Curriculum Vitae

Prof. Hem Chander Garg

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Personal

Date of Birth	: July 12, 1973
Marital Status	: Married
Present Employer	: GuruJambheshwar University of Science & Technology, Hisar-India
Designation	: Professor, Mechanical Engineering Department

Educational Qualifications

- Doctor of Philosophy (Ph.D.) in Mechanical Engineering (Tribology), Thapar University, Patiala India; August-2008. Thesis Title: **Study of Thermal Effects in Non-Recessed Hybrid Journal Bearing with Non-Newtonian Lubricant.**
- Master of Technology (M.Tech.) in Mechanical Engineering, National Institute of Technology, Kurukshetra-India; September-1998. **I Division,70.85% Marks (Distinction in Thesis).**
- Bachelor of Technology (B.Tech.) in Mechanical Engineering, National Institute of Technology, Kurukshetra-India; May-1996. **I Division, 73.92% Marks, Honours.**
- 10+2 (Senior Secondary), Board of School Education Haryana-India; May 1990, **I Division,75% Marks**.
- 10^{th} (Matriculation), Board of School Education Haryana-India, May, 1988, **I Division ,76% Marks.**

Academic Experience

- Senior Professor (Academic Pay Level-15), Mechanical Engineering Department, Guru Jambheshwar University of Science & Technology, Hisar-India, from March 20, 2021 ongoing.
- Professor, Mechanical Engineering Department, Guru Jambheshwar University of Science & Technology, Hisar-India, from November 21, 2014 to March 19, 2021.
- Professor, Mechanical & Automation Engineering Department, Indira Gandhi Delhi Technical University for Women, Delhi-India, from May 27, 2014 to November 20, 2014.
- Professor, Mechanical Engineering Department, Guru Jambheshwar University of Science & Technology, Hisar-India, from September 16, 2010 to May 26, 2014.
- Associate Professor, Mechanical Engineering Department, Guru Jambheshwar University of Science & Technology, Hisar-India, from September 16, 2007 to September 15, 2010.
- Reader, Mechanical Engineering Department, Guru Jambheshwar University of Science & Technology, Hisar-India, from September 16, 2004 to September 15, 2007.
- Lecturer, Mechanical Engineering Department, Beant College of Engineering & Technology, Gurdaspur-India (Established by Govt. of Punjab) from July 30, 1997 to September 15, 2004.
- **Visiting Associate Professor, Faculty of Engineering, Tokyo University of Science, Japan from October 1, 2009 to November 29, 2009.**

Administrative Experience

- Professor In-Charge, University Works Department, Guru Jambheshwar University of Science & Technology, Hisar-India, from December 04, 2023 ongoing.
- Superintending Engineer (S.E.), University Works Department, Guru Jambheshwar University of Science & Technology, Hisar-India, from May 10, 2023 to December 03, 2023.

- Director, Centre of Industry Institute Partnership, Guru Jambheshwar University of Science & Technology, Hisar-India, from December 14, 2016 to June 15, 2023.
- Chairman, Mechanical Engineering Department, Guru Jambheshwar University of Science & Technology, Hisar-India, from September 02, 2017 to December 31, 2017.
- Director, Placement, Guru Jambheshwar University of Science & Technology, Hisar-India, from April 6, 2016 to December 14, 2016.
- Dean, Academic Affairs, Indira Gandhi Delhi Technical University for Women, Delhi-India, from July 01, 2014 to November 20, 2014.
- H.O.D, Mechanical & Automation Engineering Department, Indira Gandhi Delhi Technical University for Women, Delhi-India, from September 01, 2014 to November 20, 2014
- Director, Placement, Guru Jambheshwar University of Science & Technology, Hisar-India, from August 29, 2013 to May 26, 2014.
- Chairman, Mechanical Engineering Department, Guru Jambheshwar University of Science & Technology, Hisar-India, from **October 18, 2004 to May 26,2014.**

Field of Specialization: Machine Design, Tribology& Lubrication

Foreign Visits

- Invited as visiting Associate Professor at **Tokyo University of Science, Japan from October1, 2009 to November 29, 2009.** Professor Shigeka Yoshimoto, an eminent scholar of international repute, was the host researcher during this visit. The experiments on bearing characteristics of water lubricated hybrid (journal/thrust) bearings were performed to increase the speed of spindle to 5, 00,000 rpm. The thermal effects were considered numerically.
- Participated and presented a research paper in **ASME/STLE** International Joint Tribology Conference held at **San Francisco, California-USA during October 18-20, 2010.**
- Participated in international seminar & short course on "**Rotor Dynamics & Bearings**" held at Leonardo Hotel **Cologne (Köln), Germany** during **October 28-31, 2013** organized byARLA Maschinentechnik GmbH, Germany and Rotor Bearing Technology & Software (RBTS), Inc. USA.
- Delivered **Keynote Speech** on the topic "Mechanics of Eco-friendly Bearings" in International Conference on Mechanics and Material Science (ICMMS2016) held at Imperial Hotel Guangzhou**, China** during October 15th-16th, 2016.

