BIO-DATA - Prof. VINAY KUMAR GUPTA

1. **Name** : **VINAY KUMAR GUPTA**
2. **Designation** : **PROFESSOR**
3. **Department** : **MECHANICAL ENGINEERING**
4. **Date of Birth** : **12.03.1970**
5. **Address for Correspondence** : **Department Mechanical Engineering,**
   Punjabi University, Patiala 147 002
   Mobile: 91-9501007560
   E-mail: guptavk70@gmail.com;
   guptavk_70@pbi.ac.in
6. **Areas of Specialization** : **Machine Design, Composite Materials**
7. **Academic Qualifications:**

Sr. No.	Degree Held	Year	Institute/ Univ.	% Marks	Division	Subjects/Area
1	B. Tech.	1993	H.B.T.I., Kanpur (Now HBTU)	75.8%	1st (Honors)	Mechanical Engg.
2	M.E.	1998	Univ. of Roorkee (Now I.I.T. Roorkee)	77.1	1st (Honors)	Industrial Metallurgy
3	Ph.D.	2005	T.I.E.T. Patiala (Now Thapar University)	----	------	Mechanics of Composite Materials

8. Membership of Professional Bodies/Organizations:

- Life Member of *Indian Society for Technical Education (ISTE)-LM 76687*
- Member *International Association of Engineers (IAENG)*
- Member Editorial Board of *International Journal of Advanced Mechatronics and Robotics; International Journal of Engg. Science and Technology (IJEST)*
- Member *Emerald Literati Network*
- Reviewer of Numerous Reputed Journals: Material Focus; International Journal of Applied and Computational Mathematics; Mechanics of Time-Dependent Materials; Iranian Journal of Science and Technology; Transactions of Mechanical Engineering, Journal of Reinforced Plastics and Composites; Mechanics Research Communications; Journal of Materials Processing and Technologies; Composite Structures; Bulletin of Materials Science; Indian Journal of Engineering & Materials Sciences; Composite Part-B; Scientific Research and Essays; International Journal of Thermal Science; Journal of Thermoplastic Composite Materials; International Journal of Mechanical Sciences; Applied Mathematical Modelling; International Journal of Mechanical Engineering; Structural Engineering and Mechanics, An International Journal, Multidiscipline Modeling in Materials and Structures; Journal of Composite Materials; Journal of Mechanical Science and Technology; Journal of Mechanics; Journal of Structures; Meccanica, The Journal of

Engineering Research, International Journal of Engg. Science and Technology, Journal of Mechanical Engineering Research, Kragujevac Journal of Science, Arabian Journal of Science and Engineering, Cellulose, Journal of Solid Mechanics, ZAMM - Journal of Applied Mathematics and Mechanics / Zeitschrift für Angewandte Mathematik und Mechanik, BioResources, Engineering Science and Technology (Elsevier), Mechanics Based Design of Structures and Machines (taylor & Francis), Polymer Composites (Wiley) etc.

9. Medals/Awards/Honours/Received:

- Selected as one of the IBC's (International Biographical Centre, Great Britain) TOP 100 Engineers-2009.
- Recipient of Scientific Award of Excellence for 2011 by American Biographical Institute.
- Recipient of International Travel Grant from DST, New Delhi, for attending and presenting paper in 9th OPERATING PRESSURE EQUIPMENT Conference, Incorporating the AINDT Biennial Conference, held at Gold Coast, Queensland (Australia), August 26-28, 2009.
- Member National Advisory Council 5th International Conference on Production & Industrial Engineering at NIT Jalandhar from June 28-29, 2018.
- Ranked among top 2% Indian Scientists in the world as per the survey conducted by STANFORD University (Field: Mining and Metallurgy), Year: 2020.

10. Scholarships:

- State Scholarship (U.P. Govt.)
- Institute Merit Scholarship (HBTI, Kanpur)
- GATE Scholarship

11. Details of Experience:

S. No.	Name of the Inst./Univ./Employer	Position Held	Period	Major Job Responsibilities and Nature of Experience
1.	Dept. of Mech. Engg., Punjabi Univ., Patiala (Formerly UCOE)	Professor	15-07-2011 to Till date	Teaching & Research
2.	Dept. of Mech. Engg., Punjabi Univ., Patiala (Formerly UCOE)	Reader / Associate Professor	15-07-2005 to 14-07-2011	Teaching & Research
3.	Mechanical Engg. Dept., Thapar Inst. of Engg. & Tech. Patiala (Now Thapar Univ.)	Asst. Professor	25-11-2003 to 14-07-2005	Teaching & Research
4.	Mechanical Engg. Dept., Thapar Inst. of Engg. & Tech. Patiala (Now Thapar Univ.)	Senior Lecturer	30-05-2002 to 24-11-2003	Teaching & Research
5.	Mechanical Engg. Dept., Thapar Inst. of Engg. & Tech. Patiala (Now Thapar Univ.)	Lecturer	30-05-1997 to 29-05-2002	Teaching & Research
6.	Lohia Machinery Manufacturers, Kanpur (UP)	Assembly Engineer	07-01-1995 to 04-11-1995	I/C of Assembly Shop (Winding and Texurising M/C)
7.	Flex Engineering Ltd., Noida (UP)	Production Officer	01-06-1993 to 27-12-1994	I/C of Production Shop (Packaging M/C)

