RESUME-August 2024

Prof. Rajesh Kumar Verma

***Ph.D.*, Jadavpur University Kolkata, India**
***C.Eng.* (Mechanical Engineering)**

Professor
Department of Mechanical Engineering
Harcourt Butler Technical University (HBTU) Kanpur
(UP Govt. Technical University)
Kanpur- 208002 (U.P.) India
Contact No.: +91-8400444068
Email: rkvme@hbtu.ac.in
Alternate Email: rajeshverma.mmmut@gmail.com
Personal web-links:
Orcid ID: 0000-0002-3973-4779

I have joined the prestigious HBTU Kanpur in the year 2022 through Direct Recruitment on the Post of Professor, MED

BRIEF SUMMARY

SCI/SCIE	Scopus/ESCI	Ph.D Successfully guided	Book Chapter(s)	Patents	Copyright Documents	Conference Paper(s)
40	43	06	21	16	04	76

Govt. sponsored R&D project Ongoing/Completed *(DST-SERB/CST/AICTE/MHRD and other Govt. agencies)*	As Project Principal Investigator (PI)	As Co-PI
13	08	05

SCI RESEARCH PUBLICATIONS (BEST FIVE ONLY)
(CORRESPONDING AUTHOR)

1. Prakhar Kumar Kharwar and **Rajesh Kumar Verma** *"Exploration of Nature Inspired Grey Wolf Algorithm and Grey Theory in Machining of Multiwall Carbon Nanotube/Polymer Nanocomposites"* ***Engineering with Computers, Springer Publications*** Volume 38, 1127-1148, July 2020, **SCI(IF 7.963)**

2. Jogendra Kumar, **Rajesh Kumar Verma** and Kishore Debnath, *"A new approach to control the delamination and thrust force during drilling of polymer nanocomposites reinforced by graphene oxide/carbon fiber"* ***Composite Structures, Elsevier Publications*** Volume 253, 112786, December 2020, **SCI(IF 5.407)**

3. Shivi Kesarwani and **Rajesh Kumar Verma**, *"Ant Lion Optimizer (ALO) algorithm for Machinability assessment during Milling of Polymer composites modified by Zero-dimensional Carbon Nano onions"* ***Measurement, Elsevier Publications*** Volume 187, 110282, **SCI(IF 3.927)**

4. Jogendra Kumar and **Rajesh Kumar Verma**, *"A novel methodology of Combined CompromiseSolution and Principal Component Analysis (CoCoSo-PCA) for machinability investigation of Graphene nanocomposites"* ***CIRP Journal of ManufacturingScience and Technology, Elsevier Publications,*** Volume 33, 143-157, May 2021, **SCI(IF 3.602)**

5. Jogendra Kumar and **Rajesh Kumar Verma**, *"Experimental investigation for machinability aspects of graphene oxide/CFRP nanocomposites and predictive modeling using hybrid approach"* ***Defence Technology, Elsevier Publications*** 2020, Volume 17 (5), 1671-1686, October 2021, **SCI(IF 3.172)**

COURSES TAUGHT AT :

UG LEVEL: ALL COURSES RELATED TO MATERIALS AND MACHINING.

PG/PH. D LEVEL: MACHINING SCIENCE, ADVANCE MATERIAL AND CHARACTERIZATION

- ***ADVANCE MATERIALS (UG EME-425)***
- ***ADVANCE MANUFACTURING PROCESS (PG EME540)***

FEW WORKS IN ACADEMIC AND RESEARCH

Achievements:

- Developed ***Materials and Morphology laboratory at MMMUT Gorakhpur from R&D sponsored project fund Cost Rs. 38.73 Lacs***
- Research project ***Ranked Second*** in Uttar Pradesh- Pollution Control Board (UPPCB) Gomti Nagar, Lucknow in a Hackathon "Beat Plastic Pollution" on 02/10/2018, out of total six hundred ninety-nine (**699**) project entries, ranked *second with Rupees Fifteen Thousand (Rs. 15000/-) cash prize.*
- *Qualified* ***GATE***

Awards:

- ***Two Best Research Paper Awards*** in 12th International Conference on Materials, Processing & Characterization (ICMPC-2021), 06th-09th October 2021, NITTTR Chandigarh, INDIA.
- ***Best Research Paper Award*** in International Conference on Progressive Research in Industrial & Mechanical Engineering (PRIME - 2021), 5th-7th August 2021, organized by NIT, Patna.
- ***Journal paper selected as best paper*** in the volume and Published as ***Vol. front Cover page*** in WSPC publications.

