


Dr. Vinay Pratap Singh		
	DESIGNATION	Assistant Professor
	QUALIFICATION	PhD , M.Tech.
	AREA OF INTEREST	Design and Materials
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DETAILED PROFILE

NAME OF FACULTY MEMBER			
	Designation	Assistant Professor	
	Phone no.	9721456084	
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	Website	https://hbtu.ac.in/mechanical-engineering-2/	
AREA OF INTEREST			
Lightweight structures, Smart structures, Biomaterials, Composite materials			
PROFESSIONAL EXPERIENCE			
Designation	Organization	From	To
Assistant Professor	SRMSCET, Bareilly, UP	01-03-2001	03-02-2003
Assistant Professor	HBTU, Kanpur	04-02-2003	Till date
HONOURS, AWARDS AND FELLOWSHIPS			
Name of Award/Honour / Fellowships		Organization	Year
Received the best research paper award for the stream of Engineering in all India Seminar on Advances in Engineering and Technology for Sustainable Development(AETSD)-2015		College of Technology, G.B.P.U.A & T. Pantnagar, Uttarakhand	2015

DETAILS OF SUBJECTS TAUGHT			
Names of Subjects at Under Graduate Level	Institution	Names of Subjects taught at Post Graduate Level	Institution
1. Machine Design 2. Strength of Materials Machine Drawing 4. Material Science 5. Industrial Engineering 6. Elements of Mechanical Design 7. Mechanical System Design 8. Engineering Mechanics	3. HBTU, Kanpur	1. Advance Mechanics of Solids 2. Fracture Mechanics 3. Advance Machine Design 4. Advanced Mechanical Vibrations 5. Advance Material Characterisation 6. Tribology	HBTU, Kanpur
1. Computer Aided Design (CAD) 2. Strength of Materials 3. Machine Drawing 4. Computer Aided Manufacturing (CAM)	SRMSCET, Bareilly, UP		
EDUCATIONAL QUALIFICATION			
Degree	University / Institution	Subject	Year
PhD	IIT Roorkee	MM Engg.	2011
M.Tech.	GBPUAT, Pantnagar	Design & Prod	2001
ADMINISTRATIVE EXPERIENCE			
Designation	Organization	From	To
Deputy , Controllor of Exam.	HBTU, Kanpur	2017	Till date
Asso. Dean CEIQA	HBTU, Kanpur	2017	Till date
O, I/C, Workshop	HBTU, Kanpur	2017	Till date
FACULTY INTERACTION WITH OUTSIDE WORLD			
Organization	Position / Assignment	Nature of interaction	Year
IIT, Kanpur	Research Fellow in visiting research program under the aegis of KIT, TEQIP, IIT, Kanpur	Research work	2015
IIT, Kanpur	Research Fellow in visiting research program under the aegis of KIT, TEQIP, IIT, Kanpur	Research work	2018