12. Published Work:

a. Research Papers 76
b. Conference/Seminar Presentation = 50
c. Books i) Text/Reference: 04
ii) Handbook Chapters: 01

13. R & D Projects Completed:

(a) <u>Major Research Projects:</u>

- Steady State Creep in Functionally Graded Cylindrical Pressure Vessel: Theoretical and Finite Element Analyses, Major Research Project: **UGC, New Delhi (**1-5-2009 to 30-10-2012)

(b) <u>Minor Research Projects:</u> (Out of UGC Unassigned Grants Allocated, TIET, Patiala**)**

- Effect of Carbide Shape & Size on Tribological Behaviour of Steel, 1998-1999.
- Analysis of Composites Subjected to High Temperature, Oct. 2000-2002.
- Modeling of Creep Behavior in Rotating Discs of Composite Materials, 2003-2004.

14. (a) Invited Talks: 20

(b) Conferences Organized: 01

(b) Short Term Courses/ Workshop/Symposium Attended: 11

15. Ph.D. Thesis Supervised:

S. No.	Name of the Student	Title of Thesis	Year of Completion
1.	Jasminder Singh Dureja	Performance Evaluation of Cutting Tools for Hard to Machine Tool Steels	April, 2010
2.	Tejeet Singh	Modeling and Analysis of Creep in Composite Cylinders	Dec. 2010
3.	Balraj Singh	Fatigue Life Evaluation of Heat Treated and PVD Coated Low Alloy Steels	Nov. 2011
4.	Dharampal Deepak	Creep Deformation and Stress Analysis in Rotating Disks of Composite Materials	Dec. 2012
5.	Manish Garg	Creep Modeling of a Functionally Graded Thin Rotating Disc	Aug. 2014
6.	Lakshya Aggarwal	Fabrication and Characterization of Hybrid Composites of Recycled Polymer and Natural Fibers	May 2017
7.	Kishore Khanna	Mathematical Modeling of Creep in Rotating Discs with Varying Material Properties	Oct. 2017
8.	Sukhjinder Singh Sandhu	Analysis of Creep in Spherical Pressure Vessels Made of Functionally Graded Composites	March, 2020
9..	Navjot Pal Singh	Fabrication and Characterization of Mechanical, Thermal and Electrical Properties of Graphene/Multiwalled Carbon Nanotubes Reinforced Epoxy Composites	June, 2021
10.	Rajinder Singh	Theoretical and Numerical Analyses of Inhomogeneous Rotating Discs with Non-Uniform Thickness	March, 2023

16. M. Tech. Thesis Supervised:

S. No.	Name of the Student	Title of Thesis	Year of Completion
1.	Rajiv Chauhan	Effect of morphology of carbide on friction & wear in 0.86% plain carbon steel	Dec. 1998
2.	Tarun Nanda	Effect of welding variables on weld bead dimensions in SAW	Feb. 2000
3.	Vikas Sharma	Weld bead dimensions and shape relationship in submerged arc welding of IRSM-41B: Micro alloyed steel	June 2002
4.	Sachin Jain	Modeling creep behavior in a rotating disc of functionally graded composite	Aug. 2005
5.	Bhupinder Goyal	Effect of reinforcement gradient on steady state creep in a rotating composite disc	Aug. 2005
6.	Hemant Kumar Kaushik	Modeling creep in a rotating composite disc of variable thickness	June 2006
7.	Kapil Sachan	Material parameters and creep in a rotating composite cylinder	May 2006
8.	Nitin Goel	Finite element analysis of creep in rotating disc of functionally graded composite	July 2011
9.	Amrinder Singh	Finite element modeling of creep in a functionally graded thick cylinder	Sept. 2011
10.	Harpreet Sharma	Effect of process parameters on friction sir welding of aluminium alloy	Sept. 2011
11.	Ashish Singla	Effect of anisotropy on creep in a thick cylinder made of functionally graded composite	Oct. 2012
12.	Ripandeep Singh	Fabrication and characterization of 5083Al-SiC surface composite by friction stir processing	Oct. 2012
13.	Sukhdeep Singh	Fabrication and characterization of 5083Al-Al_2O_3 surface composites by friction stir processing	Oct. 2012
14.	Evaran Singh	Fabrication and characterization of jute fiber reinforced-recycled polyethylene composites	Aug. 2013
15.	Sukhdeep Singh	Tensile and flexural behavior of hemp fiber reinforced virgin and recycled high density polyethylene matrix composites	Aug. 2013
16.	Harsimran Singh Salaria	Investigation of tensile and flexural behaviour of sisal fibber reinforced recycled/virgin high density polyethylene	Aug. 2013
17.	Navjot Pal Singh	Tensile behavior of sisal/hemp fiber reinforced high density polyethylene composite	Aug. 2013
18.	Mohit Sood	Effect of fiber chemical treatment on mechanical properties of sisal fiber/recycled HDPE composites	Aug. 2013
19.	Anil Kumar Samhotra	Age-hardening behaviour of A X65 grade HSLA steel	Nov. 2014
20.	Navratan Goyal	Evaluation of tensile and flexural properties of hemp reinfoced fresh/recycled polyethylene based natural fiber composites	Nov. 2014
21.	Jharminder Singh Dhaliwal	Investigation of tensile and flexural behaviour of coconut fiber reinforced fresh/recycled high density polyethylene	Nov. 2014
22.	Manpreet Singh Bahra	Effect of fibre content on mechanical properties of Pineapple/Hdpe composites	Aug. 2015
23.	Kundan Singh	Investigation of the slurry erosion behavior of D-Gun thermal sprayed micro and nano-structured (Al2O3+13TiO2) coating	Aug. 2015
24.	Harpreet Singh	Experimental investigation of tensile and flexural behaviour of Banana fiber reinforced fresh/recycled high density polyethylene composites	Aug. 2015
25.	Ashish Gupta	Modeling steady state creep in thick walled functionally graded spherical vessel,	Aug. 2015
26.	Harmeek Singh	Transient thermo-coupled mechanical simulation of variable thickness FGM disk for the braking application	Sep. 2015
27.	Amanjot Singh Baluja	Effect of fibre orientation in woven jute fibre/polypropylene composites on mechanical properties	Sep. 2016
28.	Goldendeep Singh	Investigating tensile and flexural behavior of hybrid jute-cotton fibre polypropylene laminated composites	Sep. 2016

