

**CURRICULUM VITAE**Dr. VINAY PRATAP SINGH  
B.E., M.Tech., Ph.D.


---

**Address:** Professor,  
 Mechanical Engg. Department,  
 H.B.T.U., Kanpur –208002 (U.P.) Contact: +9721456084  
 E-mail: vpsingh@hbtu.ac.in, **vinayforus@gmail.com**


---

**Thrust Area : Design, Materials, composites, Light weight Structures, Bio Materials, Bioimplants, Thermal Spray wear resistant surfaces**

**Research facility developed: Advanced tribo testing, Single station Bio-Tribometer with Joint simulation tribo testing facility**

**Educational Qualifications:**

Examinations Passed	Year of passing	Division
B.E. , Mechanical	1998	First
M.Tech (Design & Prod. Engg.)	2001	First
PhD.[ IIT Roorkee ]	2011	Passed all theory exam with <b>A+ grades</b>

**Work Experience:**Teaching & Research- More than 22 years

Sl. no.	Institute /University` name	Post held	From	Till	Experience in years
1.	S,R.M.S.C.E.T., Bareilly, U.P.	Lecturer	01-03-2001	03-02-2003	1yr and 11 months
2.	H.B.T.U., Kanpur (Previously HBTI, Kanpur)	Assistant Professor (previously Lecturer)	04-02-2003	03-02-2015	12 Years
		Associate Professor	04-02-2015	03-02-2018	03 Years
		Professor	04-02-2018	Till date	--

Administrative-

1. Looked after the security of the Institute/University as Officer In-charge Security.
2. Looked after the affairs of Hostel as Warden since 2004-2017.
3. Worked as Convener, Hobby club under Council of Students Activity.
4. Worked as Assistant Superintendent Examination HBTI, Kanpur.
5. Worked as member in the security committee for organising seminar on Curriculum development, dt. 08-6-2015 and 09-06-2015.
6. Worked as Associate Dean, CEIQA.
7. Working as Deputy Controllor Examinations.
8. Working as Officer Incharge Workshop.
9. Worked as Officer Incharge Mechanical Maintenance.
10. Worked as Deputy Coordinator UG Admission: 2023-24.

**List of Conferences, Short-Term Courses, Programmes etc. Organized / Participated:**

Organized- 10 no.s and Attended- 51 no.s

**Expert Lecture Delivered: 05 no.s**

## Facilities developed



Micro hardness tester



POD sliding wear tester



HAP fabrication setup



Powder blender



Bio-tribometer



Ball-socket wear tester

### Sponsored Project: 08no.s

1. Design and Material Modification in Existing Yokes and Harnesses sponsored by Service to the Community Cell under TEQIP, World Bank. Sanction amount 0.72 Lakhs, 01year duration.(completed)
2. Experimental Investigation of Microwave Treated Load Bearing Bio-Implants for Human Body sponsored by TEQIP-II World Bank. Sanction money amount 1.00 Lakh, March **2015**. (completed)
3. Development of a setup for the preparation of compacts for bio implants sponsored by TEQIP-II World Bank. Sanction money amount 1.00 Lakh, August, **2015**. (completed)
4. Development of experimental setup for machining and finishing of Bio- compatible materials for medical practice sponsored by MHRD through DIC (Design and Innovation Center) IIT Kanpur, amount of Rs.9,50,000/=, July **2017**. (under progress).
5. Design and development of utility products using recycled waste rubber, sponsored by Council of Science and Technology, Lucknow , U.P. Total sanction amount is 11,94,000/= . An amount of Rs. 3,90,000/- is mobilized and start date is **24-03-2018-2021** for next three years.
6. Fabrication and Experimental analysis of Novel material for Load bearing Bio-implants, sponsored by TEQIP-III, World Bank, HBTU, Kanpur. Sanction money amount 2.00 Lakh,(**28-09-2018**).
7. Development of thermally sprayed bioactive glass based composite coatings for load bearing implants, a collaborative project with IIT Kanpur, sponsored by TEQIP-III , World Bank. Sanction amount Rs.1.80Lakh dt.**22-01-2019**. [Rs1.60 Lakh by HBTU, Kanpur and Rs. 20,000/= by IIT, Kanpur
8. An Investigation of Solid Particle Erosion in Hydraulic Turbines by Using CFD , Saurabh Sangal, MED, HBTU Kanpur, Dr.VinayPratap Singh, MED, HBTU Kanpur, Dr.P.Maran, MED,TCE Madurai, Collaborative Research Scheme research project sanctioned by AICTE, New Delhi, June **2019-2020**, amount Rs. 1532000/-, CRS Application id - 1-5742567191.