Letter of Recognition letters /Appreciation :

- ***01 no. Appreciation letter from Hon'ble Vice Chancellor MMMUT*** for cooperation as a member of the committee to reform the academic structure in ***NEP-2020.***
- ***05 nos. of Recognition letters from Hon'ble Vice Chancellor MMMUT*** for presenting diligent work towards research and development project work and academic responsibilities.
- ***02 Commendation from Govt. of India***

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<td>Research Excellence Award-2023</td>
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PROFESSIONAL ACHIEVEMENTS BRIEFLY:

- Received a ***Research excellence award,2024*** by Honourable Governor madam and Honourable Vice Chancellor, HBTU.
- Received a ***Research Excellence Award-2023*** by Honourable Vice Chancellor, HBTU for outstanding research work.

- Certificate **of** ***Recognition Editors' Choice for outstanding contribution to the Archives of Metallurgy and Materials (SCI)*** through the publication of your article titled: Effect of Zirconia and Graphene Nanoparticles Loading on Thermo-Mechanical Performance of Hybrid Polymer Nanocomposite.
- Received a ***certificate of appreciation for NAAC*** from Honourable Chancellor & Governor of Uttar Pradesh and Vice Chancellor, HBTU.
- Research project (Project ID-1099) titled 'Development of Modified Bio-Nano Composite Polymer Material for Biomedical Applications, received consolation prize of Rs 5000/- in CSTUP, Engineering Students Project Grant Scheme 2023-24, Lucknow on 27/04/2024, out of total Sixty (60) project entries.
- Received a certificate of appreciation from Honourable Vice Chancellor, HBTU Kanpur. for hard work and diligent effort for project titled Cost-effective Green Route for the Development of Carbon Nanofillers and Polymer Nanocomposites for Biomedical Applications: An Experimental Approach based on Waste to Wealth (Project [D: 2199] worth INR 18.08 lakhs sponsored by CST, Lucknow, Govt. of Uttar Pradesh, India.
- Appointed as ***Technical Expert in UP State level committee of MSME, Govt. of Uttar Pradesh*** from Mechanical engineering trade by Honourable Vice Chancellor, HBTU.
- Received a certificate of appreciation for the project titled 'A Novel Integrated Photocatalytic Approach for the Development of Solar Light-Driven Hydrogen Production and $C0_2$ Conversion into Solar fine chemicals', worth INR 21.10 lakhs sponsored by SERB-DST New Delhi, India. from Honourable Vice Chancellor, HBTU Kanpur.
- ***Granted one Patent (Patent No.449335)*** from the Patent Office, Government of India
- Received a certificate of appreciation for the project titled 'Development of Modified Bio-Nano Composite Polymer Material for Biomedical Applications ', worth INR 20000, sponsored by CST, Lucknow, Govt. of Uttar Pradesh, India. from Honourable Vice Chancellor, HBTU Kanpur.
- Received a certificate of appreciation for project titled 'Design and Development Of Cost-Effective Extruder For 3D Printing Filament ', worth INR 20000, sponsored by CST, Lucknow, Govt. of Uttar Pradesh, India. from Honourable Vice Chancellor, HBTU Kanpur.
- ***Guest of Honour*** at Two-week STC on "***Recent Advances in Mechanical Engineering" on 01.05.23 in Mechanical Engineering Department***, NIT- Patna.
- ***Chaired a Technical session*** on Topic "***Processing of advanced Materials" during AIMTDR 2023***, IIT-BHU Varanasi.
- ***Best Research Paper Award*** in International Conference on Progressive Research in Industrial & Mechanical Engineering (PRIME - 2021), 5^{th} -7^{th} August 2021, organized by NIT, Patna.
- ***Two Best Research Paper Awards*** in 12^{th} International Conference on Materials, Processing & Characterization (ICMPC-2021), 06^{th}-09^{th} October 2021, NITTTR Chandigarh, INDIA.
- Research project **ranked second** in Uttar Pradesh- Pollution Control Board (UPPCB) Gomti Nagar, Lucknow in a Hackathon "Beat Plastic Pollution**"** on 02/10/2018, out of

total six hundred ninety-nine (**699**) project entries, ranked *second with Rupees Fifteen Thousand (Rs. 15000/-) cash prize.*

- Cover page award international journal (*World scientific*)
- Successfully completed one Govt. of India sponsored project of cost Rs. 13,90,000/- (**File Sanction No**. I-15011/9(29)/HRD/2008/1504 Dated 25/11/2013**.**
- Appointed as ***MoU Nodal Coordinator*** at HBTU Kanpur between LNM INSTITUTE OF INFORMATION TECHNOLOGY, Jaipur, and HARCOURT BUTLER TECHNICAL UNIVERSITY, Kanpur signed on May 28, 2024.
- Appointed as ***Technical Expert for MSME*** from Mechanical engineering trade from Mechanical Engineering Department of HBTU By Honourable Vice Chancellor, HBTU.

