

Dr. Lalit K. Toke

1. Personal Information

- **Name:** Dr. Lalit K. Toke
- **Position:** Associate Professor
- **Department:** Production Engineering
- **Contact Information:**
 - Email- lktoke@snggs.ac.in
 - Office Location- First floor Production engineering department
 - Phone Number- 7709044967

2. Educational Background

- B.E.(Mechanical), 1999- North Maharashtra University, Jalgaon.
- M.E (Mechanical), 2001 – Smarat Ashok Technological Institute, (Govt. Aided Autonomous), Vidisha, Rajiv Gandhi Proudyogiki Vishwavidyalaya, (University of Technology, M.P) Bhopal.
- Ph.D (Mechanical), 2014 - S.G.S. Institute of Technology (Govt. Aided Autonomous), Indore, Rajiv Gandhi Proudyogiki Vishwavidyalaya (University of Technology, M.P), Bhopal.
- **Postdoctoral Experience:** ----
- **Certifications:** ----

3. Research Interests

- **Areas of Expertise:** Advanced Manufacturing Processes, Total Quality Management, Total Productive Maintenance, Supply Chain Management.
- **Ongoing Projects:** ----
- **Interdisciplinary Work:** ----

4. Teaching Experience

- **Courses Taught: Undergraduate Level:** Advanced Manufacturing Processes, Product Design and Development, Dynamics of Machinery, Thermal Engineering, Industrial Engineering, Manufacturing Processes
- **Courses Taught: Postgraduate Level:** New Product Design, Computer Aided Analysis, Advanced Manufacturing Processes

- **Course Development:** Product Design and Development, Industrial Engineering, Supply Chain Management.

5. Publications and Presentations:

- **Books:**

Books Chapter

- “Linkages between Critical Success Factors and Factors of Workforce Performance in Remanufacturing Industry”, Book Title-“Designing Workforce Management Systems for Industry 4.0 Data-Centric and AI-Enabled Approaches”, <https://doi.org/10.1201/9781003357070>, Published by CRC Press, Taylor & Francis Group, LLC, 6000 Broken Sound Parkway NW, Suite 300, Boca Raton, FL 33487, U.S.A., (Scopus Index), Book chapter accepted on 11 October 2022.
- “Economic Feasibility and Optimal Ranking of Solar Power Potential Using TOPSIS Approach”, Book Title- “Intelligent Computing and Optimization”, Springer Nature Switzerland AG 2024, https://doi.org/10.1007/978-3-031-73321-5_24, is accepted on 04 Jan. 2024 (Scopus Index).
- "Transforming Industries: Capturing the Potential of IIoT and ML in the Era of Industry 5.0", Book Title- "Transforming Industries: Capturing the Potential of IIoT and ML in the Era of Industry 5.0", is accepted on 19 Oct. 2024 in (CRC Press, Taylor & Francis Group), (Scopus Index).
- "Optimizing Manufacturing Process through IIoT and ML Integration”, Book Title- "Transforming Industries: Capturing the Potential of IIoT and ML in the Era of Industry 5.0", is accepted on 19 Oct. 2024 in (CRC Press, Taylor & Francis Group), (Scopus Index).

- **Journal Articles:**

<https://scholar.google.co.in/citations?user=yT6lKLoAAAAJ&hl=en>

- Technique to optimize the supply chain in reverse logistics, (June2010) Industrial Engineering Journal, (UGC-CARE Listed), Volume II & Issue No.12, ISSN 0970-2555, Pp 04-10.
- Green Supply Chain Management: Conceptual Basis and Current Status, (March-2011), International Journal of Computer Application in Engineering, Technology and Sciences (IJ-CA-ETS), Volume 3: Issue1, March 2011, Pp 223-228.