### As Reviewer:

1. Reviewed the research paper having ID-UTRB-1101 of an International journal Tribology Transactions by Taylor and Francis,2013.
2. Reviewed three chapters of Machine Design data hand book by Tata McGraw publishing company,2013.

3. Reviewed the research article submitted for publication in the Journal of Mineral Metal and Material Engineering with manuscript reference JMMME-SSS-5-15,(25-09-2015)
4. Reviewed the research paper 'Design and simulation of different multilayer solar selective coatings for solar thermal applications', submitted for publication in Materials Research Express, IOP Publishing Temple Circus, Temple Way, Bristol, BS1 6HG, UK.
5. Reviewed a research paper 'The microstructures and anti-corrosion behavior of the thermal sprayed Hastelloy C276 coating on substrate of Q235 steel" by Kong, Yonghua; Wang, Long; Yin, Zhijian, Article reference: MRX-110220, submitted to Materials Research Express for consideration IOP Publishing Temple Circus, Temple Way, Bristol, BS1 6HG, UK.
6. Reviewed a research paper 'Effects of dissimilar alumina particulates on microstructure and properties of cold sprayed alumina/A380 composite coatings" by Qiu, Xiang; Tariq, N; Qi, Lu; Tang, Junrong; Cui, Xinyu; Du, Hao; Wang, Jiqiang; Xiong, Tianying Article reference: MRX-112865, submitted to Materials Research Express for consideration IOP Publishing Temple Circus, Temple Way, Bristol, BS1 6HG, UK.
7. Reviewed a DSIR PRISM Project: Development & testing of RCC floating solar array of 100 kWp capacity applied for fund at Startup Incubation and Innovation Centre, Indian Institute of Technology Kanpur, Oct. 2021.

#### **Member**

- Member of The Institution of Engineers (India) M-150650-6.
- Honorary **Rosalind Member of London Journals Press.** withr Membership ID#YA63155 [2020]

#### **Consultancy and Testing:**

1. Micro and Small Scale Industry Technical Upgradation Scheme, Directorate of Industries, U.P. Government, Kanpur, U.P. (2011-2012).
2. M/s Sunder Engg. works, Kanpur, (2017) for characterizing Churra making machine as foodgrain milling machine, Rs.0.472 Lakh.
- 3 M/s Anubha Plast Pvt. Ltd., Kanpur (2021) For testing of Steel Tubular Poles, Total Charges paid Rs.76,700=00.
4. Safety Audit of Toy Train, Kanpur Zoo, Rs.82,600=00, 2022-23[ Under progress]

#### **Training imparted:**

Imparted summer training of one month duration [from 15-06-2019 to 15-07-2019] to Ms. Kritika Yadav student of J.S.S., Noida on 2D and 3D Modelling of Mechanical systems.

#### **Awards/Prizes:**

**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 being organized (12-13 June, 2015) by College of Technology, Pantnagar, Uttarakhand in collaboration with The Institution of Engineers(India).**

**Received the best paper award for the research paper titled Comparative analysis of various biomaterials used in artificial knee implant at International Conference on Contemporary Issues in Engineering, Agriculture, Applied Sciences and Humanities(EAH-2019) organised by Department of Metallurgical and Materials Engineering, NIT Srinagar, Jammu and Kashmir, 22nd -23rd June, 2019.**

#### **Research Work:**

1. Worked as research fellow in visiting research program under Dr. Kantesh Balani, Associate Professor, Material Science and Engineering Department, IIT Kanpur at KIT, under TEQIP-II from 10<sup>th</sup> May, 2015 to 24<sup>th</sup> July, 2015.
2. Worked as research fellow in visiting research program under Dr. Kantesh Balani, Associate Professor, Material Science and Engineering Department, IIT Kanpur at KIT, under TEQIP-III from 1<sup>st</sup> June, 2018 to 30<sup>th</sup> June, 2018.

