

CURRICULUM VITAE

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



Address:

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Personal Details:

1. Father's Name : Dr. N.B. Singh
2. D.O.B. : 29-09-1975
3. Nationality : Indian

Educational Qualifications:

Examinations Passed	Year of passing	Division
X th	1990	First
XII th	1992	First
B.E.	1998	First
M.Tech (Design & Prod. Engg.)	2001	First
PhD.	2011	Passed all theory exam with A+ grades

Work Experience:

Teaching & Research-

More than 15 years of Teaching & More than 13 years of Research Experience in reputed Engineering Colleges.

Administrative-

1. Looked after the security of the Institute as Officer In-charge Security.
2. Looking after the affairs of Hostel as Warden since 2004.
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.

Courses Taught:

U.G.Level-

1. Machine Design.
2. Strength of Materials.
3. Material Science.
4. Computer Aided Design (CAD).
5. Machine Drawing.
6. Industrial Engineering.

P.G. Level-

1. Advance Mechanics of Solids.
2. Fracture Mechanics.
3. Advance machine design
4. Advanced Mechanical Vibrations

B.E. Project:

Finite Element Methods (FEM)-Static Stress Analysis of Multileaf spring using Finite Element Method (NISA Package).

M.Tech. Project:

Composite Materials (Polymer Based Composites)- Mechanical and Thermal Analysis of newly fabricated plexiglass(PMMA) reinforced epoxy composite.

Ph.D. Research work:

Tribological performance of plasma sprayed nanostructured ceramic coatings

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

1. Two days refresher course on “Advances in Materials and Material selection in Design” March 10-11, 2007.
2. Two days refresher course on “Composite Materials: Potentials and Challenges” Dec. 28-29, 2007.
3. One week faculty development programme on “Modeling, Simulation and Analysis of Engineering Systems” October 25-30, 2013.
4. One week faculty development programme on “Engineering Education: Opportunities, Challenges and Future Directions” March, 07-12, 2014.
5. Two days National Conference on Innovations in Materials , Design and Manufacturing (IMDM), March 27-28,2015,HBTI,Kanpur.

Attended-

1. Two weeks short term course in 2D-3D Modeling using AutoCAD at TTTI, Chandigarh, 2002.
2. Two weeks short term course on Machine Design Practices at I.I.T., Delhi, 2003.
3. A week duration short term training programme on Intellectual property rights and patent information, held during 27/09/2004 to 01/10/2004 organised by applied science department of NITTTR, Chandigarh at HBTI Kanpur.
4. Two days workshop on Mechronics and Its Applications, 13-14 Nov. 2005, KNIT Sultanpur.
5. Two weeks Staff Development Programme on Fundamentals of Tribology and Materials for Tribological applications at IT-BHU, Feb 27-March 11, 2006.
6. Short term course on Recent Trends in Nanocomposites at IIT Kanpur, Nov. 6-10, 2006.
7. A workshop on Smart Material for design of intelligent systems and Industrial Applications, IIT Kanpur, March 23-24, 2007.
8. A week duration short term course on Technical paper writing from May 11th to 15th,2010, organized by Institute of Engineers, Roorkee local center IIT Roorkee, Roorkee.
9. A week short term course on Advanced techniques in corrosion testing and protection of materials held at IIT Roorkee under QIP (AICTE sponsored) from Feb. 18-22, 2013.
10. A week duration TEQIP sponsored faculty development programme Essentials of Teaching Learning Program during 18-23 March 2013.
11. Four-day workshop on Applied Mechanics, Pravartana 2013 organised under the aegis of TEQIP World Bank by IIT Kanpur during 5th to 7th, October, 2013.
12. AICTE sponsored short term course on Modeling and Simulations Using Finite Element Methods held under QIP during Jan07 – Jan11, 2014 at IIT Roorkee, Uttarakhand.
13. Two days national conference on Emerging frontiers in Mechanical Engineering (EFIME), HBTI, Kanpur during 15-16, February 2014.

14. Five days MDP on Management capacity enhancement programme for administrators, June 09-13,2014, at IIM Lucknow Noida campus organised under the aegis of TEQIP-II.
15. A week short term course on Materials science influence in Tribology of Engineering ceramics held at IIT Roorkee under QIP (AICTE sponsored) from June 30- July04, 2014.
16. Two day workshop on Innovative practices in vegetable oil processing held at HBTI, Kanpur during 27th to 28th September, 2014.
17. A week duration workshop on Mechanics School organised under the aegis of TEQIP World Bank by IIT Kanpur during 20th February to 24th, February, 2015.
18. One day (15th March,2015) workshop on Virtual Laboratories organised by IIT, Kanpur under the aegis of MHRD, Government of India.
19. AICTE sponsored a week duration Workshop on Micro and nano fabrication held under Continuing Programme of IIT Kanpur during March 16th – March 20th, 2015 at IIT Kanpur, Kanpur.
20. Attended two days(8-9 June, 2015) state level Faculty Interaction Seminar organised by HBTI, Kanpur, under the aegis of Department of Technical Education, Government of Uttar Pradesh and sponsored by TEQIP-II, World Bank.
21. Attended a week duration course (ICT-20) on Strategic planning and management for technical institutions from 17th August to 21th August, 2015 at UPTTI Kanpur organized by NITTTR, Chandigarh.
22. A week duration short term course on Micromanufacturing at IIT Kanpur, organised under the aegis of TEQIP World Bank by IIT Kanpur during 31st August to 04th September, 2015.
23. One day(26-11-2015) National Seminar on Low cost housing models for urban and rural areas of UP, organized by Department of Technical Education, UP Government and Civil Engineering Department, HBTI, Kanpur.
24. Attended a week duration Faculty Development Programme on Advance Algorithms in Computing at CSE Department HBTI, Kanpur, organised under the aegis of TEQIP World Bank by HBTI, Kanpur during January,25-30, 2016.
25. Attended a week duration Faculty development program on Quality Management in Engineering Materials at UPTTI Kanpur during 20-25 June 2016 funded by AKTU,Lucknow.
26. Attended a week duration workshop on Machining Dynamics organised under the aegis of TEQIP World Bank by IIT Kanpur during 18-22, July, 2016.
27. Attended a week duration Faculty Development Programme on Corrosion Control in chemical and allied industries organised under the aegis of TEQIP World Bank by HBTI,Kanpur during August 22-27, 2016.
28. Attended three days(from 03-05, October 2016) workshop on Occupational Health and Safety Management Practices jointly organized by H.B.Technical University and ESCI Hyderabad at Kanpur.

