# CURRICULUM-VITAE

**1. Name** : **Prof. (Dr.) GURPREET SINGH**

**2. Father's Name** : S. Avtar Singh

**3. Date of Birth** : 2nd October 1981

**4. Residential Address** : # 364, Urban Estate Phase- III
Patiala, Punjab, India-147002
Tel. No. +918146521500
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**Address for Correspondence:** Professor
Mechanical Engineering Department,
Punjabi University,
Patiala (Punjab) – 147002
(INDIA)

**5. Marital Status** : Married

**6. Educational Qualifications :**

| ***Exam Passed*** | ***Board/University*** | ***Year of Passing*** | ***Subjects*** | ***Marks/Div.*** |
|---|---|---|---|---|
| Ph.D. (Mechanical Engineering) | Punjabi University, Patiala | 2014 | Topic: "Fabrication & Characterization in Vitro of Thermal Sprayed HA/$SiO_2$ /CaP Coatings for Biomedical Applications" | NA |
| M.E. (Mech. Engg.) | Thapar Institute of Engg. & Tech. Patiala | 2006 | CAD/CAM & ROBOTICS | 8.64 CGPA ***(With Distinction)*****(On 10 Point Scale)** |
| B. Tech. (Mech. Engg) | Punjab Technical University Jalandher | 2004 | All Mechanical Engineering Subjects | 77.04% ***(With Hons., Bronze Medal in University merit)*** |

**7. Ph. D. Thesis Topic** : **"**Fabrication & Characterization in Vitro of Thermal Sprayed HA/$SiO_2$ /CaP Coatings for Biomedical Applications**"**

| **Supervisor** | **Co- Supervisor** |
|---|---|
| **Dr. Hazoor Singh**<br>Professor & Head<br>Yadavindra College of Engineering,<br>Punjabi University, GK Campus, Talwandi Sabo, Bathinda<br>Punjab (India) | **Dr. Buta Singh Sidhu**<br>Dean (Academic Affairs)<br>I.K. Gujral Punjab Technical University,<br>Jalandher, Punjab (India) |

**8. M.E Dissertation Topic** : Operation Sequencing & Machining Parameters Selection For Rotational Components Using Genetic Algorithm & Expert System

**9. Publications** :


1. Gurpreet Singh, G. Bartarya, "Operation sequencing & machining parameter selection of rotational components using genetic algoritm & expert system" Proceedings of National Conference on Recent developments in Mech. Engg. Nov 10, 11, 2006 TIET, Patiala
2. Gurpreet Singh, Hazoor S Sidhu, Buta S Sidhu, "A Review on Thermal Sprayed Hydroxyapatite Coated Bio-implants" International Conference on Biomedical Engineering and Assistive Technologies (BEATS-2010), 17-19 December 2010 at Dr. B.R. Ambedkar National Institute of Technology Jalandhar, 144 011, Punjab, INDIA
3. Gurpreet Singh, Amrinder Singh. "Operation Sequencing Using Genetic Algorithm with Greedy Crossover", International Journal of Advanced Research in Computer Science Volume 2, No. 4, pp 426-431, July-August 2011.
4. Amrinder Singh, Gurpreet Singh, "Application of Genetic Algorithm to Computer Aided Process Plan", Journal of Current Engineering Research, Volume 2, Issue 2, pp. 23-30, March-April, 2012. [ISSN No.: 2250 – 2637]
5. Gurpreet Singh, Amrinder Singh, "Review Paper : Operation Sequencing using Genetic Algorithm" , International Journal of Emerging Trends in Engineering and Development, Issue 2, Vol. 5, pp 863-867, July 2012. [ISSN No. 0976-5697]
6. Gurpreet Singh, "Process Planning For Rotational Components Using Genetic Algorithm and Expert System", Proceeding of International Conference on "Advancement and Futuristic Trends in Mechanical and Materials Engineering" October 5-7, 2012 at PTU, Kapurthala-144601, Punjab, India pp 502-507.
7. Sabar Ali, Gurpreet Singh, "Effect of Welding Parameters on Mechanical and Micro-structural Properties of AA1100 and AA6063-T6 Joints Produced by Friction stir Welding", International Journal on Emerging Technologies, Volume 3, Issue 2, pp 19-26, 2012. [ISSN No. (Print) : 0975-8364]
8. Jagmeet Bawa, Gurpreet Singh, "A New Approach: Management of Paddy Straw without Cause Burning", Proceedings of 6th International Conference on Advanced Computing & Communication Technologies, 3rd November 2012, at Asia Pacific Institute of Information and Technology SD India,Vol. 1, p 281- 284.
9. Gurpreet Singh, Hazoor Singh, Buta Singh Sidhu, "Characterization and corrosion resistance of plasma sprayed HA and HA–SiO2 coatings on Ti–6Al–4V", Surface and

Coatings Technology, Volume 228 (2013), pp 242-247. [Elsevier, Impact Factor: 2.374] [ISSN: 0257-8972]