R&D Project Fellow:

S.No.	Name of the candidate	Project Area	Status/Remarks	Role
1.	**Dr. Devendra Kumar Singh**	*Carbon Nanofillers modified polymer nanocomposites*	**Sponsored R& D Project fellow**	**Project PI**

DETAILS OF RESEARCH GUIDANCE (Ph.D/M.Tech/B.Tech)

Dr. Rajesh Kumar Verma,* Ph.D. Supervised as *Sole/ Principal Supervisor: -

S.No.	Name of the candidate	Broad Area/Thesis title	Status/Remarks
1.	**Shri Prakhar Kumar Kharwar (Registration no. 2017058003)**	*Development and Experimental Investigation of Carbon Nanoparticle Reinforced Polymer Nanocomposites*	**Awarded** 2020
2.	**Shri Jogendra Kumar (Registration no. 2018058003)**	*Development of polymer nanocomposites reinforced by graphene oxide/carbon fiber: Machinability evaluation and damage control module*	**Awarded** 2021
Ph.D. Supervised as *Principal/Co Supervisor*			

3	**Shri Devendra Kumar Singh (Full Time)**	Development and Tribological Investigation of reduced Graphene Oxide / Zirconia modified Polymer Composites for Biomedical Applications	**Awarded 2024**
4	**Shri Kuldeep Kumar (Full Time)**	Machinability Evaluation and Single Lap Riveted Joint Assessment in Carbon Nanotube Modified Glass Fiber Reinforced Epoxy Composite	**Awarded 2024**
5	**Shri Shivi Kesarwani (Full Time)**	Investigation on Machining Induced Damages of Modified Fibrous Polymer Nanocomposites: Exploration of Drilling, Milling and Abrasive Waterjet Machining Processes	**Awarded 2024**
6	**Shri Balram Jaiswal (Full Time)**	Utilization of Textile Industries (Carpet) Waste for the Development of light weight Structural Polymer Composites	**Awarded 2024**

Ph.D Ongoing:

S.No.	Name of the candidate	Broad Area/Thesis title	Status/Remarks	Role
1.	**Shri Virat Mani Vidhyasagar (Registration no. 2021058005) Full Time**	*Stacking analysis of polymer composites in different configuration*	**Ongoing** Registered at MMMUT Gorakhpur on 17/11/2021	**Co-Supervisor**
2.	**Shri Shailesh Kumar Gupta (Registration no. 220310007) Part Time**	*Advanced machining of laminated nanocomposites*	**Ongoing** Registered at HBTU Kanpur on **20/09/2022**	**Supervisor**

M. Tech. thesis Awarded:			
S.No.	**Name of the student(s)**	**Broad Area**	**Academic Year**
1.	***Rajneesh Kumar*** M. Tech. **(Registration no.** 2016053118**)**	Spring back Analysis of Work-Hardening Material under Axial and Torsional Loading.	2017-18
2.	***Ajay Kumar Yadav*** M. Tech. **(Registration no.** 2017053103**)**	Machining of Graphite Reinforced Composites	2018-19
3.	***Sashmit Yadav*** M. Tech. **(Registration no.** 2017053112**)**	Electric Discharge Machining of Inconel X-750	2018-19
4.	***Vikas Sahani*** M. Tech. **(Registration no.** 2017053118**)**	Machining performance optimization of Graphite Reinforced Composites	2018-19
5.	***Kuldeep Kumar*** **(Registration no.** 2018053108)	Fabrication and Investigation on Machining of MWCNT Doped Epoxy/GFRP composite: Some Case Experimental Research	2019-20
6.	***Puranjay Pratap Singh*** **(Registration no.** 2018053111)	Experimental Investigation on Milling of Polymer Nanocomposites	2019-20
7.	***Som Nath Pandey*** **(Registration no.** 2018053115)	Development of composites using carpet waste for light weight applications	2019-20
8.	***Umang Dubey*** **(Registration no.** 2019053122)	Development and Characterization of PMMA Based Bio-nanocomposite	2020-21
9.	***Ankit Dhar Dubey*** **(Registration no.** 2019053104) ***(Topper & Gold Medalist)***	Analysis of Thrust, Torque and Delamination during drilling operation on hybrid composite using multiple optimization techniques	2020-21

