

Name of Teaching Staff	:	Dr. Rajendra S. Khavekar	
Designation	:	Associate Prof. and Training and Placement Officer	
Department	:	Mechanical Engg.	
Date of Joining the Institution	:	9 th February, 2000	
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Google Scholar Link	:	https://scholar.google.com/citations?user=tgDh-tEAAAAJ&hl=en	
Researchgate Link:	:	https://www.researchgate.net/profile/Rajendra-Khavekar	
ORCID	:	https://orcid.org/0000-0003-3800-3808	
Publons Researcher ID	:	https://publons.com/researcher/AAB-5735-2022/	
Qualifications with Class / Grade	:	Ph.D. (Mech. Engg.)- June-2019, University of Mumbai (DJSCE Research Centre). Thesis: A Comparative Analysis of Shainin DOE and Traditional DOE Tools for Deploying Six Sigma in select Indian Manufacturing Companies. M. Tech. (Foundry and Forge Tech.) – C.G.P.A.: 8.99/10, National Institute of Foundry and Forge Technology (NIFFT), February 1999, Ranchi University. B.E. (Industrial Production Engg.)- Ist class, 66.83%, September 1994, Karnatak University, Dharwad.	
Total Experience in Years	:	29 Years and 6 months Teaching: 26 Years and 8 months - Associate Prof. and Training & Placement Officer from 26-10-2023 to till date - Training & Placement Officer from 8.7.2008 to 25-10-2023. - Assistant Prof. in Production Engg; from 1-1-2006 to 7-7-2008. - Lecturer (Sr. Scale) in Production Engg; from 1.4.2005 to 31-12-2005. - Lecturer in Production Engg; from 9.2.2000 to 31.3.2005. Industry: 2 Years and 10 months - Trainee Executive, Amforge Industries Ltd.; Mumbai from 2nd April, 1999 to 8th February, 2000. - Service Engineer, Vishcom Engineers and Chemicals Engineering (P) Ltd; Pune from 1st December, 1994 to 30th November, 1996.	

Papers Published in Journal: International Journal	: 1. Optimization of Process Parameters in the Case of a Corrugation Operation by Using Taguchi Method”, International Journal of Mechanical and Production Engineering Research and Development, Trans Stellar Publications, Vol. 10, Special Issue: June 2020, pp: 31-38 (with Dr. Hari Vasudevan and Hardikkumar Patel). 2. “Productivity Improvement in Blow Molding Process through Energy Savings”, Lecture Notes in Mechanical Engineering, Springer Singapore, ISSN: 2195-4356, ISSN: 2195-4364 (e), 2020, pp: 167-176 (with Dr. Hari Vasudevan and Nida Sayed). 3. “Improving the On-Time Delivery of Projects in a Complex Industrial Environment”, Lecture Notes in Mechanical Engineering, Springer Singapore, ISSN: 2195-4356, ISSN: 2195- 4364 (e), 2020, pp: 231-238 (with Dr. Hari Vasudevan and Krishnan Kaushik). 4. “Investigating Red X Parameter for Short Shot-Type Defect in Plastic Injection Moulds Using Shainin’s Design of Experiments”, Lecture Notes in Mechanical Engineering, Springer Singapore, ISSN: 2195-4356, ISSN: 2195-4364 (e), 2020, pp: 533-542 (with Dr. Hari Vasudevan and Dharam Ranka). 5. “Evaluation of Piping Isometric Drawings Using Six Sigma Process”, Lecture Notes in Mechanical Engineering, Springer Singapore, ISSN: 2195-4356, ISSN: 2195-4364 (e), 2020, pp: 815-823 (with Abrar Khulli, Prasad Shirodkar and Dr.Vijaya Kumar). 6. “Optimization of Investment Casting Process Parameters Deployed in Diamond Jewellery Firm by using Design of Experiment Tools”, International Journal of Engineering Research & Technology (IJERT), ISSN: 2278-0181, Vol. 8, 2019, Issue 08 (with Dr. VijayaKumar, Rushabh Bhavsar and Mit Goda). 7. “Optimization of Injection Moulding Process Parameters for Manufacturing Plastic Components (PBT) Using Taguchi Method (TM)”, in “Materials Science Forum”, ISSN: 1662- 9752, Vol. 969, PP 775-780, Trans Tech. Publications Ltd., Switzerland, 2019, (with Dr. Hari Vasudevan and Vimal Gosar). 8. “Optimization of Injection Molding Process Parameters using Response Surface Methodology”, Lecture Notes in Mechanical Engineering, Published by Springer Singapore. DIO: 10.1007/978-981-13-2490-1.(2018) (with Dr. Hari Vasudevan and Vimal Gosar). 9. “Analyzing the need for a comparative study of Shainin DoE and Traditional DoE tools for deploying Six Sigma in Indian Manufacturing Companies”, Materials Science and Engineering, IOP Publications, Vol.376, 2018, 012121, doi:10.1088/1757-899X/376/1/01212 (with Dr. Hari Vasudevan).