MEMBERSHIP OF PROFESSIONAL SOCIETIES			
Name of Membership	Organization	Membership details	
Member of The Institution of Engineers (India)	IE India	M-150650-6.	
SPONSORED RESEARCH PROJECTS			
Number of Projects Completed		03	
Number of Projects Ongoing		04	
ORGANIZATION OF SEMINARS/CONFERENCES/WORKSHOPS/ SHORT TERM COURSES			
Number of Seminars/Conferences/Workshops organized		07- Faculty Development Programmes 01-International Conference	
PARTICIPATION IN SEMINARS/CONFERENCES/WORKSHOPS/ SHORT TERM COURSES			
Number of Seminars/Conferences/Workshops Participated		36	
RESEARCH GUIDANCE			
On going Ph.D. Guidance			
Name of Ph.D. Scholar	Ph.D. Topic	University	Year of Enrolment
Ms Ruchi Gupta	Damage Analysis of Bio coated Metallic Implants	AKTU, Lucknow	2014
Sri Sanjay Tiwari	Fabrication and Evaluation of Mechanical Properties of Silk-Hemp Hybrid Natural Fibre Reinforced Composite	AKTU, Lucknow	2014
M.Tech. Guided			
Name of M.Tech. Scholar	M.Tech. Dissertation Topic	University	Year of Award
Rao Rahul Singh, 726/11, 6104540012	Design and Development of Advanced Composite Material for Packaging Purpose	AKTU,Kanpur	Oct'13
Ajit Gupta, 701/12, 6204540001	Mechanical property evaluation of natural fibre reinforced concrete beam using bamboo fibre.	AKTU,Kanpur	Aug'14
Ankush Kumar Rajput 704/12, 6204540004	Stress analysis of flour mill shaft subjected to dynamic loading.	AKTU,Kanpur	Sept'14
Sandeep Shukla,730/13, 6304540012	A study on Thermal and Mechanical Properties of Polyurethane Foam for Packaging .	AKTU,Kanpur	UPTU, Aug' 15
Mohd. Rajat , 723/13, 6304540005	Mathematical Modelling of Iron Ore Sintering Process.	AKTU,Kanpur	UPTU, Dec' 15
Shubham Bansal 749/14,6404540016	Fabrication and mechanical properties evaluation of ceramic	AKTU,Kanpur	November 15,2016

	coated metallic implants		
Mayank Pandey 748/14, 6404540008	Fabrication and study on laminates for packaging applications	AKTU,Kanpur	November 29,2016
Virat Kumar Pal 747/14, 6404540018	Fabrication and analysis of UHMWPE based composites for bio Implants	AKTU,Kanpur	December 01,2016
Abhishek Rajpoot S.r. no. 703/15 Roll no.6504540002	Modelling, Fabrication and Characterization of Kevlar Reinforced Composite	AKTU,Kanpur	November, 03, 2017
Shailja Awasthi Sr No. – 768/16 , Roll No. 6604540014	Design and analysis of tooth abutment implant	HBTU, Kanpur	2018
Avinash Sharma, 901/11, 6104540020	Fabrication and mechanical properties evaluation of sandwich structure having jute fibre reinforced face plate and pp honeycomb core.	AKTU,Kanpur	Aug'14
Vivek Kumar, 8804540005	Evaluation of Fundamental Mechanical Properties of CNT Composites using Molecular Dynamics Simulations	AKTU,Kanpur	July'15
Ehtesham Ur Rehman, 902/12, 6204540020	A Novel Approach For The Damage Protection of MDPE Pipes Used For Natural Gas Transmission in CGD.	AKTU,Kanpur	UPTU, Dec' 15
Ashok Kumar Singh Roll no. 6504540018	Design and development of semi mechanized reaper for cereal crops	HBTU, Kanpur	2018
Amit Kumar Awasthi S.R.no.-907/15	Experimental investigation & modelling of crashed buffer for indian locomotives	HBTU, Kanpur	2018

BOOKS PUBLISHED

Title of Book	Publisher	Year	ISBN No.
Design, Materials & Manufacturing Concerns in Production of Quality Engineering Goods	Excel Publisher	2017	978-93-86256-70-6

BOOK CHAPTERS PUBLISHED

Title of Chapter	Name of Book	Publisher	Year
<ul style="list-style-type: none"> Important Material Properties, pp41-48. Important Engineering materials,pp49-78. 	Advances in Materials & Material selection in Design	MED, HBTI, Kanpur	2007
<ul style="list-style-type: none"> Polymer based Composites,pp24-41. 	Composite Materials :	MED, HBTI,	2007

• Wood Polymer Composites,pp 42-55.	Potential & Challenges	Kanpur	
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CONFERENCE PROCEEDINGS EDITED

Name of Conference	Place	Dates with year	ISBN No.
National Conference on Innovations in Materials, Design and Manufacturing(IMDM)	Kanpur	March 27-28, 2015	Nil