10. Sahijpaul, Gurpreet Singh, "Determining the Influence of Various Cutting Parameters on Surface Roughness during Wet CNC Turning Of AISI 1040 Medium Carbon Steel", IOSR Journal of Mechanical and Civil Engineering, Volume 7 (2) (May-June 2013), pp 63-72. [ISSN: 2320-334X]
11. Gurpreet Singh, Hazoor Singh, Buta Singh Sidhu, "The Effect of CaP Concentration on Corrosion Behavior of Plasma Sprayed Hydroxyapatite Coating on Titanium in Simulated Body Fluid", Biomimetics Biomaterials and Tissue Engineering, Volume 18 (1) (2013) [doi: 10.4172/1662- 100X.1000103].
12. Gurpreet Singh, Hazoor Singh, Buta Singh Sidhu, "Corrosion behavior of plasma sprayed hydroxyapatite and hydroxyapatite-silicon oxide coatings on AISI 304 for biomedical application", Applied Surface Science Volume 284 (2013), pp 811– 818. [Elsevier, Impact Factor: 2.735] [ISSN: 0169-4332]
13. Gurpreet Singh, Hazoor Singh, Buta Singh Sidhu, "In vitro Corrosion Investigations of Plasma Sprayed Hydroxyapatite Coated Titanium", International Journal of Surface Engineering & Materials Technology, Vol. 3 (2), July-December, 2013, pp 16-21. [ISSN: 2249-7250]
14. Gurpreet Singh, Hazoor Singh, Buta Singh Sidhu, "Characterization and investigation of in-vitro Corrosion behavior of plasma Sprayed hydroxyapatite and hydroxyapatite–Calcium phosphate coatings on AISI 304" Journal of Corrosion Science and Engineering, Vol. 17, (2014), pp 1-14. [ISSN 1466-8858]
15. Gurpreet Singh, Hazoor Singh, Buta Singh Sidhu, "In-Vitro Corrosion Investigations of Plasma Sprayed Hydroxyapatite and Hydroxyapatite - Calcium Phosphate Coatings on 316L SS", Bulletin of Materials Science, Volume 37(6) (2014), pp 1519-1528. [Springer, Impact Factor: 1.017] [ISSN: 0250-4707]
16. Gurpreet Singh, Hazoor Singh, Buta Singh Sidhu, "In-Vitro Corrosion Investigations of Plasma Sprayed Hydroxyapatite and Hydroxyapatite – Silicon Oxide Coatings on 316L SS", Proceedings of CORSYM 2014 (February 20-21, 2014) at Indian Institute of Technology, Bombay, India, pp 244-259.
17. Gurpreet Singh, Hazoor Singh, Buta Singh Sidhu, "Characterisation and In Vitro Corrosion Resistance of Plasma Sprayed Hydroxyapatite and Hydroxyapatite – Silicon Oxide Coatings on 316L SS", Proceedings of International Thermal Spray Conference & Exposition (May 11-14, 2015) at Long Beach, California, USA pp 941-947 [eISBN: 978-1-62708-093-4].
18. Balraj Singh, Gurpreet Singh. "A Review on Parametric Analysis of Surface Roughness During Turning of Different Types of Steel", Proceedings of National Conference on Advances In Mechanical, Industrial & Material Engineering (November 6-7, 2015) at Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib, Punjab, India, pp 1-10.
19. Gurpreet Singh, "ਜੈਵਿਕ ਅੰਗ ਪਦਾਰਥਾਂ ਦੀ ਲੋੜ ਅਤੇ ਮਹਤੱਤਾ (Bioimplnats: Need and Importance)", ਨਿਰੰਤਰ ਸੋਚ (Nirantar Soach), Volume 18 (8) (2015), pp 10-13. [ISSN: 0972-1355]
20. Gurpreet Singh, Hazoor Singh, Buta Singh Sidhu, "In-Vitro Corrosion Behavior of Plasma Sprayed Hydroxyapatite Coated Bio-Implants: A Review", Paper No.: 17037, eProceedings of 17th Asian Pacific Corrosion Control Conference (APCCC17), Eds. V.

Kain, V.S. Raja, & S. Roychowdhury held during 27-30 January, 2016, IIT Bombay, Mumbai, India, Published by IIT Bombay (2016).