29.	Manminder Singh	Tensile and flexural properties of cotton/linen fabric reinforced laminated polypropylene composites	Sep. 2016
30.	Swarnjit Singh	Effect of layering pattern on the mechanical properties of jute-linen reinforced polypropylene hybrid laminated composites	Sep. 2017
31.	Arisha Kahsyap	Effect of reinforcing pristine and amino functionalized MWCNTs on the mechanical and thermal properties of epoxy matrix composites	Sep. 2017
32.	Anshuman Arya	Preparation and characterization of mechanical properties of recycled HDPE composites reinforced with bagasse and coir fibers	Sep. 2018
33.	Manpreet Singh	High temperature oxidation behaviour of NiCrAlY Cladded SS 304 Developed through microwave irradiation	June 2023

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

(a) <u>UG (B.Tech.):</u> Strength of Materials, Machine Design, Principles of Engineering Design, Materials Science and Engineering, Industrial Metallurgy, Manufacturing Processes. Computer Aided Engineering Graphics,

(b) <u>PG (M. Tech./Ph.D.):</u> Materials Technology, Advanced Metrology

18. Technical Proficiency:

- Modeling of Creep in Structural Components of Graded and Metal Matrix Composites
- FEM analysis of Structural Components
- Regression analysis
- Fracture Surface Analysis
- Fabrication and Characterization of Natural Fiber Reinforced Polymer Matrix Composites
- Hard Part Turning
- Fatigue Behavior of PVD Coated Steel Components

19. List of Papers Published

<u>(a) Journals:</u>

1. V.K.Gupta and O.P.Pandey **(2000)**, "Wear Characteristics of Plain Carbon Steel", Indian Journal of Engineering & Materials Science (IJEMS), 7 (5-6), pp. 354-360 [NISCAIR, ISSN: 0975-1017 (Online); 0971-4588 (Print); IF-0.413 (JCR 2014)].

2. V.K.Gupta, S.B.Singh, H.N.Chandrawat and S.Ray **(2003)**, "Creep in an Isotropic Rotating Disc of Al-SiCP Composite", Indian Journal of Pure & Applied Mathematics IJPAM), 34 (12), pp. 1797-1807 [SPRINGER, ISSN: 0019-5588 (print version); ISSN: 0975-7465 (electronic version); IF-0.224 (2014)].

3. V.K.Gupta, S.B.Singh, H.N.Chandrawat and S.Ray **(2004)**, "Creep Behavior of a Rotating Functionally Graded Composite Disc Operating under Thermal Gradients", Metallurgical & Materials Transactions A, 35 (4), pp. 1381-1391 [SPRINGER, ISSN: 1073-5623 (print version); IF-1.730 (2014)].

4. V.K.Gupta, S.B.Singh, H.N.Chandrawat and S.Ray **(2004)**, "Steady State Creep and Material Parameters in a Rotating Disc of Al-SiCp", European Journal of Mechanics A/Solids, 23 (2), pp. 335-344 [ELSEVIER, ISSN: 0997-7538; IF-1.996 (2014)].

5. V.K.Gupta, S.B.Singh, H.N.Chandrawat and S.Ray **(2005)**, "Modeling of Creep Behavior of a Rotating Disc in presence of both Composition and Thermal Gradients", Journal of Engineering Materials & Technology. 127 (1), pp. 97-105[ASME, ISSN: 0094-4289; eISSN: 1528-8889 IF-1.009 (2014)].

