

CURRICULUM VITAE

Dr. Gagandeep Singh

Ph.D. (Mechanical Engineering)

Citations: 165+

h-index: 5

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Career Vision

To promote the virtues of the scientific method, research, and scholarly inquiry so students can bring important critical thinking skills to their pursuits outside of college.

Research Area Interest

- Advance Machining Processes
- Magnetorheological Finishing Processes
- Machining and Optimization

Paper Published

- **Gagandeep Singh**, Arvind Jayant, Kulwant Singh, Govind Vashishtha, and Manpreet Singh. "Enhancing surface quality of cylindrical mold punch made of P20 steel using a newly developed magnetorheological finishing process." Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering (2025): 09544089251359343. (*SCIE*)
- Manpreet Singh, and **Gagandeep Singh**. "Precision Surface Finishing of Additively Manufactured ABS Punches via Magnetorheological Finishing: M. Singh and G. Singh." JOM (2025): 1-17. (*SCIE*)
- Manpreet Singh, **Gagandeep Singh**, Riyad Abu-Malouh, Sumika Chauhan, and Govind Vashishtha. "Influence of Magnetorheological Finishing on Surface Topography and Functional Performance of Shoulder Joint Cap Surface." *Materials* 18, no. 14 (2025): 3397. (*SCIE*)
- **Gagandeep Singh**, Arvind Jayant and Manpreet Singh. "Parametric investigation and optimization of revolving tools-based magnetorheological finishing process for external cylindrical surface of printing machine roller made of copper." *Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering* (2022): 09544089231161464. (*SCIE*)
- **Gagandeep Singh**, and Arvind Jayant. "Experimental investigation of a novel magnetorheological process based on three revolving curved tip tools for finishing of mild steel." Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering 237, no. 2 (2023): 229-239. (*SCIE*)
- **Gagandeep Singh**, and Arvind Jayant. "A novel magnetorheological finishing process based on three revolving flat tip tools for external cylindrical surfaces." *International Journal of Surface Science and Engineering* 17, no. 1 (2023): 1-15. (*SCIE*)
- Manpreet Singh, **Gagandeep Singh**, and Arvind Jayant. "Optimization of turning parameters of titanium chrome-molybdenum (Ti-Cr-Mo) alloy using taguchi method." *Indian Journal of Engineering and Materials Sciences (IJEMS)* 27, no. 3 (2021): 776-782. (*SCI*)
- **Gagandeep Singh**, Anant Kumar Singh, and Prince Garg. "Development of magnetorheological finishing process for external cylindrical surfaces." *Materials and Manufacturing Processes* 32, no. 5 (2017): 581-588. (*SCIE*)
- Sahil Maan, **Gagandeep Singh**, and Anant Kumar Singh. "Nano-surface-finishing of permanent mold punch using magnetorheological fluid-based finishing processes." *Materials and Manufacturing Processes* 32, no. 9 (2017): 1004-1010. (*SCIE*)
- Manpreet Singh, **Gagandeep Singh**, and Mohammad Alshinwan. "Advanced Finishing Processes for Cylindrical Surface Finishing: A Review." *Modern Hybrid Machining and Super Finishing Processes* (2024): 161-179. (*Scopus*)
- **Gagandeep Singh**, and Arvind Jayant. "Investigation of Process Parameters of a Novel Magnetorheological Finishing Process for External Cylindrical Surfaces." *U. Porto Journal of Engineering* 9, no. 3 (2023): 1-13. (*Scopus*)

- Manpreet Singh, **Gagandeep Singh**, and Maninder Singh "Advanced finishing processes for external cylindrical surfaces— A review." *Advances in Materials and Mechanical Engineering: Select Proceedings of ICFTMME 2020* (2021): 367-378. (*Scopus*)
- **Gagandeep Singh**, and Arvind Jayant. "A novel rotating wheel magnetorheological finishing process for external cylindrical workpieces." *International Journal of Mechanical and Production Engineering Research and Development* 10, no. 3, (2020): 6271-6280. (*Scopus*)
- **Gagandeep Singh**, and Arvind Jayant. "Advanced surface finishing processes: a comprehensive review & future research directions." *International Journal of Engineering Science and Technology* 10, no. 07 (2018):213-252.