Global Initiative for Academic Networks (GIAN) Course

- One week GIAN course on "**The Finite Element Method in Engineering: Basic Procedure, Applications and Current Research Topics**" conducted during December 18-22, 2017at Guru Jambheshwar University of Science & Technology, Hisar-India, funded under Global Initiative for Academic Networks (GIAN) programme of MHRD, Government of India, New Delhi; (**Course Coordinator**); ₹5,44,000.00 ($ 8000 USD); **Foreign Faculty**: ***Prof. Singiresu S. Rao****, Mechanical and Aerospace Engineering Department, University of Miami, Coral Gables, Florida*

Sponsored Research Project

- Major Research Project titled **"Development of Aerostatic Bearings for Ultraprecision Machining"** funded by University Grants Commission (UGC), Ministry of Human Resource Development, Government of India, New Delhi in May, 2012 (**Principal Investigator**). ₹7, 55,000.00, Duration: 3 years. **Completed.**
- Minor Research Project titled **"Experimental Study of Hydrodynamic Journal Bearing with Bio Lubricant Containing Nanoparticles/Ionic Liquid Additive"** funded by Guru Jambheshwar University of Science and Technology, Hisar, Haryana (INDIA) in November, 2018 (**Principal Investigator**). ₹60,000 Duration: 01 years. **Completed.**

Doctoral Theses Supervised

- 'Thermohydrostatic Analysis of Hybrid Journal Bearing Operatingwith Micropolar Lubricant' by Pankaj Khatak awarded in August, 2017.
- 'Theoretical and Experimental Study of Hydrodynamic Journal Bearing with Biolubricant Containing Nanoparticles Additives' by Anil Dhanola awarded in March, 2021.

- ‘An Experimental Investigation of Tribological Characteristics of Environmentally Acceptable Lubricant Containing Ionic Liquid and Nanoparticles as Additives’ by Gitesh Kumar awarded in February, 2024.
- ‘Tribological Investigation of Eco-Lubricant containing optimized graphene derivative and metal oxide nanoparticles’ by Vijay Singh (in Progress).
- ‘Analysis of Hydrodynamic Journal Bearing for High Speed Shaft of Wind Turbine Gearbox’ by Pravez Khan (in Progress).

Masters Theses Supervised

- ‘Tribological Investigation of Bitter Almond oil containing TiO_2 nanoparticles as additive, by Udipt awarded in 2023.
- ‘Tribological Investigation of Bio-Nanolubricant Using Four Ball Tribotester’ by D Sunil Kumar awarded in 2021.
- ‘Experimental Analysis of Tribological Properties of Vegetable Oil-Based Nanolubricants’ by Vijay Kumar awarded in 2020.
- ‘Elasto-Hydrodynamic Analysis of Journal Bearing Operating with Non-Newtonian LubricantsContaining Nanoparticles’ by Pravez Khan awarded in 2019.
- ‘Experimental Investigation of Tribological Properties of Soybean Oil with ZDDP and CuO Nanoparticles’ by Ajay Gijawara awarded in 2018.
- ‘A Framework for Milling Tool-Paths Generation and Optimization’ by Munish Kumar awarded in 2017.
- ‘CFD Analysis of Two in-line Aerostatic Journal Bearing with Orifice Type Restrictor’ by Govind awarded in 2016.
- ‘Analysis of Hydrodynamic Journal Bearings: Theory and Experiment’ by Maninder Singh awarded in 2015.
- ‘Thermal Analysis of Two Axial Groove Hydrodynamic Journal Bearing: Theory and Experiment’ by Neeraj Kumar awarded in 2014.
- ‘Experimental Investigation of Optimum Feed Hole Position for Central Circumferential Groove Journal Bearing’ by Surinder Singh awarded in 2014.
- ‘Study of Non-Newtonian Behavior of Different Lubricants in Two axial groove Hydrodynamic Bearing: Theory and Experiment” by Shushil Kumar awarded in 2014.
- ‘Analysis of Two Axial Groove Hydrodynamic Journal Bearing: Theory and Experiment, by Maninder Singh awarded in 2014.
- ‘Experimental Investigation of Optimum Feed Hole Position for Plain Journal Bearing’ by Natra Pal awarded in 2014.
- ‘CFD Analysis of Hybrid Journal Bearing Operating with Non-Newtonian Lubricants’ by Vijay Singh awarded in 2013.
- ‘Hydrostatic Lubrication Analysis of Journal Bearing Using CFD Techniques’ by Dinesh Rathee awarded in 2012.
- ‘Experimental Investigation for Optimal Lubricant in Hydrodynamic Journal Bearings’ by Kaushal Kumar awarded in 2011.
- ‘Influence of Non-Newtonian Lubricant on Performance of Hydrodynamic Journal Bearing: Theory and Experiment’ by Paramvir Yadav awarded in 2011.
- ‘Experimental Study of Heat Transfer Enhancement using Trapezoidal channel with Sharp Edged Wavy Plate’ by Mohmad Iqbal awarded in 2011.
- ‘Experimental study of Heat Transfer Enhancement in a Channel having Heated Plate with Inclined Blocks by using Equilateral Triangle as Obstacle’ by Ishu Monga awarded in 2010.

- 'Experimental study of Heat Transfer Enhancement in Electronic Circuit Board using Sharp Edged Wavy Plate' by Pritpal Singh awarded in 2010.
- 'Optimization of CNC Turning Operation on Aluminum Using Taguchi Method' by Vijayesh Rathi awarded in 2009.
- 'The Study of Flow Structure and Heat Transfer in a Plate Fin Heat Exchanger at Various Reynolds Numbers' by Krishan Chander Yadav awarded in 2009.
- 'The Study of Performance Characteristics of Slot-Entry Hybrid Journal Bearing Using Finite Element Method' by Ravi Kapoor awarded in 2008.
- 'FEM Analysis of Slot-Entry Symmetric Hybrid Journal Bearings with Non-Newtonian Lubricants' by Harjeet Singh Maan awarded in 2008.
- 'Modeling and Analysis of Hydrostatic Journal Bearing for Non-Newtonian Lubricant' by Ravinder Duvedi awarded in 2006.