6. V.K.Gupta, N. Kwatra and S.Ray **(2007)**, "Artificial Neural Network Modeling of Creep behavior in a Rotating Composite Disc", Engineering Computations, 24 (2), pp. 151-164 [EMERALD, ISSN: 0264-4401; IF-1.495 (2014)].
7. V.K. Gupta, O.P. Pandey and S. Ray **(2008)**, "Dry Sliding Wear Characteristics of 0.13 wt pct Carbon Steel", Materials Science: Poland, 26 (3), pp. 617-631. (ISSN: 0137-1339; IF-0.384)
8. V.K.Gupta, S.B.Singh and S.Ray **(2009)**, "Role of Reinforcement Geometry on the Steady State Creep Behavior of a Rotating Composite Disc", Multidisciplinary Modeling in Materials & Structures (MMMS), 5 (2), pp. 139-150. (ISSN: 1573-6105 (print); 1573-6113 (electronic))
9. V.K.Gupta, Vijay Kumar and S. Ray **(2009)**, "Modeling Creep in a Rotating Disc under Linear and Quadratic Composition Gradients", Engineering Computations, 26 (4), pp. 400-421 [EMERALD, ISSN: 0264-4401; IF-1.495 (2014)].
10. Tejeet Singh and V.K. Gupta **(2009)**, "Effect of Material Parameters on Steady State Creep in a Thick Composite Cylinder Subjected to Internal Pressure", The Journal of Engineering Research, 6 (2), pp. 20-32. (ISSN: 1726-6009).
11. Tejeet Singh and V.K. Gupta **(2009)**, "Creep analysis of an internally pressurized thick cylinder made of a functionally graded composite", The Journal of Strain Analysis for Engineering Design, 44 (7), pp. 583-594. (ISSN: 0309-3247, IF-0.748)
12. Dharmpal Deepak, V. K. Gupta and Ashok K. Dham **(2009)**, "Impact of Stress Exponent on Steady State Creep in a Rotating Composite Disc", The Journal of Strain Analysis for Engineering Design, 44 (2), pp. 127-135. . (ISSN: 0309-3247, IF-0.748)
13. Balraj Singh Saini, V.K. Gupta and Ramandeep Ramana **(2009)**, "Experimental rig for testing specimens under bending fatigue", International Journal of Materials Engineering & Technology, 1 (1), pp. 25-32. (ISSN: 0975-0444).
14. J.S. Dureja, V.K. Gupta, Vishal S. Sharma and Manu Dogra **(2009)**, "Design Optimization of Cutting Conditions and Analysis of their Effect on Tool Wear and Surface Roughness During Hard Turning of AISI-H11 Steel with A Coated–Mixed Ceramic Tool" Proc. IMechE, Part B: J. Engineering Manufacture, 223 (B11), pp. 1441-1453. (Professional Engg. Publishing Ltd., ISSN: 0953-4054 (Print); 2041-2975 (Online), IF-0.412).
15. B.S. Saini and V.K. Gupta **(2010)**, "Effect of WC/C PVD coating on fatigue behavior of case carburized SAE8620 steel", Surface and Coatings Technology, 205 (2), pp. 511–518. (Elsevier, ISSN: 0257-8972, 2015 IF- 2.199).
16. J.S. Dureja, V.K. Gupta, Vishal S. Sharma, and Manu Dogra **(2010)**, "Design Optimization of Flank Wear and Surface Roughness for CBN-TiN Tools During Dry Hard Turning of Hot Work Die Steel", International Journal of Machining & Machinability of Materials Special Issue: Near Dry - Minimum Quantity of Lubricant (MQL) Machining, 7 (1-2), pp. 129-147. (Indersecience, ISSN: 1748-5711 (Print), 1748-572X (Online)).
17. J.S. Dureja, V.K. Gupta, Vishal S. Sharma and Manu Dogra **(2010)**, "Wear Mechanisms of Coated Mixed-Ceramic Tool During Finish Hard Turning of Hot Tool Die Steel", Proc. IMechE, Part C: J. Mechanical Engineering Science, 224 (1), pp. 183-193. (ISSN: 0022-2542, IF-0.416).
18. J.S. Dureja, V.K. Gupta, Vishal S. Sharma and Manu Dogra **(2010)**, "Wear Mechanisms of TiN-Coated CBN Tool During Finish Hard Turning of Hot Tool Die Steel", Proceedings of the Institution of Mechanical Engineers, Part B, Journal of Engineering Manufacture, 224 (4), pp. 553-566. (ISSN: 0953-4054 (Print); 2041-2975 (Online), IF-0.412)
19. B.S. Saini and V.K. Gupta **(2010)**, "Fracture Surface Topography of SAE 8620 Steel Specimens Subjected to Bending Fatigue", International Journal of Materials Engineering and Technology, 3 (1), pp. 63-76. (ISSN: 0975-0444).
20. Tejeet Singh and V.K. Gupta **(2010)**, "Modeling Creep in a Thick Composite Cylinder Subjected to Internal and External Pressures", International Journal of Materials Research, 101 (2), 2010, pp. 279-286. (ISSN: 1862-5282, IF-0.824).
21. Tejeet Singh and V.K. Gupta **(2010)**, "Modeling Steady State Creep in Functionally Graded Thick Cylinder Subjected to Internal Pressure", Journal of Composite Materials, 44 (11), pp. 1317-1333. (ISSN: 0021-9983 (Printed), 1530-793X (Electronic), IF-0.806).

22. Dharmpal Deepak, V. K. Gupta and Ashok K. Dham **(2010)**, "Steady State Creep in a Rotating Composite Disc of Variable Thickness" International Journal of Materials Research, 101 (6), pp. 780-786. (ISSN: 1862-5282, IF-0.824).