21. Ripandeep Singh, Gurpreet Singh, Hazoor Singh Sidhu, "The Cold Spray Coating Process: A Future Technique in Material Deposition", Asian Journal of Engineering and Applied Technology Volume 5 (1) (January-June 2016), pp 1-3. [ISSN 2249-068X]
22. Balraj Singh, Gurpreet Singh, Buta Singh Sidhu, "The Effect of Hydroxyapatite Coating on Corrosion Resistance and Biocompatibility of Magnesium Alloy Bio-implants: A Review", Asian Review of Mechanical Engineering Volume 5 (1) (January-June 2016), pp 56-67. [ISSN 2249-6289]
23. Gurpreet Singh, Hazoor Singh, Buta Singh Sidhu, "Corrosion Testing of Hydroxyapatite and Hydroxyapatite Silicon Oxide Coated Titanium", Proceedings of International Thermal Spray Conference & Exposition (May 10-12, 2016) at Shanghai, P.R. China pp 812-819 [ISBN 978-3-87155-574-9].
24. Gurpreet Singh, Buta Singh Sidhu, Balraj Singh, "A Review of Utilization of Niobium and Tantalum for the Enhancement in Corrosion Resistance and Biocompatibility of Bio-implants", Proceedings of International Thermal Spray Conference & Exposition (June 07-09, 2017) at Düsseldorf, Germany pp 834-844 [ISBN 978-3-96144-000-9].
25. Balraj Singh, Gurpreet Singh, "Experimental Investigation of Cutting Parameters Influence on Surface Finish during Turning of Steel using Taguchi Approach", International Journal of Manufacturing Research, Volume 13 (1) (2018), pp 49– 67 [ISSN online: 1750-0605, ISSN print: 1750-0591] (Inderscience)
26. Gourav Choudhary, Gurpreet Singh, "A Review of Corrosion Behaviour Analysis Studies of Different Stainless Steel Grades in Distinct Environments ", International Journal of Latest Trends in Engineering and Technology Special Issue AFTMME-2017, pp. 178-183 [e-ISSN:2278-621X]
27. Ramnik Garg, Balraj Singh, Gurpreet Singh, "A Review on Studies Of Parametric Analysis During Turning", International Journal of Latest Trends in Engineering and Technology Special Issue AFTMME-2017, pp. 152-160 [e-ISSN:2278-621X]
28. Sandeep Singh, Gurpreet Singh, Neeraj Bala, "Electrophoretic deposition of bioactive glass composite coating on biomaterials and electrochemical behavior study: A review", Materials Today: Proceedings, Volume 5 (9) (Part 3)(2018) pp. 20160–20169. [https://doi.org/10.1016/j.matpr.2018.06.385] [Elsevier] E-ISSN:2214-7853
29. Balraj Singh, Gurpreet Singh, Buta Singh Sidhu, "Analysis of Corrosion Behavior and Surface Properties of Plasma- Sprayed HA/Ta Coating on CoCr Alloy" Journal of Thermal Spray Technology, Vol. 27 (8) (2018) pp. 1401-1413 [https://doi.org/10.1007/s11666-018-0786-z] Print ISSN1059-9630, Online ISSN1544-1016. [Springer, Impact Factor: 1.949]
30. Balraj Singh, Gurpreet Singh, Buta Singh Sidhu, "Current Trends in Bio-Implants' Research", Asian Journal of Engineering and Applied Technology, Volume 7 (S 2) (November 2018), pp. 57-59. [ISSN 2249-068X].
31. Dalveer Singh, Sandeep Singh, Gurpreet Singh, "Fabrication and Characterization of Bioglass", Asian Journal of Engineering and Applied Technology, Volume 7 (S 2) (November 2018), pp. 99-102. [ISSN 2249-068X].
32. Balraj Singh, Gurpreet Singh, Buta Singh Sidhu, "Analysis of corrosion behaviour and surface properties of plasma-sprayed composite coating of hydroxyapatite–tantalum on biodegradable Mg alloy ZK60" Journal of Composite Materials, Vol. 53 (19) (2019) pp. 2661-2673 [https://doi.org/10.1177%2F0021998319839127], ISSN: 0021-9983 Online ISSN: 1530-793X [SAGE Journals, Impact Factor: 1.613]