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	10. “Application of Shainin Methodology to Reduce Rejections in Spur Gear Manufacturing”, ELSEVIER, Materials Today, Vol.5, issue 5, part 2, pp:12003-12008, 2017, (with Dr. Hari Vasudevan and Girish Deshpande). 11. “Design and Development of a Multi-Purpose Trolley” Informatics Journal, Vol. 9, 2017, Issue 1, (with Virag Timbadia and Dr. Vijayakumar). 12. “Application of Shainin DoE Tool to Explore Unknown Variables causing ‘Ghost Noise’ in 5th Gear Cycle of Transaxles during NVH Testing” in “Advances in Intelligent Systems Research”, Vol. 137, pp: 271-276, Atlantis Press (Springer), AISR (ISSN 1951-6851), ISBN (online): 978-94-6252-305-0.,2017, (with Dr. Hari Vasudevan and Harshvardhan Desai). 13. “A Comparative Study of Taguchi Methodology and Shainin System DoE in the Optimization of Injection Moulding Process Parameters”, Materials Science and Engineering, IOP Publication, Vol. 225, 2017, doi:10.1088/1757-899X/225/1/012183 (with Dr. Hari Vasudevan and Modi Bhavik). 14. “Review on Creativity Techniques for Product Development”, Journal of Informatics, Vol. 8 (2016) Issue 4 (with Virag Timbadia). 15. “Suspecting Dominant Variable that causes Porosity Defect in a Cast Made up of Aluminium Alloy (Lm2) Using Shainin’s DoE Approach” in the International Journal of Advances in Mechanical and Civil Engineering, Vol. 3, Issue 5, Oct 2016, ISSN: 2394- 2827, pp: 124 -130 (with Dr.Hari Vasudevan and Dharam Ranka).
Papers Presented in Conferences	National: 1. “Hybrid Rocket” in 2013. National conference on Role of Engineers in Nation building (Mumbai: Viva Institute of Technology, Maharashtra, India, March-2013) (with Dr. K .N. Vijayakumar and Vatsal Sheth). 2. “Anti-Lock Braking Syatem-A review” in 2013. National Conference on Innovations in Mechanical Engineering (Lonavala: SIT, Lonavala, Maharashtra, India, April, 2013) (with Mehta Rujai, Sinha Sujit and Dr.K N Vijayakumar). 3. “Stealth Technology” in 2013. National Conference on Innovations in Mechanical Engineering (Lonavala: SIT, Lonavala, Maharashtra, India, April, 2013) (with Lokhandawala K, Joshi Rushabh and Dr. K. N. Vijayakumar). 4. “Advances in additive Manufacturing Technology-A review” in 2013. National Conference on Innovations in Mechanical Engineering (Lonavala: SIT, Lonavala, Maharashtra, India, April, 2013) (with Diptesh M., Mahajan Shambhavi and Dr.K. N. Vijayakumar). 5. “A Modified Approach in Precision Manufacturing by Abrasive Flow machining” in 2005, National Conference on Advances in Mechanical Engineering (Hyderabad: Vasavi College of Engineering, Hyderabad, Andra Pradesh, India, May 2005). (With Vasudevan Hari, Lakal Narendra and Bhosale Ajit). 6. “Achieving Competitive Excellence in Contract processing in a Manufacturing