Research Publications in International Journals

1. M.G.H.Zaidi, N.Bhullar, V.P.Singh, P.L.Sah, S.Alam, R.Singh, Mechanical and Thermal properties of Epoxy Polymethyl Methacrylate Blends synthesized in Supercritical Carbon Dioxide, International Journal of Applied Polymer Science, Vol.103, pp1303-1310, (2007), Wiley Periodicals, Inc.[Online ISSN: 1097-4628]
2. Vinay Pratap Singh, Anjan Sil, R. Jayaganthan, A study on sliding and erosive wear behaviour of atmospheric plasma sprayed conventional and nanostructured alumina coatings, Materials and Design 32 (2011) 584–591.[Online ISSN: 0264-1275]
3. Vinay Pratap Singh, Anjan Sil, R. Jayaganthan, Tribological behavior of plasma sprayed Cr₂O₃-3%TiO₂ coatings, Wear, 272 (2011) 149–158.[Online ISSN: 0043-1648]
4. Vinay Pratap Singh, Anjan Sil, R. Jayaganthan, Tribological behaviour of nanostructured Al₂O₃ coatings, Surface Engineering, Vol.28(2012) 277-284.[Online ISSN: 1743-2944]
5. Vinay Pratap Singh, Anjan Sil, R. Jayaganthan, Wear of Plasma Sprayed Conventional and Nanostructured Al₂O₃ and Cr₂O₃, Based Coatings, **Review Paper**, Transactions of the Indian Institute of Metals Volume 65(2012), Number 1, 1-12.[Online ISSN:0975-1645]
6. Vinay Pratap Singh, Anjan Sil, R. Jayaganthan, Evaluation of dry sliding and slurry erosion behaviour of plasma sprayed nanostructured Cr₂O₃-3%TiO₂ coatings, Tribology - Materials, Surfaces & Interfaces, Volume: 8 Issue: 3, **Sep 2014**, pp. 131 – 138.[Online ISSN: 1751-584X]
7. Sandeep Shukla, Vinay Pratap Singh, S.B Yadaw, “A Study on Thermal and Mechanical Properties of Polyurethane Foam for Packaging”, BLB International Journal of Science & Technology special issue November 2015, pp77-83,(ISSN:0976-3074) proceedings of National Conference on Product Design and Manufacturing(NCPDM-2015), November, 21-22, 2015, MNNIT,Allahabad.
8. Sanjay Tiwari and Dr.Vinay Pratap Singh, "Fabrication and evaluation of flexural properties of natural fiber reinforced polymer composite:Bamboo/ Hemp ", International Journal of Innovations in Engineering and Technology (IJIET), Volume 7 Issue 3, PP166-172, 2016, ISSN: 2319 - 1058.
9. Vinay Pratap Singh, Sandeep Shukla, SB Yadaw, "A Comparative Study of Reinforced-Polyurethane Foam Composite and Unreinforced Polyurethane Foam for Packaging", Usak University Journal of Material Sciences,Volume5, 2016, 61-74.[ISSN:2147 – 2785]

Publications in International Conferences

1. V.P.Singh, M.G.H.Zaidi, Mechanical and Thermal characteristics of Polymethyl Methacrylate impregnated Epoxy composites, **International Conference** on Recent Advances in Composite Materials, IT- BHU, pp33-37, Dec., 2004.
2. J.Bhaskar, Anand. Kumar and Vinay Pratap Singh, Non-uniform Rational B-Spline (NURBS) for Object Modeling, **International conference** ICRDME 2008, SUSCET, Mohali, Punjab, pp 641-644, 23-25 Jan 2008.
3. Vinay Pratap Singh, Anjan Sil, R. Jayaganthan, Dry Sliding and Abrasive Wear Performance of Manually Granulated Nanostructured Al₂O₃ Coatings, **International conference** AMPCO 2012, IIT Roorkee, Roorkee, Uttarakhand, Nov 2012.
4. Vivek Kumar Srivastava, Dr. V.P.Singh, “Evaluation of Fundamental Mechanical Properties of Single Walled Carbon Nanotubes using Molecular Dynamics Simulations”, **International Conference** on Precision, Meso, Micro and Nano Engineering, IIT Bombay, Mumbai(December,10-12,2015).
5. Avinash Sharma, Vinay Pratap Singh, “Mechanical Property Evaluation of Honeycomb