33. Balraj Singh, Gurpreet Singh, Buta Singh Sidhu, "Investigation of the in vitro corrosion behavior and biocompatibility of niobium (Nb)-reinforced hydroxyapatite (HA) coating on CoCr alloy for medical implants" Journal of Materials Research, Vol. 34 (10) (2019) pp. 1678-1691. [DOI: https://doi.org/10.1557/jmr.2019.94] ISSN: 0884-2914 (Print), 2044-5326 (Online) [Cambridge University Press, Impact Factor: 1.495]
34. Balraj Singh, Gurpreet Singh, Buta Singh Sidhu, "In-vitro assessment of HA-Nb coating on Mg alloy ZK60 for biomedical applications" Materials Chemistry and Physics, Vol. 231 (2019) pp. 138-149. [https://doi.org/10.1016/j.matchemphys.2019.04.037] [Elsevier, Impact Factor: 2.296] ISSN: 0254-0584
35. Sandeep Singh, Gurpreet Singh, Niraj Bala, "Corrosion behavior and characterization of HA/Fe3O4/CS composite coatings on AZ91 Mg alloy by electrophoretic deposition", Materials Chemistry and Physics, Vol. 237 (2019) 121884 [https://doi.org/10.1016/j.matchemphys.2019.121884] [Elsevier, Impact Factor: 2.781] ISSN: 0254-0584
36. Balraj Singh, Gurpreet Singh, Buta Singh Sidhu, "In vitro investigation of NbeTa alloy coating deposited on CoCr alloy for biomedical implants", Surface and Coatings Technology, Volume 377 (2019), 124932. [https://doi.org/10.1016/j.surfcoat.2019.124932] [Elsevier, Impact Factor: 3.192] [ISSN: 0257-8972]
37. Tapinderjit Singh, Sandeep Singh, Gurpreet Singh, "Fabrication and characterization of chitosan – hydroxyapatite – zirconium dioxide composites for biomedical applications", Materials Today Proceedings, Volume 26 (Part 2) (2020) pp. 1878–1883. [https://doi.org/10.1016/j.matpr.2020.02.411] [Elsevier] [ISSN / eISSN:2352-9407]
38. Sandeep Singh, Gurpreet Singh, Niraj Bala, "Electrophoretic deposition of hydroxyapatite-iron oxide-chitosan composite coatings on Ti–13Nb–13Zr alloy for biomedical applications" Thin Solid Films, Vol. 697 (2020) 137801 [https://doi.org/10.1016/j.tsf.2020.137801] [Elsevier, Impact Factor: 1.888] ISSN 0040-60
39. Sandeep Singh, Gurpreet Singh, Niraj Bala, "Characterization and preparation of Fe3O4 nanoparticles loaded bioglass- chitosan nanocomposite coating on Mg alloy and in vitro bioactivity assessment" International Journal of Biological Macromolecules, Vol. 151 (2020), pp. 519-528. [https://doi.org/10.1016/j.ijbiomac.2020.02.208] [Elsevier, Impact Factor: 4.784] ISSN: 0141-8130
40. Puneet Bansal, Gurpreet Singh, Hazoor Singh, "Investigation of corrosion behavior and surface properties of plasma sprayed HA/Sr reinforced coatings on CoCr alloys" Materials Chemistry and Physics, Vol. 253 (2020) 123330 [https://doi.org/10.1016/j.matchemphys.2020.123330] [Elsevier, Impact Factor: 2.781] [ISSN: 0254-0584]
41. Sandeep Singh, Gurpreet Singh, Niraj Bala, "Analysis of in vitro corrosion behavior and hemocompatibility of electrophoretically deposited bioglass-chitosan-iron oxide coating for biomedical applications" Journal of Materials Research, Vol. 35 (13) (2020) pp. 1749-1761. [https://doi.org/10.1557/jmr.2020.159] ISSN: 0884-2914 (Print), 2044-5326 (Online) [Cambridge University Press, Impact Factor: 2.502]
42. Puneet Bansal, Gurpreet Singh, Hazoor Singh, "Investigation of surface properties and corrosion behavior of plasma sprayed HA/ZnO coatings prepared on AZ31 Mg alloy" Surface and Coatings Technology, Volume 401 (2020) 126241

[https://doi.org/10.1016/j.surfcoat.2020.126241] [Elsevier, Impact Factor: 3.784] [ISSN: 0257-8972]

43. Puneet Bansal, Gurpreet Singh, Hazoor Singh, "The importance of Co-Cr alloys in bioimplants for hip joints/ A review" Manufacturing Technology Today, Vol. 19 (1-2) (Jan –Feb 2020) pp. 25-35 [ISSN: 0972-7396] UGC Approved Journal- No. 3830
44. Puneet Bansal, Gurpreet Singh, Hazoor Singh, "Improvement of surface properties and corrosion resistance of Ti13Nb13Zr titanium alloy by plasma-sprayed HA/ZnO coatings for biomedical applications" Materials Chemistry and Physics, Vol. 257 (2021) 123738 [https://doi.org/10.1016/j.matchemphys.2020.123738] [Elsevier, Impact Factor: 3.408] [ISSN: 0254-0584]
45. Sandeep Singh, Gurpreet Singh, Niraj Bala, "Characterization, electrochemical behavior and in vitro hemocompatibility of hydroxyapatite-bioglass-iron oxide-chitosan composite coating by electrophoretic deposition", Surface and Coatings Technology, Vol. 405 (2020) 126564 [https://doi.org/10.1016/j.surfcoat.2020.126564] [Elsevier, Impact Factor: 3.784] [ISSN / eISSN:0257-8972 / 1879-3347]
46. Sandeep Singh, Gurpreet Singh, Niraj Bala, "Synthesis and characterization of iron oxide-hydroxyapatite-chitosan composite coating and its biological assessment for biomedical applications", Progress in Organic Coatings, Vol. 150 (2021) 106011 [https://doi.org/10.1016/j.porgcoat.2020.106011] [Elsevier, Impact Factor: 4.469] [ISSN: 0300-9440]
47. Sandeep Singh, Gurpreet Singh, Niraj Bala, "Electrophoretic deposition of $Fe_3O_4$ nanoparticles incorporated hydroxyapatite-bioglass-chitosan nanocomposite coating on AZ91 Mg alloy" Materials Today Communications, Vol. 26 (March 2021) 101870 [https://doi.org/10.1016/j.mtcomm.2020.101870] [Elsevier, Impact Factor: 2.678] [ISSN: 2352-4928]
48. Puneet Bansal, Gurpreet Singh, Hazoor Singh, "Plasma-sprayed HA/Sr reinforced coating for improved corrosion resistance and surface properties of Ti13Nb13Zr titanium alloy for biomedical implants", Journal of Materials Research, Vol. 36 (2021) pp. 431-442. [Springer, Impact Factor: 2.502] [ISSN / eISSN:0884-2914 / 2044-5326] [https://doi.org/10.1007/s11665-021-05490-0]
49. Puneet Bansal, Gurpreet Singh, Hazoor Singh, "Plasma-sprayed hydroxyapatite-strontium coating for improved corrosion resistance and surface properties of biodegradable AZ31 Mg alloy for biomedical applications", Journal of Materials Engineering and Performance Vol. 30 (3) (2021) pp. 1768-1779. [https://doi.org/10.1007/s11665-021-05490-0] [Springer, Impact Factor: 1.652] [ISSN / eISSN:0884-2914 / 2044-5326]
50. Kulbir Singh Sandhu, Hazoor Singh, Gurpreet Singh, Hreetabh Kishore, "Performance evaluation of additive TiO2, MWCNT and GNP reinforced particles on Mg AZ31 based matrix composites by friction stir processing", Journal of Adhesion Science and Technology (2023) [https://doi.org/10.1080/01694243.2023.2241252] [Taylor & Francis, Impact Factor: 2.2] [Print ISSN: 0169-4243 Online ISSN: 1568-5616]