23. Dharmpal Deepak, V. K. Gupta and Ashok K. Dham **(2010)**, "Creep Modeling in Functionally Graded Rotating Disc of Variable Thickness", Journal of Mechanical Science and Technology, 24 (11), pp. 2221-2232. (ISSN: 1738-494X (print), 1976-3824 (electronic), IF-0.374)

24. Tejeet Singh and V.K. Gupta **(2011)**, "Effect of Anisotropy on Steady State Creep in Functionally Graded Cylinder", Composite Structures, 93 (2), pp. 747-758. (ISSN: 0263-8223, IF-2.006).

25. J.S. Dureja, V.K. Gupta, Vishal S. Sharma and Manu Dogra **(2011)**, "Investigating Wear Mechanisms of CBN and Mixed-Ceramic Tools During Finish Hard Turning of Low-Medium Hardness AISI H11 Steel", International Journal of Machining and Machinability of Materials, 10, (1/2), pp. 120-136. (ISSN: ISSN 1748-5711, 1748-572X (Online)).

26. Dharmpal Deepak, V. K. Gupta and Ashok K. Dham **(2011)**, "Mathematical Modeling of Steady State Creep in a Functionally Graded Rotating Disc of Variable Thickness", International Journal of Computational Materials Science and Surface Engineering, 4 (2), pp. 109-129. (ISSN: 1753-3473 (Online), 1753-3465 (Print)).

27. B.S. Saini and V.K .Gupta **(2011)**, "Microstructural characterization of case carburized steels through optical Metallography", International Journal of Materials Engineering and Technology, 6 (1), pp. 39-50. (ISSN: 0975-0444).

28. B.S. Saini and V.K. Gupta **(2011)**, "Fracture surface characterization through optical fractography", International Journal of Materials Engineering and Technology, 6 (1), pp. 51-59. (ISSN: 0975-0444).

29. Amrinder Singh, Manish Garg, B. S. Saini and V. K. Gupta **(2011)**, "Modeling Creep in a Functionally Graded Thick Cylinder by Using Finite Element Analysis", International Journal of Mechanics and Solids, 6 (2), pp. 191-204. (ISSN: 0973-1881).

30. Tejeet Singh and V.K. Gupta **(2012)**, "Steady State Creep Analysis of a Functionally Graded Thick Cylinder Subjected to Internal Pressure and Thermal Gradient", International Journal of Materials Research, 103 (8), pp. 1042-1051. (Carl Hanser Verlag GmbH & Co. KG: ISSN: 1862-5282, 2011 IF-0.83).

31. Manish Garg, B. S Salaria and V.K. Gupta **(2012)**, "Analysis of Steady State Creep in a Functionally Graded Rotating Disc of Variable Thickness", Composites: Mechanics, Computations, Applications, 3 (2), pp. 171-188. ((Begell House, ISSN: 2152-2057 (Print) 2152-2073 (Online)).

32. B.S.Saini and V.K.Gupta **(2012)**, "Fatigue crack propagation behaviour of some low alloy steels in case carburized condition", International Journal of Materials Engineering Innovation, 3 (3-4), pp. 330-339. (Inderscience, ISSN: ISSN online: 1757-2762, ISSN print: 1757-2754).

33. Nitin Goel, Manish Garg, B. S. Saini and V. K. Gupta **(2012)**, "Finite Element Analysis of Creep in a Functionally Graded Rotating Disc", International Journal of Computer Aided Engineering and Technology, 4 (5), pp. 432-444. (Inderscience, ISSN online: 1757-2665, ISSN print: 1757-2657).

34. Ashish Singla, Manish Garg, Dharmpal Deepak and V. K. Gupta **(2012)**, "Creep Modeling in an Orthotropic FGM Cylinder", Asian Review of Mechanical Engineering, 1 (2), pp. 55-61. (The Research Publication, ISSN: 2249–6289).

35. Sukhdeep Singh, Dharmpal Deepak and V.K. Gupta **(2012)**, "Fabrication and Characterization of 5083 Al-Al_2O_3 Surface Composite by Friction Stir Processing", International Journal of Materials Engineering and Technology, 8 (2), pp. 137-154. (Pushpa Publishing House, India, ISSN: 0975-0444).

36. Manish Garg, B. S. Salaria and V. K. Gupta **(2013)**, "Effect of Disc Geometry on the Steady State Creep in a Rotating Disc Made of Functionally Graded Materials", Materials Science Forum, 736-736, pp. 183-191. (Trans Tech Publishers, ISSN: 1662-9752).

37. Dharmpal Deepak, V. K. Gupta and Ashok K. Dham **(2013)**, "Investigating the effect of thickness profile of a rotating functionally graded disc on its creep behavior", Journal of Thermoplastic Composite Materials, 26 (4), pp. 461-475. (Sage, ISSN: Print-0892-7057, Online-:1530-7980, 2015 IF-1.134).

38. Manish Garg, B. S Salaria and V.K. Gupta **(2013)**, "Effect of Reinforcement Gradient on Steady State Creep in a Variable Thickness Rotating Disc Made of Non-Linear FGM", International Journal of Materials Engineering Innovation (IJMATEI), 4 (1), pp. 1-17 (Inderscience, ISSN: online: 1757-2762, ISSN print: 1757-2754)

39. Manish Garg, B. S. Salaria and V. K. Gupta **(2013)**, "Effect of thermal gradient on steady state creep in a rotating disc of variable thickness", Procedia Engineering, 55, pp. 542-547. (Elsevier, ISSN: 1877-7058).