Research Publications

International Journals (*Published)*

1. Gitesh Kumar, **H. C. Garg**, **2024,** "Tribological Investigation and Statistical Optimization by Response Surface Methodology of Vegetable Oil based Ionanolubricants" *Arabian Journal for Science and Engineering,* **(Springer)**. https://doi.org/10.1007/s13369-024-09538-w,**Science Citation Index Expanded (SCIE): Impact factor: 2.5.**
2. Gitesh Kumar, **H. C. Garg, 2024,** "Dispersion Stability Analysis of Vegetable Oil Based Ionanolubricants" *Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, IMECHE*, **(Sage)**. 238(9). pp. 1138-1152. **Science Citation Index Expanded (SCIE): Impact factor: 2.**
3. Gitesh Kumar and **H.C. Garg,** 2023. Evaluation of tribological properties of vegetable oil–based ionanolubricants: An experimental study. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology **(Sage),** 237(9), 1757–1767. **Science Citation Index Expanded (SCIE): Impact factor: 2.**
4. Gitesh Kumar and **H.C. Garg, 2023**. Tribological evaluation of rice bran oil based ionanolubricants containing ionic liquids and nanoparticles. Tribology - Materials, Surfaces & Interfaces, **(Taylor and Francis)** 17(3), 217–223. **Emerging Source Citation Index: Impact factor: 1.3.**
5. Gitesh Kumar and **H. C. Garg,** 2022 Influence of a Halogen FreeIonic Liquid on The Rheological and Tribological Characteristics of Canola Oil", Industrial Lubrication and Tribology **(Emerald),** 74 (8): 914-921, **Science Citation Index Expanded (SCIE): Impact factor: 1.6.**
6. D. Sunil Kumar, **H.C. Garg**, Gitesh Kumar, 2022, Tribological Analysis of Blended Vegetable Oils Containing CuO Nanoparticles as an Additive, Materials Today: Proceedings, **(Elsevier)** 51(1): 1259-1265. ISSN 2214-7853, **Scopus index.**
7. Anil Dhanola and **H.C. Garg**, 2021. Experimental Analysis of the Efficacy of Vegetable Oil-Based Nanolubricants for Improving Journal-Bearing Performance. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology **(Sage),** 235(9) 1974-1991, **Science Citation Index Expanded (SCIE): Impact factor: 2.**
8. Anil Dhanola and **H.C. Garg**, 2021. Thermo-Elasto-Hydrodynamic (TEHD) Study of Journal Bearing lubricated with Biodegradable Nanolubricant. Journal of the Brazilian Society of Mechanical Sciences and Engineering **(Springer),**43(2), 69. DOI: 10.1007/s40430-021-02801-3, **Science Citation Index Expanded (SCIE): Impact factor: 2.2**.
9. Pravez Khan, Anil Dhanola and **H.C. Garg**, 2021. Elasto-hydrodynamic Analysis of Journal Bearing Operating with Nanolubricants. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology **(Sage),** 235(5):963-974 DOI: 10.1177/1350650120931979. **Science Citation Index Expanded (SCIE): Impact factor:2.**
10. Anil Dhanola and **H.C. Garg**, 2021. Dispersion Stability and Rheology Study of Canola oil Containing TiO_2Nanoadditives for Tribological Applications: An Experimental Approach.

Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology **(Sage),**235(9):1765-1781.**Science Citation Index Expanded (SCIE): Impact factor: 2.**

11. Anil Dhanola and **H.C. Garg**, 2020. Influence of Different Surfactants on the Stability and Varying Concentrations of TiO_2 Nanoparticles on the Rheological Properties of Canola Oil Based Nanolubricants. Applied Nanoscience**(Springer),**10:3617–3637, **Science Citation Index (SCI):Impact factor:4.604).**
12. Anil Dhanola and **H.C. Garg**, 2020. Tribological Challenges and Advancements in Wind Turbine Bearings: A Review. Engineering Failure Analysis,**(Elsevier),**118, 104885. **Science Citation Index Expanded (SCIE)**: **Impact factor: 4.**
13. Anil Dhanola and **H.C. Garg**, 2020. Thermohydrodynamic (THD) Analysis of Journal Bearing Operating with Bio-based Nanolubricants. Arabian Journal for Science and Engineering **(Springer),**45(11): 9127–9144.**Science Citation Index Expanded (SCIE): Impact factor: 2.9.**
14. Anil Dhanola and **H.C. Garg**, 2020. Experimental Analysis on Stability and Rheological Behaviour of TiO_2/Canola oil Nano lubricants. Materials Today: Proceedings **(Elsevier)**, 28(3):1285-1289. **Scopus index.**
15. Vijay Kumar, Anil Dhanola, **H.C. Garg** and Gitesh Kumar, 2020. Improving the tribological performance of canola oil by adding CuO nanoadditives for steel/steel contact. Materials Today: Proceedings **(Elsevier)**, 28(3):1392-1396. **Scopus index**.
16. Gitesh Kumar, **Hem Chander Garg**and Ajay Kumar, 2019. Experimental Investigation of Tribological Effect on Vegetable Oil with CuO Nanoparticles and ZDDP additives. Industrial Lubrication and Tribology **(Emerald), 71** (3): 499-508.**Science Citation Index Expanded (SCIE): Impact factor: 1.6.**
17. Pravez Khan, Anil Dhanola, **H.C. Garg** and Aman Khatkar, 2019. Influence of Aspect Ratio on the Performance Characteristics of Plain Journal Bearing Lubricating with Non-Newtonian Lubricant. International Journal of Engineering and Advanced Technology **(Blue Eyes Intelligence Engineering & Sciences Publication)**, 8(6): 1022-26. **Scopus Index.**
18. Pankaj Khatak and**H.C. Garg**, 2018. Performance Comparison of Hole-Entry and Slot-Entry Hybrid Journal Bearings Considering Combined Influence of Thermal Effects and Micropolar Lubricant. Industrial Lubrication and Tribology**(Emerald), 70**(6): 1037-1050.**Science Citation Index Expanded (SCIE): Impact factor: 1.6.**
19. Kaushal Kumar, Satish Kumar, Munish Gupta and **Hem Chander Garg**, 2018. Tribological Behaviour of WC-10Co4Cr Coated Slurry Pipe Materials. Industrial Lubrication and Tribology **(Emerald), 70**(9):1721-1728.**Science Citation Index Expanded (SCIE): Impact factor: 1.6.**
20. Pankaj Khatak and**H.C. Garg**, 2018. Investigation of Micropolar Lubricant and Thermal Effects in Slot-Entry Hybrid Journal Bearing. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science **(Sage), Published Online**. **Science Citation Index (SCI): Impact factor: 2.**
21. Pankaj Khatak and**H.C. Garg**, 2017. Performance Analysis of Capillary Compensated Hybrid Journal Bearing by Considering Combined Influence of Thermal Effects and Micropolar Lubricant. Journal of Tribology **(ASME), 139**(1):011707-12. **Science Citation Index Expanded (SCIE): Impact factor: 2.5.**
22. Kaushal Kumar, Satish Kumar, Munish Gupta and **Hem Chander Garg,** 2017.Characteristics of Fly Ash in Relation of Soil Amendment. Materials Today: Proceedings **(Elsevier)**, 4(2) Part A:527–532. **Scopus Index.**
23. Kaushal Kumar, Satish Kumar, Munish Gupta, **Hem Chander Garg** and Gurprit Singh, 2017. Measurement of Flow Characteristics for Multiarticulate Bottom Ash-water Suspension with Additives. Journal of Residuals Science & Technology (**DEStech Publications, Inc.),** 14(1): 11-17. **Scopus Index.**
24. Pankaj Khatak and**H.C. Garg**, 2016. Thermohydrostatic Analysis of Hybrid Journal Bearing Compensated by Constant Flow Valve Operating with Micropolar Lubricant. Proceedings of the

Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology **(Sage),**230(9): 1041-1055. **Science Citation Index Expanded (SCIE): Impact factor:2**.

25. Kaushal Kumar, Satish Kumar, Munish Gupta, and **H.C. Garg**, 2016.Effect of Addition of Bottom Ash on the Rheological Properties of Fly Ash Slurry at Varying Temperature. Materials Science and Engineering (**IOP Conference Series**), 149(1): 1-6. **Scopus Index.**
26. **H.C. Garg,** 2015. Stability Analysis of Slot-Entry Hybrid Journal Bearings Operating with Non-Newtonian Lubricant. JurnalTribologi (Malaysian Tribology Society). 6: 1-23. **Emerging Sources Citation Index:Impact factor: 1.5**.
27. **H.C. Garg**and Vijay Kumar, 2014. Thermohydrostatic Rheological Analysis of Constant Flow Valve Compensated Multiple Hole-Entry Hybrid Journal Bearings. Industrial Lubrication and Tribology**(Emerald)**,66(2):240-259.**Science Citation Index Expanded (SCIE): Impact factor: 1.6**.
28. **H.C. Garg**and Vijay Kumar, 2014. Comparison of Static Performance Characteristics of Different Configurations of Slot-Entry Hybrid Journal Bearing Operating with Non Newtonian Lubricants**.** Industrial Lubrication and Tribology **(Emerald)**,66(1):38-45.**Science Citation Index Expanded (SCIE): Impact factor: 1.6**.
29. **H.C. Garg**and Vijay Kumar, 2013. Static performance characteristics of hybrid journal bearings with plugged entry holes. Industrial Lubrication and Tribology **(Emerald)**,65(5):333-340. **Science Citation Index Expanded (SCIE): Impact factor: 1.6.**
30. **H.C. Garg**and Vijay Kumar, 2013. Thermohydrostatic Rheological Study of Orifice Compensated Asymmetric Hole-Entry Hybrid Journal Bearings**.** Industrial Lubrication and Tribology **(Emerald)**,65(6): 369-378. **Science Citation Index Expanded (SCIE): Impact factor: 1.6.**
31. Pankaj Khatak and**H.C. Garg**, 2012. Influence of Micropolar Lubricant on Bearings Performance: A Review. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology **(Sage),**226 (9): 775-784. **Science Citation Index Expanded (SCIE):Impact factor:2**.
32. **H.C. Garg**, 2012. Theoretical Modeling of Orifice Compensated Symmetric Hole-EntryHybrid Journal Bearings**.**Journal of Engineering Design and Technology **(Emerald),**10(3): 421-435, **Emerging Sources Citation Index: Impact factor:2.8**.
33. **H.C. Garg,** 2011. Influence of Non-Newtonian Behaviour of Lubricant on Performance of Hole-Entry Hybrid Journal Bearings Employing Constant Flow Valve Restrictors. Industrial Lubrication and Tribology **(Emerald)**, 63(5): 373-86.**Science Citation Index Expanded (SCIE): Impact factor: 1.6.**
34. **H.C. Garg**, Vijay Kumar and H B Sharda, 2010. Performance of Slot-Entry Hybrid Journal Bearings Considering Combined Influences of Thermal Effects and Non-Newtonian Behaviour of Lubricant. Tribology International **(Elsevier)**, 43(8):1518-1531. **Science Citation Index (SCI): Impact factor: 6.2.**
35. **H.C. Garg**, Vijay Kumar and H B Sharda, 2010. A Comparative Thermal Analysis of Slot-Entry and Hole-Entry Hybrid Journal Bearings Lubricated with Non-Newtonian Lubricant. Journal of Tribology **(ASME)**, 132(4): 041701-11. **Science Citation Index Expanded (SCIE): Impact factor: 2.5.**
36. **H.C. Garg**and Vijay Kumar, 2010. Analysis of Thermal Effects in Capillary Compensated Hole-Entry Hybrid Journal Bearings Lubricated with Non-Newtonian Lubricant. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology **(Sage),**224 (4): 317-334. **Science Citation Index Expanded (SCIE): Impact factor:2.**
37. **H.C. Garg**, Vijay Kumar and H B Sharda, 2009. Thermohydrostatic Analysis of Capillary Compensated Symmetric Hole-Entry Hybrid Journal Bearing Operating with Non-Newtonian Lubricant**.** Industrial Lubrication and Tribology **(Emerald)**, 61(1): 11-21. **Science Citation Index Expanded (SCIE): Impact factor: 1.6.**
38. **H.C. Garg**, Vijay Kumar and H B Sharda, 2007. Non-Newtonian and Thermal Effects in Constant Flow Valve Compensated Symmetric Hole-Entry Hybrid Journal Bearing. Lubrication Science **(John Wiley)**, 19(4): 269-286. **Science Citation Index Expanded (SCIE): Impact factor: 1.9.**