- Sandwich Structure with Jute Fibre-Reinforced Face Plate”, **International Conference** on Advanced and Agile Manufacturing Systems, MED, KNIT, Sultanpur, U.P., December 28-29, 2015, pp239-243 (ISBN:978-93-85777-03-5).
6. Rao Rahul Singh, Dr. V.P Singh, S.B Yadaw, “ Fabrication and Property Investigation of Natural Fiber Reinforced Composite Material for Packaging Purpose”, **International Conference** on Advanced and Agile Manufacturing Systems, MED, KNIT, Sultanpur, U.P., December 28-29, 2015, pp225-228 (ISBN:978-93-85777-03-5).
 7. Kuldeep Rana , K Naga Mahesh and Vinay Pratap Singh, "Synthesis of Additive Free Electrode Material of Super Capacitor for Energy Storage Applications", **International Conference** on Industrial and Information Systems (ICIIS 2016), organized at IIT Roorkee, Roorkee, U.K., India. (3-4 December 2016)
 8. Shubham Bansal, Vinay Pratap Singh, "Experimental Investigation of Plasma Sprayed HA (Hydroxyapatite)/Al₂O₃/Fe₂O₃ composites coated metallic implants", **IEEE International Conference** on Advances in Mechanical, Industrial, Automation and Management Systems (AMIAMS-2017) held from February 3-5, 2017 at MNNIT, Allahabad.
 9. Vinay Pratap Singh and Virat Kumar Pal, “Fretting Wear Analysis of Compression Molded Ultra High Molecular Weight Polyethylene Composite Reinforced With HA and Talc”, **International Conference** on Design, Materials & Manufacturing Concerns in Production of Quality Engineering Goods, held from March 27-29, 2017., pp156-159, ISBN: 978-93-86256-70-6.
 10. Mohd. Rajat and Vinay Pratap Singh, “Optimization of Iron Ore Sintering Process”, **International Conference** on Design, Materials & Manufacturing Concerns in Production of Quality Engineering Goods, held from March 27-29, 2017., pp 184-190, ISBN: 978-93-86256-70-6.
 11. Shailja Awasthi and Vinay Pratap Singh, “A Study of Ultra High Molecular Weight Polyethylene based Composite Biomaterials”, **International Conference** on Design, Materials & Manufacturing Concerns in Production of Quality Engineering Goods, held from March 27-29, 2017., pp 207-211, ISBN: 978-93-86256-70-6.
 12. Ruchi Gupta and Vinay P. Singh , “Strategies to Reduce Biomaterial Associated Infections”, **International Conference** on Design, Materials & Manufacturing Concerns in Production of Quality Engineering Goods, held from March 27-29, 2017., pp 212-216, ISBN: 978-93-86256-70-6.
 13. Ashok Kumar Singh and Vinay Pratap Singh, “Natural Fibres Mechanical Characteristics and Prospective for Rural Economy: A Review”, **International Conference** on Design, Materials & Manufacturing Concerns in Production of Quality Engineering Goods, held from March 27-29, 2017., pp 221-226, ISBN: 978-93-86256-70-6.
 14. Sanjay Tiwari, Vinay Pratap Singh, Kishan Kushwaha, A comparative study of flexural strength of silk fiber reinforced polymer composite sample, hemp fiber reinforced polymer composite sample with pure polymer sample, **International Conference** on Advances in Materials & Processing: Challenges & Opportunities (AMPCO 2017), IIT Roorkee, Roorkee, Uttarakhand, 30th Nov-2nd Dec., 2017.
 15. Abhishek Rajpoot, Vinay Pratap Singh, S.B. Yadaw Modelling, Fabrication and Characterization of Kevlar Reinforced Composite, **International Conference** on Future Learning Aspects of Mechanical Engineering (Flame-2018), Amity University , Noida, U.P., 3-5th October, 2018.
 16. Shailja Awasthi, Vinay Pratap Singh, S.K. Yadav, Review on Dental Implant with Special Reference to Tooth Abutment, **International Conference** on Future Learning Aspects of Mechanical Engineering (Flame-2018), Amity University, Noida, U.P., 3-5th October, 2018.