	Firm”, in 2004 National Conference on World Class Manufacturing (Wardha: B. D. College of Engineering, Sevagram, Wardha, Maharashtra, India, March, 2004), (With Vasudevan Hari and Lakal Narendra). 7. “Effect of Silicon on GGG-40 ductile Iron” in 1998, one day conference on recent trends in manufacturing of Ductile iron (Jamshedpur: IIF Chapter, India, Bihar). International: 1. “Optimization of Injection Moulding Process Parameters using Taguchi DoE Methodology”, International Conference on Role of Industrial Engineering in Industry 4.0 Paradigm (ICIEIND-2018), organised by IIIE, Odisha Chapter, Bhubaneswar, Sept; 27- 30, 2018. (with Dr. Hari Vasudevan and Bhavik Modi). 2. “Optimization of process in Electrical Discharge Machining of DIN-X36CrMo17 Steel using Grey Relational Analysis”, in the proceedings of the 4th International Conference on Industrial Engineering (ICIE-2017) organized by SVNIT, Surat from 21st-23rd December, 2017 (Dr. Hari Vasudevan and Ajaykrishna C.). 3. “Shainin tool approach for quality monitoring in Injection Moulding”, International Conference of Industrial Engineering (ICIE-2017) organized by SVNIT, Surat, Dec; 21-23, 2017. (with Dr. Hari Vasudevan and Harshita Salian) 4. “Improvement of Gear Quality in Machining Industry using Shainin System”, in the International Conference on Materials, Manufacturing and Design 2016, organised by Dr. Babasaheb Ambedkar Technological University, Maharashtra on 20th & 21st December, 2016 (with Dr.Hari Vasudevan and Deshpande Girish). 5. “Optimization of Injection Moulding Process Parameters using Shainin System”, in the International Conference on Materials, Manufacturing and Design 2016, organised by Dr. Babasaheb Ambedkar Technological University, Maharashtra on 20th & 21st December, 2016 (with Dr.Hari Vasudevan and Modi Bhavik). 6. “Optimization of Machinery Techniques” in 2014.International Conference and Workshop on Advances in Mechanical Engineering (ICWAME – 2014) (Mumbai: Thakur College of Engineering and Technology, Maharashtra, India, Feb.-March-2014) (with Dr. K. N. Vijayakumar and Sameer K.) 7. “Comparison of Quality Improvement Techniques – Shainin System vs. Six Sigma Technique’ in 2014. International Conference on Eco-Friendly Technologies for Sustainable Growth (ICEFT-14). (Mumbai: M.H.Saboo Siddik College of Engineering, Maharashtra, India , Feb.-March-2014) (with Dr. K.N. Vijayakumar and Vimal). 8. “Vibration analysis of an assembly converting it into a Mass Spring system” in 2006. International Conference on 'Advances in Materials processing and characterization (Chennai: Anna University, Tamil Nadu, India, August 2006), (with Hari Vasudevan, Narendra Lakal and Ajit Bhosle).
Area of Specialization	Metal Forming, Casting, DoE, Manufacturing Processes and Materials

PhD Guide ? Give field & University	:	<u>Field:</u> <u>University:</u>	Mechanical Engineering University of Mumbai
PhDs / Projects Guided	:	<u>PhDs :</u> <u>Projects at Masters level:</u>	Presently guiding 2 students at the Thakur College of Engineering Research Centre, University of Mumbai. Field: Mechanical Engineering: University: - University of Mumbai. Projects at Masters Level: 12 (Mechanical Engineering)
Books Published / IPRs / Patents	:		1. “Cyber security challenges in digital manufacturing and possible ways of mitigation” accepted for publication as a book chapter in “Cyber Security Threats and Challenges facing Human Life”, to be published by CRC Press, Taylor and Francis Group, HB 9781032111285. 2. “Application of Six Sigma to reduce Fresh Water Consumption: DMAIC a case study”, Customer Delight, Lambert Academic Publishing, ISBN: 978-613-9-47329-8 (with Gopal Buchade and S. N. Teli).