## Publications: 65no.s

### Journals- 31no.s

#### 2003-2008

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].

#### 2009-2014

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 Cr<sub>2</sub>O<sub>3</sub>-3%TiO<sub>2</sub> coatings, **Wear**, 272 (2011) 149–158.[Online ISSN: 0043-1648]
4. Vinay Pratap Singh, Anjan Sil, R. Jayaganthan, Tribological behaviour of nanostructured Al<sub>2</sub>O<sub>3</sub> 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 Al<sub>2</sub>O<sub>3</sub> and Cr<sub>2</sub>O<sub>3</sub>, 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 Cr<sub>2</sub>O<sub>3</sub>-3%TiO<sub>2</sub> coatings, **Tribology - Materials, Surfaces & Interfaces**, Volume: 8 Issue: 3, Sep 2014, pp. 131 – 138.[ Online ISSN: 1751-584X].

#### 2015-2020

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 (IJJET), 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].
10. Ardh Kumar Shukla and Vinay Pratap Singh, Modelling and Biomechanical Finite Element Analysis of Human Femur Bone, Journal of Basic and Applied Engineering Research (JBAER), volume 6, Issue 4; April-June-2019. P-ISSN:2350-0077 and e-ISSN: 2350-0255, pp237-242 .
11. Ardh Kumar Shukla and Vinay Pratap Singh, Comparative Analysis of various Biomaterials used in Artificial Knee Implant, Journal of Material Science and Mechanical Engineering(JMSME), Vol. 6, Issue 3, April-June 2019, pp 183-188 [P-ISSN:2393-9095].
12. Ardh Kumar Shukla and Vinay Pratap Singh, Design and Modelling of Artificial Knee Joint Implants using Computational Techniques, Journal of Material Science and Mechanical Engineering(JMSME), Vol. 6, Issue 3, April-June 2019, pp:189-194 [P-ISSN:2393-9095].
13. Vipin Kumar Saroj, Anand Kumar and Vinay Pratap Singh, Design and Development of Railway Sleepers using Waste Tyre Rubber, Journal of Basic and Applied Engineering Research (JBAER), volume 6, Issue 5; April-June-2019. P-ISSN:2350-0077 and e-ISSN: 2350-0255, pp 309-312.
14. Vipin Kumar Saroj, Anand Kumar and Vinay Pratap Singh, Compressive Strength and Flexural Strength Study of Railway Sleepers using Waste Tyre Rubber, Journal of Basic and Applied Engineering Research (JBAER), volume 6, Issue 5; April-June-2019. P-ISSN:2350-0077 and e-ISSN: 2350-0255, pp313-318.