10.	***Virat Mani Vidhyasagar*** **(Registration no.** 2019053123)	Development and characterization of Hydroxyapatite and multi-walled carbon nanotube reinforced pmma bone cement nanocomposite for othopedics applications	2020-21
11.	***Shivam Dubey*** **(Registration no.** 2020053114)	Development and characterization of polymer nanocomposites reinforced by graphene oxide/carbon fiber	2021-22
12.	***Taufeeq Ahmad*** **(Registration no.** 2020053115)	Development and characterization of polymer nanocomposites reinforced by graphene oxide/carbon fiber	2021-22
13.	***Uma Dutt Choubey*** **(Registration no.** 2020053116) ***(Topper & Gold Medalist)***	Fabrication and characterization of HDPE based polymer nanocomposites reinforced by SiC nanoparticle	2021-22

COURSES TAUGHT:

Theory Courses

UG Level (B.Tech)

1. Quality Management
2. Engineering Materials
3. Energy Management
4. Manufacturing Science and Technology
5. Engineering Mechanics
6. Industrial Manufacturing Processes
7. Non-Conventional energy Resources
8. Textile Mechanics and Machinery
9. Elements of Mechanical Engg.
10. Total quality management
11. Production Planning & Control
12. Product Design & Development
13. Non-Destructive Testing

Laboratory/Practical

1. Engineering Mechanics Lab
2. Workshop Technology
3. Elements of Mechanical Engg.

4. Engineering Materials Lab.
5. Automobile lab
6. Machine Design

M.Tech /Ph.D level

1. Metal cutting and Tool design
2. Machining Science
3. Design of Experiments
4. Product design and development

AREA OF RESEARCH:

Production Engineering, Manufacturing Processes, Carbon nano materials reinforced composites, FRP Composite Material, Modelling and Optimization of Production Processes

ADMINISTRATIVE RESPONSIBILITIES FROM 2018 TO JUNE 2022 (MMMUT)

S.No.	Duration	Administrative Role
1.	**2018, April -Feb. 2020**	**NSS Coordinator,** MMM university of Technology Gorakhpur
2.	**2018-Cont**	**PGS & R Convener** Mechanical Engineering Department, MMMUT Gorakhpur
3.	**July 6-8, 2018**	**MRC Department level activities in charge** for Malaviya Research conclave (MRC2018) MMMUT Gorakhpur
4.	**July 2018**	**Officer In-charge** (O/c) Machine Design (computer) laboratory
5.	**23-24 August 2018**	**Coordinator**, Convocation related departmental activity
6.	**02-21 August 2018**	Member of Discipline and security committee in **IPNS 2018**
7.	**03, 06, 07 August 2018**	Coordinator of different activities in IPNS- 2018
8.	**01/10/2018**	**Coordinator**, Swachh Bharat Abiyan (SBA) University level
9.	**02/10/2018**	**Coordinator**, Cleanness Drive University level
10.	**23/10/2018**	**Coordinator**, Expert Talk 23/10/2018, MED MMMUT
11.	**02/10/2018**	**Coordinator**, Unnat Bharat Abiyan (UBA)
12.	**31/10/2018**	**Coordinator** Rashtriya Ekta Diwas (Unity Day) and Rashtriya Sankalp Diwas
13.	**16-17 November 2018**	**Coordinator** Academic Audit, MED MMMUT

14.	**2018**	**Coordinator** NIRF, MED MMMUT
15.	**16/12/2018**	**Coordinator RSD-2018**
16.	**17-23 December 2018**	**Coordinator STTP AME-2018**
17.	**01-02 Feb. 2019**	**Executive committee member,** 56th Annual Sports Meet (ASM), MMMUT
18.	**01-02 Feb. 2019**	**Jury** of various events of 56th Annual Sports Meet (ASM), MMMUT
19.	**01 Feb. 2019**	**BoS** MED, MMMUT
20.	**28-29 March 2019**	**Organising Secretary** **National Conference FME-2019**
21.	**23/07/2019-30/07/2019**	**Workshop on Jal Shakti- A inititaitive of AICTE, Govt. of India**
22.	**05/08/2019-08/08/2019**	**Three days seminar on "*Role of NSS in student life*"**
23.	**01/09/2019-15/09/2019**	**Workshop and seminar on single use plastic**
24.	**10/12/2019 to 26/12/2019**	**Technical workshop under Unnat Bharat Abiyan-A initiative of MHRD Govt. of India**
25.	**30/12/2019**	**Blood donation camp at MMMUT Gorakhpur**
26.	**14/02/2020 to present**	**Vice-chairman, Council of student activities (CSA)**
27.	**February 2020**	**Deputy Coordinator** **Malaviya Research Conclave (MRC-2020)**
28.	**May 2020 to June 2022**	**Coordinator, Nodal centre Virtual lab-MMMUT supported by IIT Kanpur**
29.	**April 2021 to June 2022**	**Associate Dean Undergraduate Studies (AD-UG), MMMUT**