40. Tejeet Singh and V. K. Gupta **(2013)**, "Modeling steady state creep behavior of functionally graded thick cylinder in the presence of residual stress", Procedia Engineering, 55, pp. 760 – 767. (Elsevier, ISSN: 1877-7058).

41. Dharmpal Deepak, Ripandeep Singh Sidhu and V.K. Gupta **(2013)**, "Preparation of 5083 Al-SiC Surface Composite by Friction Stir Processing and its Mechanical Characterization", International Journal of Mechanical Engineering, 3 (1), pp. 1-11, (WordPress, ISSN: 2277-7059).

42. Tejeet Singh and V.K. Gupta **(2014)**, "Analysis of Steady State Creep in Whisker Reinforced Functionally Graded Thick Cylinder Subjected to Internal Pressure by considering Residual Stress", Mechanics of Advanced Materials and Structures, 21 (5), pp. 384–392. (Taylors and Francis, ISSN: 1537-6494 (Print), 1537-6532 (Online), 2013 IF-0.664).

43. Manish Garg, Dharmpal Deepak, V.K. Gupta **(2014)**, "FE modeling of creep in linear and non-linear FGM cylinder under internal pressure", Multidiscipline Modeling in Materials and Structures, 10 (1), pp. 94 – 105. (Emerald, ISSN: 1573-6105).

44. Sukhdeep Singh, Dharmpal Deepak, Lakshya Aggarwal and V.K. Gupta **(2014)**, "Tensile and flexural behavior of hemp fiber reinforced virgin-recycled HDPE matrix composites", Procedia Materials Science, 6, pp. 1696–1702. (Elsevier, ISSN: 2211-8128).

45. Manpreet Singh Bahra, Lakshya and V. K. Gupta **(2015)**, "Natural Fiber Reinforced Polypropylene Composites: A Review", IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE), 5, pp. 43-45. (International Organization of Scientific Research, e-ISSN: 2278-1684; p-ISSN: 2320-334X).

46. Itinder Singh, Shishir Sinha, Vinay Gupta and Lakshya Aggarwal **(2015)**, "Development of Natural Fiber Reinforced Recycled Polyethylene Composite", IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE), 4, pp. 36-40. (International Organization of Scientific Research, e-ISSN: 2278-1684, p-ISSN: 2320-334X).

47. Kishore Khanna, V.K. Gupta and S.P. Nigam **(2015)**, "Creep analysis of a variable thickness rotating FGM disc using Tresca criteria", Defence Science Journal, 65 (2), pp. 163-170. (DRDO, pISSN: 0011-748X, eISSN: 0976-464X, 2015 IF-0.31).

48. Dharmpal Deepak, Manish Garg and V. K. Gupta, **(2015)**, "Creep Behavior of Rotating FGM Disc with Linear and Hyperbolic Thickness Profiles", Kragujevac Journal of Science, 37, pp. 35-48 (Faculty of Science, University of Kragujevac, ISSN: 1450-9636).

49. Ashish Singla, Manish Garg and V K Gupta **(2015), "**Steady State Creep Behavior of Functionally Graded Composite by using Analytical Method", International Journal of Computer Applications (IJCA), Proceedings on International Conference on Advancements in Engineering and Technology ICAET 2015, 8, pp. 13-17 (ISSN: 0975-8887).

50. Navjot Pal Singh, Lakshay Aggarwal and V.K. Gupta **(2015)**, "Tensile Behavior of Sisal/Hemp Reinforced High Density Polyethylene Hybrid Composite", Materials Today: Proceedings 2 (4–5), pp. 3140-3148 (Elsevier, ISSN: 2214-7853).

51. Mohit Sood, Dharmpal Deepak and V.K Gupta **(2015)**, "Effect of Fiber Chemical Treatment on Mechanical Properties of Sisal Fiber/Recycled HDPE Composite", Materials Today: Proceedings 2 (4–5), pp. 3149-3155 (Elsevier, ISSN: 2214-7853).

52. Manish Garg, B. S. Salaria and V. K. Gupta **(2015)**, "Modeling Creep in a Variable Thickness Rotating FGM Disc under Varying Thermal Gradient", Engineering Computations, 32(5), pp. 1230-1250 [EMERALD, ISSN: 0264-4401; IF-1.495 (2014)].

53. Lakshya Aggarwal, Shishir Sinha, and V. K. Gupta **(2015)**, "Effect of fiber loading on flexural strength of hybrid sisal/hemp-HDPE composites, AIP Conference Proceedings, 1661 (1), pp. 110001-110003 (American Inst. of Physics, ISSN: 0094243X, DOI: 10.1063/1.4915446).

54. Manish Garg and V. K. Gupta **(2015)**, "Stress Analysis of a Variable Thickness Rotating FGM Disc", International Journal for Research in Applied Science & Engineering Technology (IJRASET), 3 (VI), pp. 24-28, (ISSN: 2321-9653).