15. Ranveer Singh Soni and Vinay Pratap Singh, Preparation and Characterisation of Hydroxyapatite Powder, *Journal of Basic and Applied Engineering Research (JBAER)*, volume 6, Issue 5; April-June-**2019**. P-ISSN:2350-0077 and e-ISSN: 2350-0255, pp319-322.
16. Ranveer Singh Soni and Vinay Pratap Singh, Study and Analysis of Hydroxyapatite based Composite Material, *Journal of Basic and Applied Engineering Research (JBAER)*, volume 6, Issue 5; April-June-**2019**. P-ISSN:2350-0077 and e-ISSN: 2350-0255, pp323-326.
17. Vivek Singh Chauhan and Vinay Pratap Singh, Study of Materialistic & Thermal properties of Polypropylene and Banana Fiber Reinforced Composite, *Journal of Emerging Technologies and Innovative Research (JETIR)*, Volume 6, Issue 6, June **2019**, pp71-78 (ISSN-2349-5162).
18. Uttam Sharma, Rishi Dadhich, Vinay Pratap Singh, Development of a Mini Inlinecutting Machine using E-Waste, *International Journal of Science and Research (IJSR)* ISSN: 2319-7064 pp 22-27, proceedings of 25th Conference of Mechanical Engineering and Technology (**COMET**), at IIT BHU, Varanasi, 6th -7th, April, **2019**.
19. Arjun Diwakar, Dr. Vinay Pratap Singh, Prof. Anand Kumar, Effect of Crumb Rubber on The Mechanical Properties of Concrete And Future Possibility In Building Structure, *Global Scientific Journal*, Volume 7, Issue 11, November **2019**, ISSN 2320-9186.
20. Shyam Sunder and Dr. Vinay Pratap Singh, Study on Hazardous effects and various recycling techniques for Electronic waste, *Journal of The Gujrat Society*, Vol.21(16), December **2019**, ISSN:0374-8588, pp1019-1037.
21. Abhishek Kumar Gupta, Anand Kumar and Vinay Pratap Singh, Finite Element Analysis of Scrap Aluminum Wire Reinforced Concrete, *International Journal of Advances in Engineering and Management (IJAEM)*, July **2020**, Volume 2, Issue 1, pp: 457-461, ISSN: 2395-5252.
22. Shailja Awasthi, Vinay Pratap Singh, Design and analysis of tooth abutment implant, *Journal of Dental Implants*, Wolters Kluwer .Medknow, July **2020**;10:35-44.[ DOI: 10.4103/jdi.jdi\_8\_19], ISSN 0974-6781.
23. Gangesh Kumar Rai, V.P. Singh, Study of fabrication and analysis of nanocellulose reinforced polymer matrix composites, **Materials Today: Proceedings**, <https://doi.org/10.1016/j.2020.06.18>.
24. Gangesh Kr Rai, Dr. Vinay Pratap Singh, Analysis of nanocellulose reinforced epoxy composite plate, *International Research Journal of Engineering and Technology*, e-ISSN 2395-0056, p-ISSN 2395-0072, Volume 7, Issue 09 Sep **2020**, page no: 792-795.

### **2021-Onwards**

25. Shyam Sunder and Vinay Pratap Singh, Study of Harmful Effects and Disposal Techniques for E-waste in Emerging Nations, *Advances in Interdisciplinary Engineering, Lecture Notes in Mechanical Engineering*, [https://doi.org/10.1007/978-981-15-9956-9\\_35](https://doi.org/10.1007/978-981-15-9956-9_35), Springer Nature Singapore Pte Ltd. **2021**,345-356.[Book]
26. Ruchi Gupta and Dr. Vinay Pratap Singh, Determination of Mechanical Properties and Physical Characterization of HA-ZnO-Fe<sub>3</sub>O<sub>4</sub> Composites for Implants applications, **Journal of Materials Engineering and Performance**, ASM International, **2021**, Volume 30(2) February 2021, pp955-963.
27. Arjun Diwakar, Vinay Pratap Singh, Anand Kumar, Mechanical Properties Evaluation of Concrete with Crumb Rubber Particles used as Fine Aggregate, **Usak University Journal of Engineering Sciences**, **2021**, 4(1):28-41.
28. Ayushi Pandey and Vinay Pratap Singh, Advancement in PEEK Properties for Dental Implant Applications: An Overview, *International Research Journal of Engineering and Technology*, (IRJET) e-ISSN: 2395-0056, Volume: 08 Issue: 07, PP3254-59 July **2021**.
29. Gaurav Katiyar and Vinay Pratap Singh, Study and a Review on Carbon Nanotubes, Synthesis, and Analysis of CNT Reinforced Polymer Composites, *International Research Journal of Engineering and Technology (IRJET)* e-ISSN: 2395-0056, Volume: 08 Issue: 07, pp3254-59 July **2021**.