Patent

- **Gagandeep Singh**, and Arvind Jayant. "Experimental investigation of process parameters of novel magnetorheological process on surface roughness of P20 steel mold punch." *JOM* (2024): (*Under Review*)

Paper Presented

- Arvind Jayant, Janpriy Sharma, and **Gagandeep Singh**. "Selection of reverse logistics service provider using AHP-improved PROMETHEE based hybrid approach: a case study." Presented at *International conference on Advancements in Engineering and Technology (ICAET-2018)*, Sangrur.
- Manpreet Singh, **Gagandeep Singh**, and Arvind Jayant. "Optimization of parameters affecting surface roughness of Ti-Cr-Mo alloy during lathe machining by using taguchi method." Presented at *1st International Conference on New Frontiers In Enginnering, Science And Technology (NFEST-2018)*, Delhi.
- **Dr. Gagandeep Singh**, Er. Ekta Gairola and Dr. Amandeep Singh. (2024) “*SELF-POWERED SMART SHOES FOR BLIND PEOPLE.*” IN202411028078.
- **Dr. Gagandeep Singh**, Er. Hardeep Singh, Dr. Manpreet Singh, Er. Indraj Kumar, Dr. Amandeep Singh, Dr. Nimisha Singh. (2023) “*SMART DUNG CAKE MAKING DEVICE AND A METHOD THEREOF.*” IN202311088396.
- Dr. Manpreet Singh, Er. Indraj Kumar, **Er. Gagandeep Singh**, Er. Hardeep Singh, Er. Parvinkal Singh (2023) “*SELF-CLEANING MAT FOR AUTOMOBILES.*” IN202311031301.

Educational Qualification

Course	Branch /Group /Discipline	Board/Institution/University	Year	CGPA* / %
Ph.D.	Mechanical Engineering	Sant Longowal Institute of Engg. & Tech., Sangrur	2023	Completed
M.Tech.	Production Engineering	Thapar Institute of Engg. & Tech., Patiala	2016	8.17
B.Tech.	Mechanical Engineering	Chitkara Institute of Engg. & Tech., Rajpura	2013	73.92%
Diploma	Mechanical Engineering	Govt. Polytechnic College, Amritsar	2010	67.87%
High-School	State Board	Govt. High School, Barnala	2007	67.23%

*on a scale of 10

Experience

- Research - 10 years
- Teaching Assistance - 05 years
- Teaching – 03+ years

Academic Projects

Project Title: Design and development of a magnetorheological finishing process for external cylindrical surfaces.

Duration: Ph.D. Dissertation (August 2016 - 2022)

Project Title: Experimental analysis of external cylindrical surface of mild steel using turning type magnetorheological finishing tool.

Duration: M. Tech. Dissertation (August 2014- July 2016)

Project Title: Effect of ash particles on boiler steel tubes at elevated temperature.

Duration: B. Tech. Project

Technical & It Skills Sets

Software Packages: FluidSIM, Ultimaker Cura, Design Expert, Auto CAD.

Languages Known: English, Punjabi, and Hindi

Operating System: Windows 98/XP/7/8.1/10/11.

Adept in: MS office and Internet Applications.

Achievements Accolades

- Awarded **Ministry of Education (MoE) Fellowship** to pursue Ph.D. in the Department of Mechanical Engineering at Sant Longowal Institute of Engg. & Tech., Punjab.
- Received scholarship from **All India Council for Technical Education (AICTE)** during Master Program.
- 2 times GATE qualified (2014, 2016).

Trainings Undergone

- Six months industrial training at **Federal-Mogul, Goetze India limited** Bahadurgarh, Patiala, July – Dec. 2012.
- Six weeks industrial training at **Standard Tractors Limited, Barnala**, June – July 2011.
- One-month industrial training at **Standard Tractors Limited, Barnala**, July 2009.

Workshops & Seminars Attended

- Attended short term training programme on “**Research Methods in Engineering & Technology (RMET-2017)**” during **January 9-13, 2017**, Organized by **Department of Mechanical Engineering of SLIET, Longowal** Sponsored by **TEQIP II**.
- Attended short term course on “**Advanced Engineering Optimization Through Intelligent Techniques (AEOTIT)**” during **March 27-31, 2017**, Organized by **Department of Mechanical Engineering of SVNIT, Surat**.
- Attended short term course on “**Micro Fabrication and Hybrid Machining**” during **March 12-16, 2018**, Organized by **Department of Mechanical Engineering of PEC, Chandigarh** under **TEQIP III**.

Extra-Curricular Accolades

- Stood 2nd in High Jump Competition in the Chitkara Campus.
- Got Rajya Puraskar award from the Bharat Scouts & Guides.
- A proud Blood donor.

Personal Details

Father's Name: Sh. Kaur Singh

Mother's Name: Smt. Surinderpal Kaur

Permanent Address: Azad Nagar, Barnala, Punjab – 148101.

Date of Birth: 08 October 1991

Marital status: Single

Nationality: Indian

DECLARATION

I, **Gagandeep Singh**, do hereby declare that the above-mentioned information is accurate, complete and to best of my knowledge and I bear the responsibility for the correctness of the above-mentioned particulars.

Date: 09/04/2026

Signature