**10. Books Published**

1. Gurpreet Singh, Balraj Singh, "Effect of Cutting Parameter on Surface finish of Steel During Turning", Lambert Academic Publishing, Total Pages: 77, 2016. ISBN 978-3-659-96611-8
2. Gurpreet Singh, Yacov Sehijpaul, "CNC Turning of Medium Carbon steel", Lambert Academic Publishing, Total Pages: 61, 2017. ISBN: 978-620-2-05727-1

**11. Patents**

SPIRAL CHANNEL BASED FLUIDIC COOLANT CIRCULATION UNIT
Register for UK Design [Design number: 6333988 Grant date: 17 January 2024 Registration date: 19 December 2023]

**12. Conferences/Workshops/ Lectures organized:**

1. Organised 7 days NSS Camp from 17-23 January 2011 at Punjabi University, Patiala.
2. Organised International Conference on "Advancement and Futuristic Trends in Mechanical and Materials Engineering" October 5-7, 2012 at PTU, Kapurthala-144601, Punjab, India
3. Organised 7 days NSS Camp from 26 February -04 March 2013 at Punjabi University, Patiala.
4. Organised 7 days NSS Camp from 17 -23 January 2014 at Punjabi University, Patiala.
5. Organised International Conference on "Advancement and Futuristic Trends in Mechanical and Materials Engineering" October 16-18, 2014 at PTU, Kapurthala-144601, Punjab, India
6. Organised 7 days NSS Camp from 20 -26 March 2015 at Punjabi University, Patiala.
7. Organised National workshop on "Thermal Spray Coatings" on February 24, 2016 at Guru Nanak Dev Thermal Plant, Bathinda, Punjab, India under the aegis of Society of Mechanical and Materials Engineering, India.
8. Organised International Conference on "Advancement and Futuristic Trends in Mechanical and Materials Engineering" February 25-27, 2016 at Baba Farid Institutions, Bathinda, Punjab, India under the aegis of Society of Mechanical and Materials Engineering, India.
9. Organised 7 days NSS Camp from 9 -15 March 2016 at Punjabi University, Patiala.
10. Organised expert Lecture on "Intellectual Property Rights" on 04 October 2016 in Mechanical Engineering Department, Punjabi University, Patiala.
11. Organised International Conference on "Advancement and Futuristic Trends in Mechanical and Materials Engineering" November 02-04, 2017 at Shaheed Udham Singh College of Engineering and Technology, Tangori, Mohali, Punjab, India under the aegis of Society of Mechanical and Materials Engineering, India.
12. Organised International Conference on "Advancement and Futuristic Trends in Mechanical and Materials Engineering" November 15-17, 2018 at Punjab University SSG Regional Centre (PUSSGRC), Hoshiarpur, Punjab, India under the aegis of Society of Mechanical and Materials Engineering, India.
13. Organised International Conference on "Advancement and Futuristic Trends in Mechanical and Materials Engineering" December 5-7, 2019 at IIT, Ropar, Punjab, India under the aegis of Society of Mechanical and Materials Engineering, India.
14. Organised International Conference on "Advancement and Futuristic Trends in Mechanical and Materials Engineering" December 19-20, 2020 (online) at MRSPTU, Bathinda, Punjab, India under the aegis of Society of Mechanical and Materials Engineering, India.
15. Organised International Conference on "Advancement and Futuristic Trends in Mechanical and Materials Engineering" December 9-11, 2021 at IIT, Ropar, Punjab, India under the aegis of Society of Mechanical and Materials Engineering, India.
16. Organised Science Festival (Vigyan Sarvatre Pujeyate) Feb 22-28, 2022 as Coordinator at Punjabi University, Patiala.
17. Organised Short Term Course on "Smart Materials and Nano Technology" October 17-21, 2022, in collaboration with NITTTR Chandigarh at Department of Mechanical Engineering, Punjabi University, Patiala.