30. Ruchi Gupta, Mayank Agarwal, Vinay Pratap Singh, HA-ZnO-Fe<sub>3</sub>O<sub>4</sub> Composite Manufactured by Wet Powder Metallurgy Process For Implant Applications, *Composites Theory and Practice* formerly: *Kompozyty (Composites)*, ISSN: 2084-6096, 22: 1 (2022) 40-43.
31. V.P.Singh et al., Production and Tribological performance under sliding contact conditions of Zirconia and reduced Graphene oxide loaded Polymer nanocomposites for Biomedical applications, *Journal Title: Polymer Composites*, 2023;1–19.[ DOI: 10.1002/pc.27691].

### Conferences/ Seminars-34 no.s

#### 2003-2008

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.

#### 2009-2014

3. Vinay Pratap Singh, Anjan Sil, R. Jayaganthan, Dry Sliding and Abrasive Wear Performance of Manually Granulated Nanostructured Al<sub>2</sub>O<sub>3</sub> Coatings, **International conference** AMPCO 2012, IIT Roorkee, Roorkee, Uttarakhand, **Nov 2012**.
4. Vinay Pratap Singh, Ruchi Gupta, Jitendra Bhaskar, Recent trends in damage protection of thermally sprayed Hydroxyapatite (HA) coatings on metallic implants: Review, **National conference** NCRAME 2013, GBPEC, Pauri Garhwal, Uttarakhand, **July 2013**.
5. Ruchi Gupta, Vinay Pratap Singh, Recent technologies used for preventing failures of biocoated metallic implants, **National conference** EFIME, HBTI, Kanpur, 29-33, **Feb 2014**.
6. Ajit Gupta, Ankush Kumar Rajput, Vinay Pratap Singh, A review on bamboo reinforce cement composite, **National conference** EFIME, HBTI, Kanpur, 43-50, **Feb 2014**.
7. 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**.

#### 2015-2020

8. 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**.
9. 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.
10. 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.
11. 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.
12. 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.
13. 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.
14. 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).
  15. 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).
  16. 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).
  17. Avinash Sharma, Dr. V.P Singh, "Compressive, Impact and Dynamic Behaviour of Honeycomb Sandwich Structure", **National Conference** on Advances in Material, Design and Manufacturin(AMDM-2016), Department of Mechanical Engineering, Allenhouse Institute of Technology,Kanpur 208008 (U.P.) , INDIA.( January 30-31, 2016).
  18. 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 )
  19. 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.
  20. Shubham Bansal, Vinay Pratap Singh, "Experimental Investigation of Plasma Sprayed HA (Hydroxyapatite)/Al<sub>2</sub>O<sub>3</sub>/Fe<sub>2</sub>O<sub>3</sub> 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.
  21. 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.
  22. 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.
  23. 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.
  24. 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.
  25. 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.
  26. 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, 30<sup>th</sup> Nov-2<sup>nd</sup> Dec., 2017.



27. Abhishek Rajpoot, Vinay Pratap Singh, S.B. Yadav Modelling, Fabrication and Characterization of Kevlar Reinforced Composite, **International Conference** on Future Learning Aspects of Mechanical Engineering (Flame-2018), Amity University, Noida, U.P., 3-5<sup>th</sup> October, **2018**. Lecture Notes in Mechanical Engineering **ISBN 978-981-13-6468-6** ISBN 978-981-13-6469-3. <https://doi.org/10.1007/978-981-13-6469-3>.
28. 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., 3-5<sup>th</sup> October, **2018**. **ISBN 978-981-13-6577-5**.
29. Ashok Kumar Singh and Vinay Pratap Singh, Design and Development of Battery Powered Reaper for Cereal Crops, **International Conference** on Academic Science and Engineering (ICASAE-19), organised by Institute of Engineering Research and Publication (IFERP) at Lucknow, Uttar Pradesh, 07th- 08th June, **2019**. ISBN:978-93-89107-12-8.
30. Abhishek Kumar Gupta, Anand Kumar and Vinay Pratap Singh, Study on Important Techniques and Processes for the Management of Waste Electrical Wires, Lecture Notes in Mechanical Engineering, Springer, 2<sup>nd</sup> International Conference on FLAME, Amity University Noida, August, **2020**. [Book]