- The implementation and barriers of green supply chain management in Indian manufacturing industries, (March 2012) International Journal of Innovation of Mechanical and Automobile Engineering, Volume- I, Issue-2, 2012, pp 91-97.
- An empirical study of green supply chain management in Indian perspective, (2012), International Journal of Applied Science and Engineering Research, ISSN: 2277-9442, Vol.1, No.2, pp. 372-383.
- Green supply chain management: practices, performance, and pressure within manufacturing industry, (2013), International Journal of Emerging Technologies in Computational and Applied Sciences. ISSN (Print): 2279-0047, (Online): 2279-0055, Vol. 2, Issue 6, pp.122-127.
- Study on optimal location and optimal voltage for piezo-electric actuator on aluminum cantilever plate, (Nov.-2013), International Journal of Engineering Research and Industrial Applications, ISSN: 0974-1518, Vol. 6, No. IV, pp.119-126.
- Optimization of demand based remanufacturing cost estimation model, International Research Journal of Engineering and Technology (IRJET), (June-2015), ISSN: 2395-0072 (Print) 2395-0056 (Online), Vol.2, No.3, pp.1687-1696, UGC Journal List No.-45170.
- Study on optimal voltage for piezoelectric actuator in vibration control of cantilever beam using Ansys, (2016), International Journal of Emerging Technologies in Computational and Applied Sciences (IJETCAS), ISSN: 2279-0047, Vol.16, No.219, pp.42-47.
- Vendor evaluation using MCDM method (GTMA), International journal scientific review and research in engineering and technology, (Oct.-2016), ISSN: 2455-3603, Vol.1, No.6, pp.11-22.
- Design & Fabrication of an Auto cutter Rubber Sheet Cutting, (2017), International Journal for Scientific Research & Development, Vol. 5, Issue 03, ISSN (online): 2321-0613
- A framework of enablers relationship for implementation of green manufacturing in Indian context, (2018), International Journal of Sustainable Development & World Ecology, ISSN: 1350-4509 (Print) 1745-2627 (Online) Vol.-25, Issue-4, Pp-303-311, (Taylor & Francis Group, SCI, and Scopus Index, UGC-CARE Listed, Impact Factor-4.768, Q1)
- Design and fabrication of pneumatic three axis dumping trolley, (April-2018), International Journal of Institutional & Industrial Research, ISSN: 2456-1274, Vol. 3, Issue 1, Jan- April 2018, pp.61-63.

- Design and Manufacturing of Solar Operated 3 in 1 Agricultural Mechanism, (2019), International Journal of Recent Trends in Production Engineering, Vol.2, Issue-2, HBRP Publication, pp 1-6.
- Design and fabrication of die threading machine, (2019), International Journal of Advanced Research in Industrial Engineering, HBRP Publication, Vol.-1, Issue-2.
- Design and Development of Activated Carbon-Based Purification System for Automobile Emissions, (2019), International Journal of Recent Trends in Automation and Automobile Engineering, HBRP Publications, Vol.-2, Issue-2.
- Critical success of green manufacturing for achieving sustainability in Indian context, (2019), International Journal of Sustainable Engineering, (Taylor & Francis Group, Q1), Vol.-12, Issue-6, Pp.- 415-422, ISSN: 1939-7038 (Print) 1939-7046 (Online)
- Total quality management in small and medium enterprises: An overview in Indian context, (2020), Quality Management Journal, (Taylors & Francis Group, SCI, and Scopus Index, UGC-CARE Listed, Impact Factor-1.923, Q3), ISSN: 1068-6967 (Print) 2575-6222 (Online), Vol.-27, Issue-3, Pp-159-175.
- Assessment of Green Supply Chain Management practices, performances, pressures, and barriers amongst Indian manufacturer, (2020), International Journal of Productivity and Performance Management (Emerald Publication, Scopus Index, UGC-CARE Listed, Impact Factor-3.991, Q2), Vol. 70 No. 8, pp. 2237-2257, ISSN-1741-0401
- Optimization of machining parameter of Inconel 718 in turning operation for Green Productivity-A Review, (2020), Journal of Solid-State Technology (Scopus Index) Volume: 63 Issue: 5, ISSN-0038-111X, Page 3159-3169.
- Design and Development of Fire Fighting Robot and Android Controller, (2020), International Journal of Disaster Recovery and Business Continuity (Web of Science Index), Science & Engineering Research Support Society, Australia, Vol.-11, No.-3, ISSN:2005-4289 (Print), 2207-6425 (Online), pp. 2175–2180, Published on 01/11/2020.
- Design and Development of Material Handling Robot, (2020), International Journal of Disaster Recovery and Business Continuity (Web of Science Index, Science & Engineering Research Support Society, Australia, Vol.-11, No.-3, ISSN: 2005-4289 (Print), 2207-6425 (Online), pp. 2110–2119, Published on 01/11/2020.
- Design and Construction of Solar and Wind Hybrid System, (2020), International Journal of Disaster Recovery and Business Continuity (Web of Science Index), Science & Engineering Research Support Society, Australia,

Vol.-11, No.-3, ISSN-2005-4289 (Print), 2207-6425 (Online), pp. 2240–2250, Published on 01/11/2020.