39. R.K. Duvedi, **H.C. Garg** and V.K. Jadon, 2007, Modeling and analysis of non-recessed hole-entry hybrid journal bearing for non-Newtonian lubricants. Journal of institution of engineers (India): Mechanical Engineering Division, **(Institution of engineers)** 87, 36-45. Scopus Indexed.

40. **H.C. Garg**, H B Sharda and Vijay Kumar, 2006. On the Design and Developments of Hybrid Journal Bearing: A Review. Tribotest (Presently Lubrication Science) **(John Willey)**, 12(1):1-19. **Science Citation Index Expanded (SCIE): Impact factor: 1.9**.

41. R.K. Duvedi, **H.C. Garg** and V.K. Jadon, 2006. Analysis of Hybrid Journal Bearing for Non-Newtonian Lubricants. Lubrication Science **(John Wiley)**,18(3): 187-207. **Science Citation Index Expanded (SCIE): Impact factor: 1.9**.

Chapters Contributed in Books

1. Gitesh Kumar,**H. C. Garg**, 2024 "Investigating the Antiwear Characteristics of Castor Oil Based Ionano Lubricant using Four Ball Tester" Tribology for Energy, Environment and Society, S.K. Sinha, D. Kumar, N.N. Gosvami, and P. Nalam, eds., **Springer NatureSingapore**, Singapore, pp. 91–99.**Scopus Index** https://doi.org/10.1007/978-981-99-9264-5_8
2. Anil Dhanola and H.C. Garg, 2021. Lubrication Performance of Vegetable Oil-Based Nanofluids under Different Lubrication Regimes (Book Chapter), **Nova Science Publishers, Inc., New York.Book citation index and Scopus Index.**

National Journals *(Published)*

1. Gupta M., Ishu Monga and **H C Garg**, 2012. Experimental Set-Up for a Channel Having Heated Plate with Inclined Blocks and Equilateral Triangles as an Obstacle. Journal of Environmental Research and Development **(JERAD Publications),** 6(4): 1078-82.(Impact factor: 0.157).
2. **H.C. Garg,** 2011. Performance of Asymmetric Slot-Entry Hybrid Journal Bearing Operating with Non-Newtonian Lubricant. Journal of Engineering and Technology **(Medknow Publications)**, 1(1): 16-23.
3. **H.C. Garg,** 2011. Thermal Analysis of Orifice Compensated Symmetric Hole-Entry Hybrid Journal Bearings. Journal of Engineering and Technology **Medknow Publications,** 1(2): 74-82.
4. R.K. Duvedi**, H.C. Garg**and V.K. Jadon, 2007. Modelling and Analysis of Non-recessed Hole-entry Hybrid Journal Bearing for Non-Newtonian Lubricants, **Institution of Engineers (India)** Journal-MC, 87: 36-45.
5. **H.C. Garg,** Navneet Arora and N P Mehta, 2004. Stochastic Behaviour and Maintenance Planning for Steam Flow System in A Thermal Power Plant. **Indian Institution of Industrial Engineering Journal,** XXXIII (2):18-25.

International Conferences

1. Anil Dhanola, Gitesh Kumar and **H.C. Garg,** 2018.A State-of- The- Art Review on Tribological Performance of BioBased Lubricants Using Nanoparticles.International conference on Advanced Materials, Energy& Environmental Sustainability ICAMEES 2018, December 14-15, 2018**,** Departments of Chemistry and Physics UPES, Dehradun, Uttarakhand (INDIA).
2. Pankaj Khatak and **H.C. Garg**, 2017. Influence of Geometrical Parameters on the Performance of Asymmetric Hole Entry Hybrid Journal Bearing with Micropolar Lubricant. 27th International Conference on Recent Development In Mechanical, Production, Industrial and Automobile Engineering (ICMPIAE 2017) ISBN: 978-93-85225-87-1, February 26, 2017, Delhi (**INDIA**).
3. Kaushal Kumar, Satish Kumar, Munish Gupta and **Hem Chander Garg, 2017.**Effect of Rotational Speed and Solid Concentration on Erosion Wear in Pipeline for Solid Liquid Flow.4th International Conference on Engineering Technology & Science ICETS' March 30-31, 2017**,** Muthayammal Engineering Institution, Rasipuram-Tamil Nadu **(INDIA).**
4. **H.C. Garg,** 2010. Static and Dynamic Performance Characteristics of Constant Flow Valve Compensated Hole-Entry Hybrid Journal Bearing System Considering Combined Influences of Thermal Effects and Non-Newtonian behaviour of Lubricant. **ASME/STLE International Joint Tribology Conference,** October 18-20, 2010, **Presented,San Francisco, California (USA).**