18. Organised Science Festival Feb 27-28, 2023 as Coordinator at Punjabi University, Patiala.

**13. Conferences/Workshops attended:**

1. A Conference On Computer Aided Design And Manufacturing : A Global Perspective April 08-09, 2005 at Thapar Institute of Engineering & Technology , Patiala (India).
2. National Conference on "Advancement and Futuristic Trends in Mechanical and Materials Engineering" February 19-20, 2010 at YCoE, Talwandi Sabo.
3. International Conference on Biomedical Engineering and Assistive Technologies (BEATS-2010), 17-19 December 2010 at Dr. B.R. Ambedkar National Institute of Technology Jalandhar, 144 011, Punjab, India.
4. International Conference on "Advancement and Futuristic Trends in Mechanical and Materials Engineering" October 5-7, 2012 at PTU, Kapurthala-144601, Punjab, India.
5. National Seminar on "Nurturing Sports Through Science" 27th September, 2013, at Punjabi University, Patiala.
6. International Conference on "Advancement and Futuristic Trends in Mechanical and Materials Engineering" October 3-6, 2013 at PTU, Kapurthala-144601, Punjab, India.
7. International Corrosion Prevention Symposium (CORSYM 2014), February 20-21, 2014 at Indian Institute of Technology Bombay, Mumbai, India.
8. Workshop on "Thermal Spray" 15 October, 2014 at Punjab Technical University, Kapurthala-144601, Punjab, India.
9. International Thermal Spray Conference & Exposition (May 11-14, 2015) at Long Beach, California, USA.
10. National Conference on Advances In Mechanical, Industrial & Material Engineering (November 6-7, 2015) at Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib, Punjab, India.
11. 17th Asian Pacific Corrosion Control Conference (January 27-30, 2016) at Indian Institute of Technology Bombay, Mumbai, India.
12. 19th Punjab Science Congress theme "Influence of Science and Technology on Environment and Human Health" (February 7-9, 2016) at SUS Group of Institutions, Tangori, SAS Nagar, Mohali, Punjab, India.
13. National Workshop on "Thermal Spray Technology" February 24, 2016 organised by Society of Mechanical and Materials Engineers (SOMME) at Guru Nanak Dev Thermal Plant, Bathinda, Punjab, India.
14. International Conference on "Advancement and Futuristic Trends in Mechanical and Materials Engineering" February 25-27, 2016 at Baba Farid College of Engineering and Technology, Bathinda, Punjab, India.
15. International Thermal Spray Conference & Exposition (May 10-12, 2016) at Shanghai, P.R. China.
16. Symposium on "Corrosive Failure Remedies for High Temperature Components" June 29, 2016 organised by Society of Mechanical and Materials Engineers (SOMME) at CII, Chandigarh, India.
17. International Conference on "Advancement and Futuristic Trends in Mechanical and Materials Engineering" November 02-04, 2017 at Shaheed Udham Singh College of Engineering and Technology, Tangori, Mohali, Punjab, India under the aegis of Society of Mechanical and Materials Engineering, India.

18. International Conference on "Materials Processing and Characterization [ICMPC-2018]" (March 16-18, 2018) at Gokaraju Rangaraju Institute of Engineering and Technology (GRIET), Hyderabad, India.
19. International Conference on "Advancement and Futuristic Trends in Mechanical and Materials Engineering" November 15-17, 2018 at Punjab University SSG Regional Centre (PUSSGRC), Hoshiarpur, Punjab, India under the aegis of Society of Mechanical and Materials Engineering, India.