- Strategic planning to investigate the decision index of organization for effective total quality management implementation- In context of Indian small and medium enterprises, (2021), Journal of Engineering, Design and Technology, (Emerald Publication, SCI and Scopus Index, UGC-CARE Listed, Impact Factor-2.483, Q3), Paper published on 26 Feb. 2021, Vol. 20 No. 3, pp. 749-776, ISSN-1726-0531.
- A review on the identification of total productive maintenance critical success factors for effective implementation in the manufacturing sector, Journal of Quality in Maintenance Engineering, (Emerald Publication, SCI, and Scopus Index, UGC-CARE Listed, Impact Factor-1.948, Q2), Vol. 29 No. 1, pp. 114-135. Paper published on 16/12/2021, ISSN-1355-2511, <https://doi.org/10.1108/JQME-11-2020-0118>.
- Reliability analysis and hypothesis testing of critical success factors of total productive maintenance, International Journal of Quality & Reliability Management, (Emerald Publication, SCI, and Scopus Index, UGC-CARE Listed, Impact factor-3.5, Q2), Vol. 40 No. 1, pp. 238-266, Paper published on 06/01/2022, DOI 10.1108/IJQRM-03-2021-0068. ISSN-0265-671X.
- Vibration analysis and control of cracked beam using finite element method by using ANSYS, World Journal of Engineering, (Emerald Publication, SCI & Scopus Index, UGC-CARE Listed, Impact factor-2.011, Q3), ISSN-1708-5284, Vol. 20 No. 5, pp. 938-955, paper published on 26/05/2022.
- Critical analysis of green accounting and reporting practises and its implication in the context of Indian automobile industry, Journal of Environment, Development and Sustainability (Springer Publication, SCI & Scopus Index, UGC-CARE Listed, Impact factor-4.349, Q1), DOI: 10.1007/s10668-022-02816-3, ISSN: 1387-585X (Print) 1573-2975(Online), Vol. 26, Pp. 3243-3268, Paper published on 27/12/2022.
- An Assessment of key performance indicators and its relationship for implementation of total productive maintenance in manufacturing sector, International Journal on Interactive Design and Manufacturing (IJIDeM), (Springer Publication, SCI & Scopus Index, UGC-CARE Listed, Impact factor-2.639, Q2), Vol. 17, Pp. 1741-1753, Paper published on 11/03/2023, <https://doi.org/10.1007/s12008-023-01252-5> ISSN: 1955-2513 (Print) 1955-2505 (Online)
- Effect of Innovative Burnishing Method by Utilizing a Flank Face of a Turning Tool on Surface Quality of Al-Alloy, 2nd International Conference & Exposition

on Mechanical, Material, and Manufacturing Technology (ICE3MT 2022) AIP Conf. Proc. 2943, 020007-1–020007-12; <https://doi.org/10.1063/5.0183657>, Published on 26 Dec.2023(Scopus Index)

- Economic Feasibility and Optimal Ranking of Solar Power Potential Using TOPSIS Approach, Springer Lecturer Note Series in Network and Systems, <https://link.springer.com/book/9783031508868>
- “Enhancing Agricultural Efficiency in India with IoT based Smart Boats”, Sigma Journal of Engineering and Natural Sciences, Paper is Accepted on 4 April 2024 (SCOPUS Index).
- Optimizing Aluminium Alloy Surface Quality with ANN Driven Burnishing: Machining Parameters and Durability Study, Evergreen - Joint Journal of Novel Carbon Resource Sciences & Green Asia Strategy, Publication- Kyushu University Institutional Repository, Japan, Vol. 11, Issue 02, Pp. 927-937, June, 2024, Paper is accepted on 20 May 2024, ISSN: 2189-0420 (Print), 2432-5953 (Online), (SCOPUS Index).
- “Intelligent Fruit Sorter for Quality Evaluation of Guava Fruit Using Image Analysis”, Sigma Journal of Engineering and Natural Sciences, Paper is Accepted on 16 Oct. 2024 (SCOPUS Index).
- “Qualitative Evaluation of Kerf Taper Angle of Conventionally Drilled Holes in Glass Fiber Epoxy Composite”, (2025), Frontiers in Mechanical Engineering (Scopus Index, Web of Science Index, UGC-CARE Listed, Impact Factor-2.1, Q2), Vol.11, <https://doi.org/10.3389/fmech.2025.1513269>, Paper published on 27/01/2025
- "Optimizing Ventilated Disk Brake Design for Enhanced Thermal Performance: An Analytical and Experimental Approach", Multiscale and Multidisciplinary Modeling, Experiments and Design (Springer Publication, Scopus Index, UGC-CARE Listed, Impact factor-2.1, Q2), Paper accepted on 12/02/2025, Published online 03/03/2025, <https://doi.org/10.1007/s41939-025-00797-0>, ISSN- 2520-8160 (Print), 2520-8179 (Online)
- “Experimental Investigation on Electric Vehicle Braking System using Fuzzy Rule Based Control Strategy”, World Journal of Engineering, (Emerald Publication, SCI & Scopus Index, UGC-CARE Listed, Impact factor-2.011, Q3), ISSN-1708-5284, Paper accepted on 15/03/2025