### 2021- Onwards

31. Vatsal Vajpai, Dr. Vinay Pratap Singh, A Survey on Experimental Characterization of Saccharum Munja Grass Fibers, [ICRAMER 2021], AIP Conference Proceedings 2460, 030003-1 - 10 (2022); <https://doi.org/10.1063/5.0095712> Published Online: 26 August **2022**.
32. Parijat Srivastava, Vinay Pratap Singh, Prosthesis: Material, Wear and Loading considerations for Long life Sustainability, 3rd Biennial International Conference on Future Learning Aspects of Mechanical Engineering [FLAME-2022], 3-5, August, **2022**, organised by AMITY, Noida.
33. Ardh Shukla and Vinay Pratap Singh, Paper presented in 3rd Biennial International Conference on Future Learning Aspects of Mechanical Engineering [FLAME-2022], 3-5, August, 2022, organised by AMITY, Noida, Paper titled Design and FEM analysis of porous scaffold for artificial Knee joint.
34. Accepted paper in the International Conference titled “Experimental Investigation of Strength Properties of Aluminum Wire Reinforced Cement Concrete”, AIMTDR-2023 to be held in 8-10, Dec. 2023 organised by IIT BHU, Varanasi.

### Detail of MTech & PhD students

#### M.Tech students :

SNo	Name of Faculty Supervisor	Name of Student	Topic	Month of Submission after defense
<b>M.Tech (Computer Aided Design)</b>				
1.	Dr. V.P. Singh	Rao Rahul Singh, 726/11, 6104540012	Design and Development of Advanced Composite Material for Packaging Purpose	Oct'13
2.	Dr. V.P. Singh	Ajit Gupta, 701/12, 6204540001	Mechanical property evaluation of natural fibre reinforced concrete beam using bamboo fibre.	Aug'14
3.	Dr. V.P. Singh	Ankush Kumar Rajput 704/12, 6204540004	Stress analysis of flour mill shaft subjected to dynamic loading.	Sept'14
4.	Dr. V.P. Singh and Sh. S.B. Yadav	Sandeep Shukla, 730/13, 6304540012	A study on Thermal and Mechanical Properties of Polyurethane Foam for Packaging .	UPTU, Aug' 15



5.	Dr.V.P.Singh	Mohd. Rajat , 723/13, 6304540005	Mathematical Modelling of Iron Ore Sintering Process.	UPTU, Dec' 15
6.	Dr. V.P. Singh	Shubham Bansal 749/14,6404540016	Fabrication and mechanical properties evaluation of ceramic coated metallic implants	November 15,2016
7.	Dr. V.P. Singh and Sh. S.B.Yadaw	Mayank Pandey 748/14, 6404540008	Fabrication and study on laminates for packaging applications	November 29,2016
8.	Dr. V.P. Singh	Virat Kumar Pal 747/14, 6404540018	Fabrication and analysis of UHMWPE based composites for bio Implants	December 01,2016
9.	Dr. V.P. Singh and Sh. S.B.Yadaw	Abhishek Rajpoot S.r. no. 703/15 Roll no.6504540002	Modelling, Fabrication and Characterization of Kevlar Reinforced Composite	November, 03, 2017
10.	Dr. V.P. Singh	Shailja Awasthi Sr No. – 768/16 , Roll No. 6604540014	Design and analysis of tooth abutment implant	Dec.2018
11.	Dr. V.P. Singh	Ardh Kumar Shukla Roll No. 170204013	Modelling and static stress analysis of artificial implants for human knee joints	Nov.,2019
12.	Dr. V.P. Singh	Ranveer Soni Roll No. 170204010	Fabrication and experimental analysis of Hydroxyapatite based composite material for medical implants	Nov.,2019
13.	Dr. Anand Kumar & Dr. V.P,Singh	Vipin Kumar Saroj Roll No. 170204002	Design and Development of railway sleepers usingrecycled waste tyre rubber	Nov.,2019
14.	Dr. V.P. Singh	Gangesh Kumar Rai Roll No. 180204009	Fabrication and Analysis of Nano-cellulose Reinforced Polymer Matrix Composite for Automobile Application	Oct..2020 [4-11-2020]
15.	Dr. Anand Kumar & Dr. V.P,Singh	Abhishek Kumar Gupta Roll No. 180204001	Modeling and Experimental Analysis of Scrap Aluminium Wire Reinforced Concrete Composites	Oct..2020 [4.11.2020]
16.	Dr. V.P. Singh	Ayushi Pandey Roll No. 190204004	Modelling and Analysis of PEEK Based Dental Implants	August,21
17.	Dr. V.P. Singh	Gaurav Katiyar, Roll No. 190204005	Modelling and Micro-scale Analysis of Carbon Nanotube Reinforced Epoxy Composites	August,21
18.	Dr. V.P. Singh	Vatsal Vajpai, Roll No. 190204017	Fabrication and Analysis of Sachharum Munja Fibre - Epoxy based Composite Laminate	August,21
19.	Dr. V.P. Singh	Prasoon		Under progress