National Conferences

1. Pankaj Khatak and **H.C. Garg**, 2017. Thermohydrostatic Analysis of Constant Flow Valve Compensated Asymmetric Hole Entry Journal Bearing. National Conference on Trends and Advances in Mechanical Engineering (TAME-2017) March 16-17, 2017, pp. 83-90, Department of Mechanical Engineering, YMCA University of Science and Technology, Faridabad (Haryana).
2. Munish Kumar, P. Khatak and **H.C. Garg**, 2017. Advancements in CNC Interpolators for Linear andParametric Curve Approximation and CommandGeneration. National Conference on Trends and Advances in Mechanical Engineering (TAME-2017) March 16-17, 2017, pp. 278-284, Department of Mechanical Engineering, YMCA University of Science and Technology, Faridabad (Haryana).
3. **H.C. Garg** and Ravi Kapoor, 2010. Study of Performance Characteristics of Slot-Entry Hybrid Journal Bearing Using FEM. National Conference on Global Trends in Mechanical Engineering, April 16-17,2010, Rayat and Bahra Institute of Engineering & Bio-Technology, Mohali Campus, (Punjab).
4. R. Duvedi, **H.C. Garg**, V.K. Jadon and Balkar Singh, 2005. Computer Aided Steady State FEM Analysis of Hybrid Journal Bearing Operating with Non-Newtonian Lubricants. National Conference on Computer Aided Design and Manufacturing: A Global Perspective, April 8-9, 2005, T.I.E.T. Patiala, India.
5. **H.C. Garg**, Navneet Arora and N P Mehta, 2003. Data Base Analysis for Steam Flow System in Thermal Power Plant. National Conference on Recent Developments in Mechanical Engineering, October 31- November 1, 2003, pp. 348-353, T.I.E.T. Patiala, India.

Short Term Training Programme/Workshop Organised

- Organized One Day Webinar on "**Research Ideas Towards Patents**" under National Intellectual Property Awareness Mission (NIPAM) by Center for Industry Institute Partnership at GuruJambheshwar University of Science & Technology, Hisar-India on **February 07, 2023**. Fully Supported by Intellectual Property Office, India.
- OrganizedOne Day Webinar on "**IPAwareness/Training program**"under National Intellectual Property Awareness Mission (NIPAM) byCenter for Industry Institute Partnership at GuruJambheshwar University of Science & Technology, Hisar-India on28, December, 2021. Fully Supported by Intellectual Property Office, India.
- Organized One Day Webinar on "**IP-AWAKE: Patent Filing, Prosecution, Enforcement in India and Commercialization**"by Center for Industry Institute Partnership at Guru Jambheshwar University of Science & Technology, Hisar-India on 19, March, 2021.
- Organized National Workshop on "**Patent Filing and Protection ofIntellectual Property Rights"** by Center for Industry Institute Partnership at Guru Jambheshwar University of Science & Technology, Hisar-India on **February 20, 2020**. Fully Supported by Haryana State Council for Science & Technology, Department of Science & Technology, and Government of Haryana-Panchkula.
- Organized 3 Days Skill Development Programme on "**Accounting and Book Keeping"** by Center for Industry Institute Partnership at Guru Jambheshwar University of Science & Technology, Hisar-India in Collaboration with Senior Citizen's Council for Human Resource Development, Chandigarh During **February 10-12, 2020**for Non-Teaching Employees.
- Organized National Workshop on **"Intellectual Property Rights & Patents"** by Center for Industry Institute Partnership at Guru Jambheshwar University of Science & Technology, Hisar-India on **January 30, 2019**. Fully Supported by Haryana State Council for Science & Technology, Department of Science & Technology, and Government of Haryana- Panchkula.
- Organized National Workshop on "**Advances in Tribology"** onthe occasion ofcelebration of National Technology Day in Guru Jambheshwar University of Science & Technology, Hisar-India on **May 11, 2018**. Fully Supported by Haryana State Council for Science & Technology, Department of Science & Technology, and Government of Haryana- Panchkula.
- Organized One day Workshop on "**Outcome Based Education** "in Faculty of Engineering & Technology at Guru Jambheshwar University of Science & Technology, Hisar-India on **July 21, 2017**.
- Organized National Workshop on "**Basics of Rheology and Its Applications**" on the occasion ofcelebration of National Technology Day in Guru Jambheshwar University of Science &

Technology, Hisar-India on **May 11, 2017**. Fully Supported by Haryana State Council for Science & Technology, Department of Science & Technology, and Government of Haryana- Panchkula.

- Organized National Workshop on "**MATLAB and the Internet of Things (IoT)**" on the occasion ofcelebration of National Technology Dayin Guru Jambheshwar University of Science & Technology, Hisar-India on **May 11, 2016**. Fully Supported by Haryana State Council for Science & Technology, Department of Science & Technology, and Government of Haryana- Panchkula
- Organized Startup Session/Bootcamp in collaboration with Startup Accelerator Chamber of Commerce (SAAC) in Guru Jambheshwar University of Science & Technology, Hisar-India on **February 9, 2016**.
- Organized **One Week** Short Term Training Programme (STTP) on "Tribology of Bearings for Ultra-Precision Machining" in Mechanical Engineering Department, Guru Jambheshwar University of Science & Technology, Hisar-India during **April 18-22, 2013.**
- Organized National Workshop on "Recent Trends in Engineering & Technology" in Faculty of Engineering & Technology, Guru Jambheshwar University of Science & Technology, Hisar-India on **March 17, 2009**.