- **Conference Papers:**

- Reverse Supply Chain in Paper Recycling Industry, International Conference & Exhibition on Total Engineering Analysis & Manufacturing Technologies, “TEAMTECH -2008” held at Indian Institute of Science (IISc.) Bangalore on Sept.22-25, 2008.
- Green Supply Chain Management: A Review of Literature and Framework for Future Investigation, International Conference on Recent Advances in

Material Processing Technology, held at National Engineering College, Kovilpatti (TN) on Feb.25-27, 2009.

- How green is the supply chain? Practice and research, International conference on Advances in Industrial Engineering Application “ICAIEA 2010” held at department of Industrial Engineering, Anna University Chennai, India on Jan.6-8, 2010.
- Design and Development of Material Handling Robot, International Conference on Emerging Trends in Engineering and Technology, virtual conference, 28-29 May 2020, Organized by S.I.E.M, Nashik and IFERP.
- Design and Construction of Solar and Wind Hybrid Power Generation System, International Conference on Emerging Trends in Engineering and Technology, virtual conference, 28-29 May 2020, Organized by S.I.E.M, Nashik and IFERP.
- Design and Development of Fire Fighting Robot and Android Controller, International Conference on Emerging Trends in Engineering and Technology, virtual conference, 28-29 May 2020, Organized by S.I.E.M, Nashik and IFERP.
- Overview of gravity die casting process parameters affecting product quality, The 2nd International Conference on “Recent Advances in Materials, Manufacturing and Machine Learning (RAMMML-2023)” organized by Department of Mechanical Engineering, Yashwantrao Chavan College of Engineering, Nagpur, technically sponsored by NPTC Group of Colleges, United Kingdom held on 2nd – 4th February 2023
- Enhancement of heat transfer of Nickel Manganese Cobalt (NMC) Lithium-ion battery packs using Herringbone Fins for electric mobility applications, 2nd International Conference on Fluid, Thermal and Energy Systems on June 6-8, 2024, at the National Institute of Technology Calicut, India.
- Design and optimization of cold plate for prismatic battery cell for electric vehicles applications, 2nd International Conference on Fluid, Thermal and Energy Systems on June 6-8, 2024, at the National Institute of Technology Calicut, India.

- **Editorial Work:** Reviewer of more than 10 Scopus Indexed /SCI journals.

6. Awards and Honors

- **Grants:** ----
- **Awards:** ----
- **Fellowships:** ----

7. Professional Experience

- **Administrative Roles:** ----
- **Industry Collaboration:** ----
- **Consulting Work:** ----

8. Supervision and Mentoring

- **PhD/Master's Supervision:** ---
- **Professional Memberships**
- **Associations:**
 - Life Member of “Institution of Engineers (India)” Fellow-1230588 as on 31/07/2017
 - Life Member of “Indian Society for Technical Education” LM -37668.
 - Life Member of “Indian Institution of Industrial Engineering” MIIE-9399.
 - Membership of “Industrial Engineering and Operations Management” (IEOM).
 - Professional Member of Institute of Engineering Research and Publication (IFERP)

10. Miscellaneous

- **Languages:** Marathi, English, Hindi
- **Skills:** ----
- **Personal Interests:** Reading