### M.Tech (Mechanical Engineering Design) Part Time

1.	Dr. V.P. Singh	Avinash Sharma, 901/11, 6104540020	Fabrication and mechanical properties evaluation of sandwich structure having jute fibre reinforced face plate and pp honeycomb core.	Aug'14
2.	Dr. V.P. Singh	Vivek Kumar, 8804540005	Evaluation of Fundamental Mechanical Properties of CNT Composites using Molecular Dynamics Simulations	July'15
3.	Dr.V.P.Singh	Ehtesham Ur Rehman, 902/12, 6204540020	A Novel Approach For The Damage Protection of MDPE Pipes Used For Natural Gas Transmission in CGD.	UPTU, Dec' 15
4.	Dr.V.P.Singh	Ashok Kumar Singh Roll no. 6504540018	Design and development of semi mechanized reaper for cereal crops	Dec.2018
5.	Dr.V.P.Singh	Amit Kumar Awasthi S.R.no.-907/15	Experimental investigation & modelling of crashed buffer for indian locomotives	Dec.2018
6.	Dr.V.P.Singh	Vivek Kumar Singh Chauhan Roll no.-6604540026	Investigation of Mechanical Properties of Banana Fiber reinforced composite with polypropylene Honeycomb structure	24, Oct. 2019

**Ph.D. student details:**

<b>Sl. No.</b>	<b>Name of the student</b>	<b>Name of Supervisor</b>	<b>Thesis topic</b>	<b>Name of the university</b>	<b>Completed /In Progress</b>
<b>1.</b>	<b>Ms Ruchi Gupta</b>	<b>Dr. V.P. Singh</b>	<b>Damage Analysis of Bio coated Metallic Implants</b>	<b>AKTU(formerly UPTU, Lucknow)</b>	<b>In Progress</b>
<b>2.</b>	<b>Mr. Shyam Sunder, 18031003</b>	<b>Dr. V.P.Singh, Dr. J Bhaskar</b>	<b>Fabrication and Analysis of Polymeric composites for packaging applications using e-waste</b>	<b>HBTU, Kanpur</b>	<b>In Progress</b>
<b>3.</b>	<b>Mr. Parijat Srivastava, 190310003</b>	<b>Dr. V.P.Singh</b>	<b>Fabrication and Experimental investigations of wear resistant artificial acetabular liner for hip joint</b>	<b>HBTU, Kanpur</b>	<b>In Progress</b>
<b>4.</b>	<b>Mr. Krishan Narayan Upadhyay</b>	<b>Dr. V.P.Singh</b>	<b>An Experimental Investigation and Optimisation of Green nano composite based on Starch for packaging</b>	<b>HBTU, Kanpur</b>	<b>In Progress</b>