55. J.S. Dureja, V.K. Gupta, V Sharma, M. Dogra and M.S. Bhatti **(2016)**, "A Review of Empirical Modeling Techniques to Optimize Machining Parameters for Hard Turning Applications", Proceedings of the Institution of

Mechanical Engineers, Part B: Journal of Engineering Manufacture, 230 (3), pp. 389–404 (Publisher SAGE, ISSN: 0954-4054, IF-0.954 (2016)].

56. K. Khanna, V.K. Gupta and S.P. Nigam **(2015)**, "Investigating Creep Performance and Predicting Rupture Time for Rotating FGM Disc under Different Thermal Gradients", CMC: Computers, Materials & Continua, 48(3), pp. 147-161, [Tech Science Press, ISSN: 1546-2218 (printed), ISSN: 1546-2226 (online), IF: 0.964 (2014)].

57. Kishore Khanna, V.K. Gupta and S.P. Nigam **(2017)**, "Creep Analysis in Functionally Graded Rotating Disc Using Tresca Criterion and Comparison with Von-Mises Criterion", Materials Today: Proceedings, 5th International Conference of Materials Processing and Characterization (ICMPC 2016), 4(Issue 2PA), pp. 2431-2438, [Elsevier, ISSN: 2214-7853].

58. Manpreet Singh Bahra, V.K. Gupta and Lakshya Aggarwal **(2017)**, "Effect of Fibre Content on Mechanical Properties and Water Absorption Behaviour of Pineapple/HDPE Composite", Materials Today: Proceedings, 5th International Conference of Materials Processing and Characterization (ICMPC 2016), 4(Issue 2PA), pp. 3207-3214, [Elsevier, ISSN: 2214-7853].

59. Kishore Khanna, V.K. Gupta and S.P. Nigam **(2017)**, "Modeling and Analysis of Creep in a Variable Thickness Rotating FGM Disc using Tresca and Von-Mises Criteria", Transactions of Mechanical Engineering Iranian Journal of Science and Technology, [Springer, ISSN: 2228-6187 (print version), ISSN: 2364-1835 (electronic version), 41(2), pp. 109-119, [Springer, ISSN: 2228-6187 (print version), ISSN: 2364-1835 (electronic version), IF: 0.595 (2015).

60. Lakshya Aggarwal, Shishir Sinha and M. S. Bhatti, V. K. Gupta **(2017)**, "Mixer Design Optimization with Fractured Surface Topography of Mechanical Properties of Polymer Biocomposites", Journal of the Taiwan Institute of Chemical Engineers, 74, pp. 272-280, [Elsevier, ISSN: 1876-1070, IF-2.848 (2015)].

61. H.S. Farwaha, Dharampal Deepak and Vinay Kumar Gupta **(2017),** "Investigation of Flexural Behavior of Coconut Fiber Reinforced Fresh/Recycled High Density Polyethylene", International Journal of Advanced Mechatronics and Robotics, 9(2) 2017 : July-December, pp. 67-73, [Serial Publications, ISSN : 0975-6108].

62. M. Sood, D. Deepak and V.K. Gupta, **(2018)**, "Tensile Properties of Sisal Fiber/Recycled Polyethylene (High Density) Composite: Effect of Fiber Chemical Treatment", Materials Today: Proceedings, 5(2), pp. 5673-5678 [Elsevier, ISSN: 2214-7853].

63. Sukhjinder Singh Sandhu, Tejeet Singh and V.K. Gupta, **(2018)**, "Effect of Pressure Ratio on Tangential/Axial Stress in Thick Spherical Vessels", Journal of Emerging Technologies and Innovative Research (JETIR), 5(1), pp. 915-924 [ISSN-2349-5162]. UGC LISTED.

64. Sukhjinder Singh Sandhu, Tejeet Singh and V.K.Gupta, **(2018)**, "Secondary Stage Creep Deformations and Stresses in Thick Spherical Vessels Considering Plain Strain", Journal of Emerging Technologies and Innovative Research (JETIR), 5(4), pp. 834-845 [ISSN-2349-5162].

65. Rajinder Singh, R. K. Saxena, Kishore Khanna and V.K. Gupta **(2019)**, Modelling Creep Response of a Functionally Graded Rotating Disc with Exponential Reinforcement Gradient, Materials Today: Proceedings, Vol.18, Part 7, pp. 3891–3899 [Elsevier, ISSN: 2214-7853].

66. Sukhjinder Singh Sandhu, Tejeet Singh and V.K. Gupta **(2019)**, Analysis of Steady State Creep Behaviour in Spherical Vessels Made of Composite Material, Materials Today: Proceedings, Vol. 18, Part 7, pp. 3401–3408 [Elsevier, ISSN: ISSN 2349-5162].

67. Swarnjit Singh, Dharmpal Deepak, V.K. Gupta **(2019)**, Effect of Layering Pattern on the Mechanical Properties of Jute-Linen Reinforced Polypropylene Hybrid Laminated Composites, Materials Today: Proceedings, 18, pp. 4182–4189 [Elsevier, ISSN: 2349-5162].

68. Dharmpal Deepak, Navrattan Goyal, Pankaj Rana and V.K. Gupta **(2019)**, Effect of Varying Reinforcement Content on the Mechanical Properties of Hemp-Recycled HDPE Composites, Materials Today: Proceedings, Vol. 18, Part 7, 2019, pp. 5286-5291 [Elsevier, ISSN: 2349-5162].