Professional Memberships	:		Life Member, ISTE Fellow Member, ISME Member, ASM
Grants fetched	:	Minor Research Grant (University of Mumbai)	Research grant received under the “Minor Research Grant” scheme of the University of Mumbai: 1. Research grant of Rs. 30,000/- for the work titled “Design and Development of Multi-Purpose Trolley” for the A.Y. 2016-17.
Interaction with Professional Institutions	:	Guest Lectures: Other Achievements and Responsibilities:	1. Co-Convener of International conference on Intelligent Manufacturing and Automation (ICIMA) in 2018, 2020 and 2022. Received the best Research Paper Award during the presentation (ICMPE) in Pune on 7th of August 2016. Delivered a session on “Carriers in Engineering” during Times Education Expo held on 31-05-2025 at their Mumbai office. Hon. Secretary, Indian Society of Manufacturing Engineers (ISME). Member, student outreach committee, ASM India Chapter. Responsibility at University of Mumbai: Appointed as a subject expert for conducting USSC Interviews at various Engineering College by University of Mumbai.
Subjects Taught	:	<u>UG Level:</u> Engg. Drawing, Materials and Metallurgy, OR, MFT, MFTA, EFAC, RM SOM, <u>PG Level:</u> RM, Advanced Materials	

Projects Guided	:	<u>UG Level: more than 80</u> Some of the UG Projects Guided: 1. Improving Product Quality using Statistical Process control, CAPA & Non-Conformity Analysis of BMR. 2. Productivity Improvement and Cycle Time Reduction in Photometry Used for Biochemistry. 3. Improvement of Deadline Management System at I.EVO using Lean Manufacturing Principles. 4. Improvement of Productivity by Reduction of Cycle Time in Photometer Lamp Assembly. 5. Implementation of Industrial Waste Management Practices at Anandji Haridas & Company Pvt. Ltd. <u>PG Level: 12</u> Some of the PG Projects Guided: 1. Optimization of Process Parameters of Corrugation Operation by using Taguchi Method. 2. Productivity Improvements in Blow Moulding Process through Energy Savings. 3. Evaluating Quality Aspects of Injection Moulding using Shainin Tool.	
Recommended Students for Higher Education		<u>Name of the Student</u> More than 20 students for P.G.	<u>University/Industry</u> Various Universities across USA, Canada, Germany and Singapore
Institute/Department Responsibility handled:		1. Anti-Ragging Committee 2. Unfair Means Committee (Autonomy) 3. IQAC member 4. Academic Audit Committee 5. Academic Council 6. National Innovation and Start up Policy-Committee member 7. Alumni cell-Committee member	

Courses completed online (Cousera) :	1. Introduction to Data Analytics for Business. 2. Finance for Everyone: Decisions. 3. Excel Skills for Business: Essentials. 4. Six Sigma and the Organization (Advanced). 5. Learning to Teach Online. 6. Assessment in Higher Education: Professional Development for Teachers. 7. 3D Printing Applications. 8. Ferrous Technology I 9. Advanced Manufacturing Process Analysis. 10. Digital Manufacturing and Design.
FDPs attended online :	1. One week FDP on “Recent Trends in cutting-Edge Automotive Tech.”, conducted by Arjun College of Technology. 2. One week FDP on “Research and Innovation Trends in Large Language Models”, conducted by DJSCE. 3. One week FDP on “Future Trend in Novel Materials”, conducted by SRM Institute of Management and Tech. 4. One week FDP on “Exploring the Dimensions of Innovation, Incubation and Emerging Technologies to Embrace Post Covid Changes”, conducted by Finolex Academy of Management and Technology, Ratnagiri . 5. One week FDP on “Inculcating Universal Human Values in Technical Education”, conducted by AICTE. 6. One week FDP on “A Journey into the Manufacturing Sector in India in view of Industry 4.0 practices and COVID-19”, conducted by DJSCE. 7. One week FDP on “SCILAB” conducted by DJSCE. 8. One week FDP on “3D Printing and Design”, conducted by IIIT, Kancheepuram. 9. One week FDP on “Advanced Materials and Additive Manufacturing Systems for Industry 4.0" , conducted by RIT, Islampur. 10. One week FDP on “Electric Vehicles-The Future of Mobility” conducted by RIT, Islampur.