**14. Short Terms School/ Orientation/ Refresher Courses attended:**

| S. No. | Title of the school/course | Held at | Duration of school/course |
|---|---|---|---|
| 01 | Developing Strategies for Implementation of TPM in Indian Industry, Dec 19, 2004 | Thapar Institute of Engineering & Technology , Patiala (India) | 01 day |
| 02 | Energy Conservation Systems | Thapar University, Patiala (India) | Dec 10 , 2007 To Dec 21, 2007 (11 Days) |
| 03 | Thermal Spraying Techniques and Their Applications in Surface Engineering | BBSB Engineering College, Fatehgarh Sahib (India) | June 22, 2009 To July 03, 2009 (11 Days) |
| 04 | NSS Training and Orientation Course | Training & Orientation Center, Ministry of Youth and Sports Affairs, Punjabi University, Patiala (India) | Jan 15, 2010 to Jan 24, 2010 ( 10 Days) |
| 05 | 4th Orientation Course | Academic Staff College, Punjabi University, Patiala (India) | June 18, 2010 to July 15, 2010 (24 days) |
| 06 | National Seminar on Social Harmony and Human Rights | NSS Punjabi University, Patiala in collaboration with Rajiv Gandhi National Institute of Youth Development, Sriperumbudur – 602 105, Tamil Nadu. | 13-15 December, 2010 (03 Days) |
| 07 | Refresher Course in Information Technology (Inter Disciplinary) | Academic Staff College, Panjab University, Chandigarh | 30 November, 2011 to 20 December 2011 |

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|---|---|---|---|
| | | | (21 Days) |
| 08 | Refresher Course in Mechanical Engineering | Academic Staff College, Punjabi University, Patiala (India) | 14 May 2012 to 02 June, 2012 |
| 09 | Short Term Course in Solid Works | NITTTR, Chandigarh | 27 March 2017 to 31 March 2017 |
| 10 | Short Term Course / Workshop in Research Methodology | UGC-HRDC, Punjabi University, Patiala | 24 November 2017 to 30 November 2017 |
| 11 | Capacity Building Program for Technical Personnel | DST Sponsored at Amity University, Noida, UP | 07 January 2019 to 18 January 2019 (12 Days) |
| 12 | Recent Trend in Automobile Technology | NITTTR, Chandigarh | 24 February 2020 to 28 February 2020 (01 Week) |

**15. Work Experience:**

1. Worked as Lecturer from July 17, 2006 to October 26, 2006 in Mechanical Engineering Department of RIMT, Institute of Engineering and Technology, Mandi Gobindgarh (Punjab), India.
2. Worked as Lecturer from October 27, 2006 to August 19, 2009 in Mechanical Engineering Department of Yadawindra College of Engineering, Punjabi University, Guru Kashi Campus, Talwandi Sabo Distt. Bathinda (Punjab)-151302, India.
3. Worked as Assistant Professor from August 20, 2009 to October 26, 2019 in Mechanical Engineering Department, Punjabi University, Patiala (Punjab) India.
4. Working as Associate Professor from October 27, 2019 to till date in Mechanical Engineering Department, Punjabi University, Patiala (Punjab) India.

**16. Administrative responsibilities:**

1. Worked as Program Officer of NSS unit from 2009 to 2021.
2. Worked as convener and member of many purchase committees.
3. Worked as member of student consultative committee.
4. Worked as Convener, Tech Fest organizing committee.
5. Worked as Placement co-coordinator of department of Mechanical Engineering
6. Worked as a time-table co-coordinator of department of Mechanical Engineering
7. Working as a member of ACD (Academic Council of Department)
8. Working as Nodal officer for NAAC evaluation of department of Mechanical Engineering
9. Working as Department Coordinator of FIST program of Department of Science and Technology, New Delhi
10. Member Entrepreneurship, Innovation and Carrier Hub (EICH), Punjabi University, Patiala.

**17. Membership of Professional Organizations:**

1. Life Member of Indian Society of Technical Education (ISTE) M. No.: LM81177

2. Founder Life Member of Society of Mechanical and Materials Engineers (SOMME)
3. Life Member Punjab Academy of Sciences M. No.: L-1406

**18. Ph.D. Thesis Supervised:**

| S. No. | Name of the Student & Roll No. | Title of Thesis | Supervisors | Year of Completion |
|---|---|---|---|---|
| 1. | Balraj Singh | In Vitro Degradation Behaviour and Biocompatibility of Plasma Sprayed Bioactive Coatings (HA, Nb, Ta) on Metallic Alloys (CoCr, Mg) | Gurpreet Singh | 2020 |
| 2. | Sandeep Singh | INVESTIGATION OF IN-VITRO CORROSION BEHAVIOUR AND BIOCOMPATIBILITY OF COMPOSITE COATINGS BY ELECTROPHORETIC DEPOSITION ON TITANIUM AND MAGNESIUM ALLOYS | Gurpreet Singh | 2021 |