69. Navjot Pal Singh, V.K.Gupta and Amrinder Pal Singh **(Available online 20 August 2019)**, Graphene and Carbon Nanotube Reinforced Epoxy Nanocomposites: A Review, Polymer, Volume 180, 10 October 2019, Article 121724 [Elsevier, ISSN: 0032-3861, IF: 4.432, 2022], Link: https://doi.org/10.1016/j.polymer.2019.121724.

70. Arisha Kashyap, Navjot Pal Singh, Shalini Arora, Vasundhara Singh and V.K. Gupta **(First Online: 03 January 2020)**, Effect of Amino-Functionalization of MWCNTs on the Mechanical and Thermal Properties of

MWCNTs/Epoxy Composites, Bulletin of Materials Science, 43: 43. [Springer, ISSN: 0250-4707 (print), eISSN: 0973-7669 (online), IF: 1.783, 2022]. Link: https://doi.org/10.1007/s12034-019-2012-0

71. Rajinder Singh, Ravindra Saxena, Kishore Khanna and V.K. Gupta **(2020)**, Creep Response of Rotating Composite Discs having Exponential, Hyperbolic, Linear and Constant Thickness Profiles, Defence Science Journal, 70(3), May 2020, pp. 292-298, DOI : 10.14429/dsj.70.14913 [DRDO, pISSN: 0011-748X, eISSN: 0976-464X, IF-0.707, 2020), https://doi.org/10.14429/dsj.70.14913

72. Rajinder Singh, R K Saxena, Kishore Khanna and V. K. Gupta **(2020)**, Assessment of Creep in Composite Disc having Exponential, Hyperbolic and Uniform Thickness Profiles, Materials Today: Proceedings, Vol. 26, Part 2, pp. 1972-1976 [Elsevier, ISSN: 2214-7853]: DOI: https://doi.org/10.1016/j.matpr.2020.02.431.

73. Navjot Pal Singh, V.K. Gupta and Amrinder Pal Singh **(2021)**, Effect of reinforcing amine functionalized multiwalled carbon nanotubes and graphene nanoplatelets in epoxy on electrical properties, Materials Today: Proceedings, Volume 38, Part 1, pp. 340-344 [Elsevier, ISSN: 2214-7853]: DOI: https://doi.org/10.1016/j.matpr.2020.07.418.

74. Navjot Pal Singh, V. K. Gupta, Amrinder Pal Singh and Bharti Sapra **(February 2021-In Press)**, Synergistic effects of graphene nanoplatelets and NH2-MWCNTs on cryogenic mechanical properties of epoxy nanocomposites", Polymer Testing, Volume 94, February 2021, Article 107032, pp. ????? [Elsevier, ISSN: 0142-9418, IF: 4.282, 2022], Link: https://doi.org/10.1016/j.polymertesting.2020.107032.

75. Manish Garg, Sujata Goyal and V.K. Gupta **(2021),** Creep Modeling in a Rotating FGM Disc, Advances and Applications in Mathematical Sciences, Vol. 20, Issue 12, pp. 3105-3111 (ISSN 0974-6803), https://www.mililink.com/upload/article/695081044aams_vol_2012_october_2021_a15_p3105-3111_manish_garg_and_sujata_goyal.pdf

76. Kishore Khanna, V. K. Gupta and Neeraj Grover **(2022)**, Influence of anisotropy on creep in functionally graded variable thickness rotating disc made of 6061Al-SiCw, The Journal of Strain Analysis for Engineering Design, Volume: 57, Issue 2, pp. 95-103 [Sage, ISSN: 0309-3247, IF 1.935, 2022] :https://doi.org/10.1177/0309324721999971.

(b) Books:

S. No.	Title	Authors	Publisher & Year of Publication
1.	Effect of Fiber Orientation on Mechanical Properties of Composites **(ISBN: 978-620-2-09551-8)**	Dharmpal Deepak Amanjot Singh **V.K.Gupta**	LAP LAMBERT Academic Publishing, Germany, September 2018
2.	Analysis of Creep in Functionally Graded Composite Cylinder **(ISBN: 978-3-659-69594-0)**	Manish Garg, Ashish Singla **Vinay Gupta**	LAP LAMBERT Academic Publishing, Germany, April 2015
3.	Mechanical Behaviour of Sisal fibre Reinforced HDPE Composites **(ISBN:978-3-659-50695-6)**	H.S. Salaria, D. Deepak, **Vinay Gupta**	LAP LAMBERT Academic Publishing, Germany, Dec. 2013
4.	Elements of Mechanical Engineering **(ISBN:81-8014-017-2)**	V.K.Jadon, **V.K.Gupta**	Standard Publishers Distributors, Delhi, 2003

(c) Hand Book Chapters:

S. No.	Title	Authors	Publisher and Year of Publication
1.	Book Chapter-15 (PP. 357-387): SURFACE ENGINEERING, in "Comprehensive Guide for Nanocoatings Technology, Volume 1: Deposition and Mechanism Series: Nanotechnology Science and Technology" (**Editor:** Mahmood Aliofkhazraei) **(ISBN: 978-1-63482-447-7)**	B. S. Saini, **V. K. Gupta**	Nova Science Publishers, Inc., Hauppauge, NY 11788, USA, 2015

(VINAY KUMAR GUPTA)