Expert Talks/Lecturer In Short Term Training Programmes/Courses

- Expert talk on the topic'**Ethical Concern in Research**' on February 23,2021 in RUSA sponsored One-week online interaction programme for PhD scholars organized by Human Resource Development Centre, Guru Jambheshwar University of Science & Technology, Hisar-India during February 22-27, 2019.
- Key-Note Speech delivered on the topic **'How to Publish Quality Research Paper'** on February 28, 2020 in National Conference on 'Emerging Trends in Technology, Science &Management (ETTSM-2020)' held at Om Sterling Global University, Hisar.
- Expert talk delivered on the topic **'Publishing Research Paper'** on February 12, 2019 in the UGC sponsored One week workshop on "Research Methodology/Data Analytical Techniques in Science & Engineering for Faculty & Research Scholars" organized by Human Resource Development Centre, Guru Jambheshwar University of Science & Technology, Hisar-India during February 11-16, 2019.
- Expert talk on **Solution of One- Dimensional Heat Conduction Equation Using Finite Element Method** in One week Global Initiative for Academic Networks (GIAN) course on "The Finite Element Method in Engineering: Basic Procedure, Applications and Current Research Topics" conducted during December 18-22, 2017 at Guru Jambheshwar University of Science & Technology, Hisar-India.
- Expert talk on **Solution of Reynolds Equation Using Finite Element Method** in One week Global Initiative for Academic Networks (GIAN) course on "The Finite Element Method in Engineering: Basic Procedure, Applications and Current Research Topics" conducted during December 18-22, 2017 at Guru Jambheshwar University of Science & Technology, Hisar-India.
- Expert talk on **Hydrodynamic Lubrication** in Faculty Development Programme on "Advancements in Mechanical Engineering" heldin Mechanical Engineering Department, Guru Jambheshwar University of Science & Technology, Hisar-India from August 29, 2016 to September 02, 2016.
- Expert talks delivered on:**Basics of Lubrication,Bearings Design**, **Thermal Analysis of Bearings**,**FEM Analysis of Flow Governing Equations in bearings**,**Technical Research Project Writing**in Short Term Training Programme on "Tribology of Bearings for Ultra- Precision Machining" held in Mechanical Engineering Department, Guru Jambheshwar University of Science & Technology, Hisar-India from April 18, 2013 to April 22, 2013.
- Expert talk on **Basic Concepts of Finite Element Method (FEM)** in Staff Development Programme on "Basics and Applications of Computational Fluid Dynamics" held at Thapar University Patiala-India from July 10, 2009 to July 23, 2013.

Notable Short Term Training Programme/Workshop Attended (Last 05 Years)

- Attended two weeks GIAN course on "**Finite Element Method: Theory and Programming**" held at **IIT Hyderabad-**India during July 14-24, 2016. **Foreign Faculty**: ***Prof. J.N. Reddy****, Mechanical Engineering Department Texas A&M University,* ***USA****.*

- Attended internationally acclaimed training programme on **"Essentials of Machinery Lubrication"** organized by **VAS Tribology Solutions the licensed partners of Noria Corporation, USA** held at Jamesson Inn Shriraz, 56 Park Street, Kolkata during November 19-21, 2015.
- Attended one week course on "**Micromanufacturing**" held at **IIT Kanpur-**India during August 3, 2015 to September 04, 2015.

Editorial Board

Member, Journal Advisory Board of

- Journal of Engineering and Technology (Medknow Publications)

Reviewer

On the panel of reviewers for the following journals:

- Journal of Tribology (**ASME**)
- Tribology International (**Elsevier**)
- Tribology Transactions (**STLE**)
- Journal of Engineering Tribology **(IMechE, Part J)**
- Industrial Lubrication and Tribology (**Emerald**)
- Journal of Engineering, Design and Technology (**Emerald**)
- Wind Energy **(John Wiley & Sons)**
- Journal of the Brazilian Society of Mechanical Sciences and Engineering **(Springer),**

Membership of Professional Bodies

- Life member of Tribology Society of **India** (TSI)
- Life member of the Malaysian Tribology Society of **Malaysia** (MYTRIBOS)

Honors and Awards

- **Rashtriya Gaurav Award** conferred for 'Meritorious Services, Outstanding Performance and Remarkable Role' in academic and administrative spheres by the India-International Friendship Society (IIFS) in a seminar on Economic Growth & National Integration held on February 9, 2013 at New Delhi-India.
- **Letter of Appreciation** from Prof. Shigeka Yoshimoto, host researcher, Tokyo University of Science, Tokyo (Japan).
- Merit Scholarship Certificate in B.Tech. (Mechanical Engineering)
- Placed in merit list in 10^{th} and 10+2 by Board of School Education, Haryana-India.
- School topper at Middle, High and Senior Secondary level.

Major Contribution towards Development of Mechanical Engineering Department/University

- I joined the Department of Mechanical Engineering of Guru Jambheshwar University Science & Technology, Hisar (Haryana) since its inception in the year 2004. Being founder Chairman of the Department, I got opportunity to develop all laboratories and workshop in the Department. Even construction of laboratories and workshop was done as per requirements of the Department only after consulting with me from time to time. Within a short span of ten years of its existence, Department was equipped with latest facilities required for achieving excellence comprising the various latest laboratories (CAD/CAM, Strength of Material (SOM), Fluid Mechanics (FM), Hydraulic Machine, Theory of Machine (TOM), Internal Combustion (IC) Engine, Heat Transfer (HT), Tribology Lab and workshop (Machine, Welding, Foundry, Forging and Carpentry Shops). An approximate amount of ₹ 35million was spent for procurement of Machines/Equipment's. The delegates from abroad and also from within the country, during their visit to these labs and workshop, appreciated the effort made towards development of the Department.

  Apart from this, I took initiative to start Post Graduate Programme in the Department. The course scheme for this Programme was designed and detailed contents were prepared under my supervision

and it was successfully started in the year 2006 with a goal to combine excellence and research with service to society. A research programme leading to Ph.D. degree was also started in academic session 2009-2010 under my supervision.

Besides strengthening my department in all spheres, I have contributed a lot in the growth of my university. The university authorities have always shown faith in me by assigning important duties. Here is a brief account of the academic and administrative assignments accomplished by me.