**Ph.D. Supervising:** 03 (Pursuing)

**19. M. Tech. Thesis Supervised:** 17

| S. No. | Name of the Student & Roll No. | Title of Thesis | Supervisors | Year of Completion |
|---|---|---|---|---|
| **1.** | Amrinder Singh (10913008) | Operation Sequencing Using Genetic Algorithm | Gurpreet Singh | July 2011 |
| **2.** | Sabar Ali (YCE(TS) 2010-275 | Experimental Study Of Friction Stir Welding of Aluminum Alloys | Gurpreet Singh | August 2012 |
| **3.** | Jaswinder Singh (11193011) | Evaluation of Crop Residue Potential for Power Generation for Indian State Punjab | Gurpreet Singh | Feb 2014 |
| **4.** | Yacov Sehijpaul | Optimizing and Determining the Influence of Various Cutting Parameters on the Surface Roughness during Wet CNC Turning of AISI 1040 Medium Carbon Steel | Gurpreet Singh | Feb 2014 |
| **5.** | Hardeep Singh (11293031) | Evaluation of Free vibration Characteristics of Cantilever Beams Made from Different Materials | Dr. Gurpreet Singh | July 2014 |
| 6. | Balraj Singh | To Study the Effects of Cutting Parameters on Surface Finish of AISI | Dr. Gurpreet | July 2015 |

| | | | | |
|---|---|---|---|---|
| | | 1018 Steel Turned with HSS M2 Tool using Taguchi Approach | Singh | |
| 7. | Assa Singh | Study of Erosion-Corrosion Behaviour of Some D-Gun Sprayed Coatings | Dr. Gurpreet Singh<br>Dr. Vikas Chawla | Dec. 2016 |
| 8. | Ramnik Garg | Experimental Investigation of Different Turning Parameters on Surface Roughness of EN8d Steel using Taguchi Approach | Dr. Gurpreet Singh | Feb. 2017 |
| 9. | Gourav Choudhary | Comparative Analysis of Corrosion Behaviour of Stainless Steel Grades 304 and 316L for Different Applications | Dr. Gurpreet Singh | 05 June 2017 |
| 10. | Agam | To investigate the effect of Ni, $TiO_2$ and $Cr_2O_3$ additions in SAW flux on mechanical properties of welded specimen of mild steel | Dr. Gurpreet Singh | 22 September 2017 |
| 11. | Amandeep Singh | Study of Erosion-Corrosion Behaviour of Thermal Sprayed Coatings at Higher Temperature | Dr. Gurpreet Singh<br>Dr. Vikas Chawla | |
| 12. | Dalveer Singh | Fabrication and Characterization of Bioglass | Er. Sandeep Singh<br>Dr. Gurpreet Singh | 7 September 2018 |
| 13. | Sandeep Singh | Investigation of Performance, Emission and Noise Characteristics of dual Fuel Compression Ignition Engine Using Syngas Produced from Coconut Husk | Er. Sandeep Singh<br>Dr. Gurpreet Singh | 7 September 2018 |
| 14. | Gagandeep Singh | Analysis of Low-Pressure By-Pass Valve in Turbine By-Pass System of Thermal Power Plant | Dr. Kanwarpreet Singh<br>Dr. Gurpreet Singh | 11 January 2019 |
| 15. | Tapinderjit Singh | Fabrication and Characterization of Chitosan-Hydroxyapatite-Zirconium Dioxide Composite for Biomedical Applications | Er. Sandeep Singh<br>Dr. Gurpreet Singh | 18 September 2019 |

**19. Books /Journal Reviewed:**

1. Reviewer of "Surface Review and Letters" (World Scientific).
2. Reviewer of "Surface Coatings and Technology" (Elsevier).
3. Reviewer of "Applied Surface Science" (Elsevier).
4. Reviewer of "Journal of Thermal Spray Technology" (Springer)
5. Reviewer of "Part C: Journal of Mechanical Engineering Science" (SAGE Journal)

**20. Awards/Fellowships:**

1. 2 year fellowship of Rs. 5000/ pm during the M.E. (2004-06) at Thapar Institute of Engineering & Technology Patiala.
2. Awarded as "Best Programme Officer" NSS at Punjabi University, Patiala for the year 2013-14 on 16 January, 2015.
3. Travel Grant of Rs 50000/- wide letter number 1837/G/A-3 dated 02/03/2015 by University Grants Commission at Punjabi University, Patiala to International Thermal Spray Conference & Exposition (May 11-14, 2015) at Long Beach, California, USA.
4. Travel Grant of Rs 25000/- wide letter number Do/L/TF-1-2015-16 dated 24/04/2015 by Center for International Co-operation in Science (CICS), Chennai to International Thermal Spray Conference & Exposition (May 11-14, 2015) at Long Beach, California, USA.
5. Travel Grant (Young Scientist) of Rs 87695/- wide letter number ITS/299/2016-17 dated 10/06/2016 by Science and Engineering Research Board, New Delhi to attend International Thermal Spray Conference & Exposition (May 10-12, 2016) at Shanghai, P.R. China.
6. Punjab Science Academy Conferred "Young Scientist Award" on 19$^{th}$ Punjab Science Congress (7-9 February, 2016) at SUS group of Institutions, Tangori, Mohali, Punjab.
7. Zapp Precision Metals GmbH Medicine Alloys, Germany had sponsored CoCr bar weighing 3.3 kg for the research work. The actual price of material is 65.50 EUR/kg.
8. Medicoat France had sposered Hydroxyapatite Powder weighing 2 kg for research work. The actual price of the powder is 400 USD.

**(Dr. Gurpreet Singh)**