Publications in National Conferences

1. Ruchi Gupta, Vinay Pratap Singh, Recent technologies used for preventing failures of biocoated metallic implants, **National conference** EFIME, HBTI, Kanpur, 29-33, Feb 2014.
2. Ajit Gupta, Ankush Kumar Rajput, Vinay Pratap Singh, A review on bamboo reinforce cement composite, **National conference** EFIME, HBTI, Kanpur, 43-50, Feb 2014.
3. Ankush Kumar Rajput, Ajit Gupta, Vinay Pratap Singh, Failure analysis of machine shafts subjected to dynamic loading, **National conference** EFIME, HBTI, Kanpur, 187-194, Feb 2014.
4. Vinay Pratap Singh, Ruchi Gupta, "Recent Trends In Coating of Biomaterials with Emphasis on Microwave Technology: Review", **National Conference** on Recent Advances in Electronics & Computer Engineering (RAECE), IIT Roorkee, Roorkee, February 13-15, 2015.
5. Vinay Pratap Singh, Dheeraj Kumar and Sanjay Tiwari, "Characterisation of Surface Hardness of Treated Bamboo Natural Fibre Polymer Composites", **National Conference** on Innovations in Materials , Design and Manufacturing(IMDM), March 27-28, 2015, HBTI, Kanpur, ISBN:978-93-84869-47-2.
6. Vinay Pratap Singh, and Avinash Sharma, "Study of Mechanical Properties and Absorption Behaviour of Jute fibre reinforced- Epoxy Composite", **National Conference** on Innovations in Materials , Design and Manufacturing(IMDM), March 27-28, 2015, HBTI, Kanpur, ISBN:978-93-84869-47-2.
7. Sandeep Shukla and Vinay Pratap Singh, "Study of Mechanical Properties of Treated and Untreated Wood Dust Filled Polymer Composites", **National Conference** on Innovations in Materials , Design and Manufacturing(IMDM), March 27-28, 2015, HBTI, Kanpur, ISBN:978-93-84869-47-2.
8. Mohd. Rajat and Vinay Pratap Singh, "Mathematical Modelling of Iron Ore Sintering Process", **National Conference** on Innovations in Materials , Design and Manufacturing(IMDM), March 27-28, 2015, HBTI, Kanpur, ISBN:978-93-84869-47-2.
9. Vinay Pratap Singh, Sanjay Tiwari, Dheeraj Kumar, "Copper Based Nanocomposites by Mechanical Alloying: A Review", **all India seminar** on Advances in Engineering and Technology for Sustainable Development(AETSD)-2015 being organised(12-13 June, 2015 by College of Technology, Pantnagar, Uttarakhand in collaboration with The Institution of Engineers(India) , pp134-142, 12-06-2015.
10. Avinash Sharma, Dr. V.P Singh, "Compressive, Impact and Dynamic Behaviour of Honeycomb Sandwich Structure", **National Conference** on Advances in Material, Design and Manufacturing(AMDM-2016), Department of Mechanical Engineering, Allenhouse Institute of Technology, Kanpur 208008 (U.P.) , INDIA.(January 30-31, 2016).
11. Ehteshamur Rahman, Vinay Pratap Singh, "Surface Modification of MDPE Pipeline for Failure Prevention Through Metallic Coating", **National Conference** on National Tribology Conference (NTC-2016) held from December 8 – 10, 2016, at IIT BHU, Varanasi.