Expert Lecture Delivered:

1. Delivered one expert lecture on the topic “Modeling, Analysis and Simulation using AutoCAD and ANSYS” (on 29-10-2013)at the faculty development programme “Modeling, Simulation and Analysis of Engineering Systems” organized between October 25-30, 2013.
2. Delivered one expert lecture on the topic “Ethics in Engineering Education” (March 09, 2014) at the faculty development programme “Engineering Education: Opportunities, Challenges and Future Directions” March, 07-12, 2014.

3. Delivered one Invited talk on the topic " Light Weight Sandwich Structures With Honeycomb core"(on 28-03-2015) at the National Conference on Innovations in Materials, Design and Manufacturing(IMDM),March 27-28,2015,HBTI,Kanpur.

Sponsored Project:

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. (under progress)
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. (under progress)

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 handbook 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)

As Expert:

1. Worked as an expert for the modification of the following syllabus for Research, Development and Training Institute, Kanpur, U.P.(2013,2014)
 - i- Diploma in Tool and Mould making
 - ii- Diploma in Production Engineering
2. Worked as an expert for finalising the items /equipments of Plant Pathology Department of C.S.A. Agriculture and Technology ,University suitable for auction.(2015)

As Rapporteur/Convener in National Conference/Seminar:

1. Worked as Rapporteur during Two sessions of Paper Presentation on the Topic of Materials Engineering during National Conference on Innovations in Materials , Design and Manufacturing(IMDM),March 27-28,2015,HBTI,Kanpur.
2. Worked as Convener for the Scientific session on day-1(12-06-2015), in all India Seminar on Advances in Engineering and Technology for Sustainable Development(AETSD)-2015 being organised by College of Technology, Pantnagar, Uttarakhand in collaboration with The Institution of Engineers(India).

Editor

1. Worked as Assistant Editor for the Proceedings of two days National Conference on Innovations in Materials, Design and Manufacturing(IMDM), March 27-28, 2015, HBTI, Kanpur.
2. Member of Editorial Board of Journal of Mineral Metal and Material Engineering,2015.

Member

Member of The Institution of Engineers (India) M-150650-6.

Consultancy and Testing:

Micro and Small Scale Industry Technical Upgradation Scheme , Directorate of Industries,U.P. Government, Kanpur,U.P.(2011-2012)

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

Research Work:

Worked as research fellow in visiting research fellow under Dr. Kantesh Balani, Associate Professor, Material Science and Engineering Department, IIT Kanpur at KIT, under TEQIP-II from 10th May, 2015 to 24th July, 2015.

Publications:

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.
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.
3. Vinay Pratap Singh, Anjan Sil, R. Jayaganthan, Tribological behavior of plasma sprayed Cr₂O₃-3%TiO₂ coatings, Wear, 272 (2011) 149–158.
4. Vinay Pratap Singh, Anjan Sil, R. Jayaganthan ,Tribological behaviour of nanostructured Al₂ O₃ coatings, Surface Engineering, DOI 10.1179/1743294411 Y.0000000076, (2011).
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, Number 1, 1-12, DOI: 10.1007/s12666-011-0070-0,(2012).
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.
7. Rao Rahul Singh, Vinay Pratap Singh, S.B.Yadaw, Design & Development of Advanced Composite Material for Packaging Purpose (under review).
8. 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.
9. 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 (IJET), Volume 7 Issue 3,PP166-172, 2016, ISSN: 2319 - 1058.

Conferences/ Seminars-

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. 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.
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 ,Dr. V.P.Singh, "Synthesis of Additive Free Electrode Material of Super Capacitor for Energy Storage Applications", **International Conference** on on Industrial and Information Systems (ICIIS 2016), to be held from 3-4 December 2016 at IIT Roorkee, Roorkee.(Communicated)
19. Dr Vinay Partap Singh, Ehteshamur Rahman, "Surface Modification of MDPE Pipeline for Failure Prevention Through Metallic Coating", **National conference** on National Tribology Conference (NTC-2016) to be held from December 8 – 10, 2016, at IIT BHU, Varanasi.

Extra Curricular Activities:

1. Worked as Cultural Secretary of PG Society during M.Tech.
2. Played cricket at College and University level.
3. Played basketball, handball at district level.

Date:

Place:

(Vinay Pratap Singh)