1. Name : **Dr. SANDEEP SINGH**

2. Designation : **ASSISTANT PROFESSOR**

3. Department : **MECHANICAL ENGINEERING**

4. Date of Birth : **08.12.1985**

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6. Area of Specialization: Bio-fuels and Surface Coating in field of biomedical applications

7. Academic Qualifications:

Sr. No.	Degree Held	Year	Board/Uni./Inst.	% of Marks	Div./ Rank	Subjects Taken
1.	Diploma	2003-2006	P.S.B.I.T.E	75	1st	Mech. Engg.
2.	B.Tech	2006-2009	P.T.U	75	1st	Mech. Engg.
3.	M.E	2010-2012	Thapar University	78	1st	Thermal Engg.
4.	Ph.D	2018-2021	Punjabi University	Awarded	Awarded	Surface Coating

8. Details of Experience:

Sr. No.	Name of Inst./Employer	Position Held	Duration	Major Job Responsibilities and Nature of Experience
1.	Thapar Polytechnic College Patiala	Lecturer	05.08.2009 to 28.05.2010	Teaching and Research
2.	M.M.U. Mullana (Ambala) Haryana	Assistant Professor	01.08.2012 to 22.08.2014	Teaching and Research
3.	B.B.S.B.E.C Fatehgarh Sahib	Assistant Professor	25.08.2014 to 20.11.2015	Teaching and Research
4.	Punjabi University Patiala	Assistant Professor	23.11.2015 to Till Date	Teaching and Research

9. M. Tech. Students Guided: 11

10. List of Papers/ Courses taught at P.G and U.G Level:

Sr. No.	Courses	Class
1.	Gas Turbines	P.G
2.	Environment Science	P.G
3.	Renewable Resources	U.G
4.	Applied Thermodynamics	U.G
5.	Basic Thermodynamics	U.G
6.	Fluid Mechanics	U.G
7.	Heat Transfer	U.G
8.	Operation Management	U.G
9.	Theory of Machines	U.G
10.	Industrial Engineering	U.G

11. Technical Proficiency:

1. Production of Biodiesel Technique

2. Characterization of Biodiesel Properties

3. Electrophoretic Deposition Technique for surface coating (Biomedical applications)

12. List of Papers Published:

Research Papers:

1. Singh, S., Sharma, S., Mohapatra, S.K. and Kundu, K., 2013. Characterisation of biodiesel derived from waste cotton seed oil and waste mustard oil. *International Journal of Engineering Science and Technology*, *5*(7), ISSN No. 0975-5462, p.1443.
2. Singh, S., Sharma, S., Mohapatra, S.K. and Kundu, K., 2013. Optimization of Cotton Seed Methyl Ester and Mustard Methyl Ester from Transesterification Process. *International Journal of Engineering Science and Research Technology*, *2*, ISSN No. 2277-9655, pp.2027-31.
3. Singh, S., Sharma, S. and Mohapatra, S.K., 2015. A Production of Biodiesel from Waste Cotton Seed Oil and Testing on Small Capacity Diesel Engine. *International Journal of Advance Research in Science and Engineering*, (4), ISSN No. 2319-8354.
4. Singh, A., and Singh, S., 2017. Experimental Study on the utilization of oxygenated additive diethylether on the performance and emission characteristics of C.I. Engine. *International Journal of Latest Trends in Engineering and Technology*, Special Issue, e-ISSN:2278-621X, pp. 193-200,
5. Singh, V., and Singh, S., 2017. Comparative investigation the properties of cottonseed methyl ester blends D80-B10-E10 and D60-B20-E20 with diesel. *International Journal of Latest Trends in Engineering and Technology*, e-ISSN: 2278-621X, pp. 173-177.
6. Singh, S., 2017. A Review on investigation of biodiesel properties. *International Journal of Latest Trends in Engineering and Technology*, Special Issue AFTMME-2017, e-ISSN: 2278-621X, pp. 166-172.
7. Singh, C., Singh, S., and Samra, A.K., 2018. Comparative Analysis of Performance and Emission Characteristics of Compression Ignition Engine using Biodiesel and Microemulsion Based Bio Fuel Derived from Grape-seeds. *Asian journal of Engineering and Technology*, ISSN: 2321-2462, pp. 159-165.
8. Singh, D., Singh, S., and Singh, G., 2018. Fabrication and Characterization of bioglass", *Asian journal of Engineering and Technology*, ISSN: 2321-2462, pp. 153-158.
9. Singh, A., Singh, S., Singla,V., and Singh,V., 2018. Performance and Emission analysis of a C.I. engine using ethanol and its blends with Jajoba biodiesel and diesel as a fuel.

