citation Index INSPEC UGC
8	Residual stresses and surface topography investigation of AISI D3 tool steel under of ultrasonic vibration assisted wire-EDM, Kumar, S, Grover and Walia, R S. 2022, Int. J. Interact. Des. Manufacturing (IJIDeM) https://doi.org/10.1007/s12008-022-01034-5	IJIDeM, Springer-Verlag France	Not Mentioned	Refereed	SCImago, SCOPUS, UGC Approved

List of Published Papers in International/National Conferences:

S.No.	Title of the paper along with volume, Issue No, year of Publication	Publisher	Paid any money or not for publication
1.	Evaluation of Cutting Rate for Ultrasonic Work Piece Vibration	Second International Conference on Sustainable Energy Resources.	Conference Fee

	Assisted Wire-EDM under Varying Amplitude of Vibration (2019). Kumar, S, Grover and Walia, R S.	Material and Technologies ISERMAT-2019 SSN College of Engineering , Kalavakkam , Tamil Nadu, 14-15 March 2019	
2.	A systematic framework for the analysis of ultrasonic vibration perception in Hybrid EDM utilizing ISM and MICMAC approach, Sanjay Kumar, Krishan Verma	International Conference on TAME-2019 J C Bose UST, YMCA, Faridabad	Conference Fee
3	AN INVESTIGATION OF TI ALLOY CUTTING RATE UNDER ULTRASONIC VIBRATION ASSISTED WIRE CUT EDM, Dr. Sanjay Kumar, Dr O. P Mishra and Surender Singh	International Conference on TAME-2019 J C Bose UST, YMCA, Faridabad	Conference Fee
4	A REVIEW ON MACHINABILITY AND THE USES OF TITANIUM ALLOYS, Dr. Sanjay Kumar, Dr. Sanjeev Goyal	International Conference on TAME-2019 J C Bose UST, YMCA, Faridabad	Conference Fee

List of FDP and Workshop STC and STTP attended/participated:

S. No	Course attended	Title	Venue	Date	Duration
1	STTP	Problem Solving and decision making	NITTTR Kolkata	19-06-2017 to 23-06-2017	1 week
2	STTP	Academic Leadership	NITTTR Bhopal	02-07-2018 to 06-07-2018	1 week
3	STTP	Engineering Research	NITTTR Bhopal	24-06-2019 to 28-06-2019	1 week
4	International Conference	International conference on Sustainable Energy Resource, Materials and Technology-2019	SSN College Kalavakkam, Tamil Nadu	14-03-2019 to 15-03-2019	2 Days
5	National Conference	Trends and Advances in Mechanical Engineering-19	J.C. Bose University of Science and Technology, YMCA, Faridabad	04-04-2019 to 05-04-2019	2 Days
6	FDP	3D Printing & Design	J.C. Bose University of Science and Technology, YMCA, Faridabad	20-01-2020 to 24-01-2020	1 week
7	FDP	Introduction to Additive Manufacturing	IIT Kanpur(Online)	01-12-2020 to 05-12-2020	1 week

8	FDP	Research in Modern Era	J.C. Bose University of Science and Technology, YMCA, Faridabad	01-06-2020 to 05-06-2020	1 week
9	Workshop	An insight into revised accreditation framework of NAAC	J.C. Bose University of Science and Technology, YMCA, Faridabad	12-02-2020	1 Day
10	Workshop	Analytical Techniques in Industrial Engineering	J.C. Bose University of Science and Technology, YMCA, Faridabad	29-08-2020	1 Day
11	FDP	Cardinal Role of quality Education in development of self reliant India	Aggarwal College Ballabgarh, Faridabad (Online)	07-07-2021 to 14-07-2021	8 Days
12	STTP	Research, Researches and supervisors: Enhancing capability, Ethic and Relationship	J.C. Bose University of Science and Technology, YMCA, Faridabad	23-03-2022 to 28-03-2022	1 week
13	Workshop	Intellectual property Right	J.C. Bose University of Science and Technology, YMCA, Faridabad	19-06-2021	1 Day
14	STC	Supply Chain Management	J.C. Bose University of Science and Technology, YMCA, Faridabad	13-03-2021 to 17-03-2021	1 week
15	International Conference	Trends and Advances in Mechanical Engineering -21	J.C. Bose University of Science and Technology, YMCA, Faridabad	18-03-2021 to 19-03-2021	2 Days
16	STC	Exregy Analysis in Industrial Application	J.C. Bose University of Science and Technology, YMCA, Faridabad	25-10-2021 to 29-10-2021	1 week

Sr.No	Title	Type	PI/Co-PI	Duration (InMonths)	Total Grant /Funding Received (Rs.)	Name of Sponsoring/ Funding Agency	Outcome of the Project
1	Design and Fabrication of manually operated Agriculture waste briquetting Machine: A Business model for Self Help Group(SHPs)	Research Project Ongoing	Co-PI	36	More than 10Lakhs	DST Haryana	Manual operated briquetting Machine and SHPs in Faridabad region.
2	Production and Operation Management in Flexible Manufacturing System through augmented and virtual reality: An Industry4.0.	Research Project Ongoing	Co-PI	36	More than 10Lakhs	J C Bose UST, YMCA (YMCA Mob)	The outcome of this research proposal is the detection of guidelines to improve the Augmented Reality potentialities in FMS and industries 4.0.

3	Scheme for Promoting Interests, Creativity and Ethics among Students	Research Project Ongoing	PI	12	Less than 10Lakhs	AICTE	Development of Mechnext club for students with exploring Various projects like Drone, Gesture wheel chair etc.
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Future Plans:

1. To organize short term courses for faculty as well as students on Entrepreneurship Development; Data-Driven Decision Making; Non-conventional Machining, CIM etc.
2. To organize national/international conferences on areas like Entrepreneurship Development; Data-Driven Decision Making; Non-conventional Machining, CIM etc.
3. To search for sponsored research projects in the field of material and advanced manufacturing technology.
4. To encourage industry-institute interaction, try for consultancy projects in the areas Six Sigma and Multiple objective and multi-attribute decision making approaches like ANP, ISM, GTA, AHP, MOORA