Academic Assignments (National Level/ University Level)

- Appointed as "Margdarshak" by All India Council for Technical Education, Delhi w.e.f. August 5, 2019.
- Appointed as "NAAC Assessor" by National Assessment and Accreditation Council, Bangalore since 2017.
- Outside expert to 'Board of Studies' of UG programs under Skill Faculty of Engineering and Technology, Shri Vishwakarma Skill University, Palwal- Haryana since 2019.
- Outside Expert to Academic Council of Om Sterling Global University, Hisar w.e.f. February 5, 2020.
- Chancellor Nominee on the Court of Indira Gandhi University Meerpur (Rewari) from June 11, 2014 for a period of two years.
- Member of Expert Committee Nominated by Chairman, UGC for Granting Major Research Project in Mechanical Engineering as per XII plan MRP guidelines dated January 9, 2015.
- Appointed as Member Coordinator, NAAC Peer Team visit to various Institutions throughout India w.e.f. September, 2017.
- Member, Board of Studies (BOS), School of Engineering and Technology, Central University of Haryana, Mahendergarh from July 2016 ongoing.
- Member, U.G.B.O.S. (Under Graduate Board of Studies), Department of Mechanical Engineering, Deenbandhu Chhottu Ram University of Science & Technology, Murthal, Sonipat from September 26, 2013 for a period of two years.
- External Expert, Faculty of Engineering & Technology, M.M. University, Mullana-Ambala from May 05, 2013 for a period of two years.
- Member, B.O.S. (Board of Studies), Department of Mechanical Engineering, Deenbandhu Chhotu Ram University of Science and Technology, Murthal, Sonipat from November 2, 2007 for a period of two years.
- Vice-Chancellor nominee (Kurukshetra University) in B.O.S. (Board of Studies), Department of Mechanical Engineering, N.C. College of Engineering & Technology Israna (Panipat) from November, 2008 ongoing.
- Member, Governing Body of Kalpana Chawla Group of Colleges, Hisar.
- Member, Academic Council, Guru Jambheshwar University of Science & Technology, Hisar from January 31 , 2018 for a period of two years.
- Chairman, P.G.B.O.S. (Post Graduate Board of Studies) of Mechanical Engineering Department, Guru Jambheshwar University of Science & Technology, Hisar October 18, 2004 to May 26,2014.
- Chairman,U.G.B.O.S. (Under Graduate Board of Studies) of Mechanical Engineering Department, Guru Jambheshwar University of Science & Technology, Hisar October 18, 2004 to May 26,2014.
- Chairman, Departmental Research Committee, Mechanical Engineering Department, Guru Jambheshwar University of Science & Technology, Hisar October 18, 2004 to May 26,2014.
- Member, Faculty of Engineering & Technology, Guru Jambheshwar University of Science & Technology, Hisar October 18, 2004 ongoing.
- Member, B.O.S & R. (Board of Studies and Research),Mechanical Engineering Department, Guru Jambheshwar University of Science & Technology, Hisar from Novmber 21, 2014 ongoing.
- Member, Departmental Research Committee, Mechanical Engineering Department, Guru Jambheshwar University of Science & Technology, Hisar from Novmber 21, 2014 ongoing.

Administrative Assignments

- Member, University Court, Guru Jambheshwar University of Science & Technology, Hisar from March28, 2023 for a period of two years.
- Chairman, Standing Purchase Committee, Guru Jambheshwar University of Science & Technology, Hisar from September 09, 2024 for a period of two years.
- Chairman, Standing Purchase Committee, Guru Jambheshwar University of Science & Technology, Hisar from September 09, 2022 for a period of two years.
- Member, Academic Council, Guru Jambheshwar University of Science & Technology, Hisar from November 09, 2015 for a period of two years.
- Member, Start Up Cell, Guru Jambheshwar University of Science & Technology, Hisar from January 08, 2018.
- Member, Internal Quality Assurance Cell, Guru Jambheshwar University of Science & Technology, Hisar from November 09, 2015 for a period of two years.
- Member, IDP implementation Committee, RashtriyaUchchatar Shiksha Abhiyan (RUSA) w.e.f. December 14, 2015.
- Advisor, Placement Cell, from October 29, 2015 to April 05, 2016.
- Deputy Coordinator, World Bank Project (TEQIP-II). Total project cost: **₹125 million**, Duration: 05 years.
- Coordinator, Internal Quality Assurance Cell, Guru Jambheshwar University of Science & Technology, Hisar in September, 2010.
- Member, Women Cell, Constituted for Prevention of Sexual Harassment of Women at Workplace, Guru Jambheshwar University of Science & Technology, Hisar for a period of two years from May 19, 2011.
- Member, Board of Residence, Health and Discipline, Guru Jambheshwar University of Science & Technology, Hisar for a period of two years from August 29, 2011.
- Convener, Campus security Surveillance Committee, Guru Jambheshwar University of Science & Technology, Hisar from January, 2013 ongoing.
- Member, Steering Committee-NAAC Accreditation, Guru Jambheshwar University of Science & Technology, Hisar-2009.
- Deputy Chief Admission Coordinator, Undergraduate Programmes, 2010-12.
- Member, Committee Constituted to Consider the Issues Pertaining to Admissions to Ph.D. programme (2010-11) and finalization of Ph.D. Prospectus, Guru Jambheshwar University of Science & Technology, Hisar.
- Member, High Power Standing Purchase Committee, Guru Jambheshwar University of Science & Technology, Hisar for a period of one year from April 01, 2009.
- Member, Unfair Means Committee, Guru Jambheshwar University of Science & Technology, Hisar for a period of one year from August 01, 2008.
- Member, Library Committee, Guru Jambheshwar University of Science & Technology, Hisar (2009).
- Member, Standing Purchase Committee-I, Guru Jambheshwar University of Science & Technology, Hisar from August 03, 2011.
- Member, House Allotment Committee, Guru Jambheshwar University of Science & Technology, Hisar for a period of two year from December, 2010 and from December, 2014.
- Member, Sports Council, Guru Jambheshwar University of Science & Technology, Hisar for a period of one year from January 04, 2011.

Date: 17.04.2025 **Prof. Hem Chander Garg**