Advances in Interdiscplinary Engineering Notes in Mechanical Engineering, Springer Nature, 2019, pp. 229-238.

10. Singh, S., Singh, G. and Bala, N., 2018. Electrophoretic deposition of bioactive glass composite coating on biomaterials and electrochemical behavior study: a review. *Materials Today: Proceedings*, *5*(9), pp.20160-20169.
11. Singh, S., Singh, G. and Bala, N., 2019. Corrosion behavior and characterization of HA/Fe_3O_4/CS composite coatings on AZ91 Mg alloy by electrophoretic deposition. *Materials Chemistry and Physics*, *237*, p.121884.
12. Singh, J., Singh, S. and Mohapatra, S.K., 2020. Production of syngas from agricultural residue as a renewable fuel and its sustainable use in dual-fuel compression ignition engine to investigate performance, emission, and noise characteristics. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, *42*(1), pp.41-55.
13. Singh, R., Singh, S. and Kumar, M., 2020. Impact of n-butanol as an additive with eucalyptus biodiesel-diesel blends on the performance and emission parameters of the diesel engine. *Fuel*, *277*, p.118178.
14. Singh, S., Singh, G. and Bala, N., 2020. A Review: Effects of electrophoretic deposition parameters on hydroxyapatite reinforced coatings, Manufacturing Technology Today, 19, pp. 12-20.
15. Singh, T., Singh, S. and Singh, G., 2020. Fabrication and characterization of chitosan–hydroxyapatite–zirconium dioxide composites for biomedical applications. *Materials Today: Proceedings*, *26*, pp.1878-1883.
16. Singh, S., Singh, G. and Bala, N., 2020. Electrophoretic deposition of hydroxyapatite-iron oxide-chitosan composite coatings on Ti–13Nb–13Zr alloy for biomedical applications. *Thin Solid Films*, *697*, p.137801.
17. Singh, S., Singh, G., Bala, N. and Aggarwal, K., 2020. Characterization and preparation of Fe_3O_4 nanoparticles loaded bioglass-chitosan nanocomposite coating on Mg alloy and in vitro bioactivity assessment. *International Journal of Biological Macromolecules*, *151*, pp.519-528.
18. Singh, S., Singh, G. and Bala, N., 2020. Analysis of in vitro corrosion behavior and hemocompatibility of electrophoretically deposited bioglass–chitosan–iron oxide coating for biomedical applications. *Journal of Materials Research*, *35*(13), pp.1749-1761.

19. Singh, S., Singh, G. and Bala, N., 2021. Characterization, electrochemical behavior and in vitro hemocompatibility of hydroxyapatite-bioglass-iron oxide-chitosan composite coating by electrophoretic deposition. *Surface and Coatings Technology*, *405*, p.126564.
20. Singh, S., Singh, G. and Bala, N., 2021. Electrophoretic deposition of Fe_3O_4 nanoparticles incorporated hydroxyapatite-bioglass-chitosan nanocomposite coating on AZ91 Mg alloy. *Materials Today Communications*, p.101870.
21. Singh, S., Singh, G. and Bala, N., 2021. Synthesis and characterization of iron oxide-hydroxyapatite-chitosan composite coating and its biological assessment for biomedical applications. *Progress in Organic Coatings*, *150*, p.106011.
22. Singha, S., Singha, G. and Balab, N., 2019. Introduction to biomaterials and surface modification techniques: a review. Int J Surf Eng, 9.
23. Singh, A. and Singh, S., 2021. Impact of biodiesel–diesel and diethyl ether blends on the performance and emissions of a dual fuel diesel engine. Journal of The Institution of Engineers (India): Series C, 102, pp.705-711.

Publications in e-book series:

1. Singh, S., Singh, G. and Bala, N., 2020, Electrophoretic deposition of hydroxyapatite incorporated composite coatings on metallic substrates: A Review, e-book series on materials entitled *Advances in Material Research and Technology*, Volume: Advanced Ceramics, **Springer Publisher (Accepted).**

2. Singh, T., Singh, S. and Singh, G., 2022. An Introduction to Bio-Implants and Biodegradable Materials: A Review. Additive Manufacturing of Polymers for Tissue Engineering, pp.41-59.

Invited Talks:

1. Delivered an expert talk on "Literature Review, different tools and selection of Journals on Six Day Faculty Development Programme on "Research Ethics" at Desh Bhagat University, Mandi Gobindgarh on 7th June 2022.
2. Deliverd an expert talk on "Latest innovations and Technology Change in the field of Thermal Engineering" in Mechanical Engineering Department CEC CGC Lanran on 10th August 2023.