ADMINISTRATIVE RESPONSIBILITIES FROM 2022 TO present (HBTU Kanpur)

1.	**NAAC coordinator**	**Lead Indicator Criteria-3, NAAC**
2.	**Classes coordination work**	**University Coordinator**
3.	**Finance Controller, HBTU**	**May-Oct, 2023**
4.	**Additional Controller of Examinations**	**September 2024 to present**

5.	**Center Supdtt. HBTU Exam**	**September 2024 to present**

COURSE DEVELOPMENT:

1. NEP 2020 reform committee member at MMMUT Gorakhpur
2. Prepared course structure and syllabi for B.Tech (Mechanical Engineering) and M.Tech (Computer integrated manufacturing) Program during Jan2018 to July 2018.
3. B. Tech and M. Tech subject's modification related to Production engineering, TQM, Engineering Materials, Machining Science, Design of Experiments (DoE), CAPP, Advanced Material and Characterization etc.

LAB MODERNIZATION:

Materials and Morphology lab. Developed through Govt. sponsored project (UPCST, CRS, AICTE, MoT Govt of India agencies) at MED, MMMUT Gorakhpur, India

TECHNICAL MEMBERSHIP:

1. Life Associate Member of International Association of Engineers (IAENG) **Membership Number: 114989**
2. Life Associate Member of International Association of Computer Science and Information Technology, Mechanical Engineering Society (MES) **Membership Number: 80347235**
3. Senior member of Universal Association of Mechanical and Aeronautical Engineers (UAMAE) **Membership Number: SNM1005741**
4. Member of DAAAM International Vienna, **Membership Number: DPN64046**
5. Academic Society of Science Engineering and Technology (ASSET), Annual Member ID- AM1809F05
6. Life Member of Institution of Engineers (India) (MIE)**: M-1727995**

INVITED TALKS/EXPERT LECTURES

1. Delivered invited talk (Three hours) on the topic "***Theory of cutting tools***" and "***Basics of machining***" dated-17/07/2017, invited by Programme Coordinator of course ID

CU51, Department of Mechanical Engineering, **NITTTR Kolkata**, Under MHRD, Govt. of India, Salt Lake City, Kolkata – 700106

2. Delivered expert lectures (Three hours) on the topic "***Basics of machining***" dated-18/07/2017 respectively invited by **NITTTR Kolkata**, Under MHRD, Govt. of India, Salt Lake City, Kolkata – 700106
3. Delivered expert talk of one hour duration on "***Optimization methods used in manufacturing technology***" on 04/10/2017 invited by Head of Department (HoD), Department of Mechanical Engineering Ashoka Institute of Technology & Management Varanasi – 221007
4. Delivered expert talk on "***NSS- its role & objective in student life***" on 04 August 2018 in Induction program for new students (IPNS 2018)
5. Delivered guest lecture on "***Machining of composite and metals***" on 04/10/2017 invited by Ashoka Institute of Technology & Management Varanasi – 221007
6. Delivered expert lecture on "***Machining performance optimization in drilling and turning of composites materials***" on 24/03/2018, short term training program (STTP), Computational and Manufacturing Challenges in Mechanical Engineering (CMCME-2018) organised by MED, MMMUT Gorakhpur UP
7. Delivered expert lecture on "***Machining of GRRP composite***" on 26/6/2018 in Faculty Development Program (FDP) on **"**Modern Optimization Techniques for Engineering and Scientific Applications**"** from 25th June to 29th June, 2018, organised by Department of Mechanical Engineering, Ashoka Institute of Technology & Management Varanasi – 221007
8. Delivered expert lecture on "***Multi-response Optimization modules in manufacturing engineering***" on 26/6/2018 in Faculty Development Program (FDP) on **"**Modern Optimization Techniques for Engineering and Scientific Applications**"** from 25th June to 29th June, 2018, organised by Ashoka Institute of Technology & Management Varanasi – 221007 .
9. Delivered expert lecture on "***Taguchi based Multi-response Optimization"*** on 22/12/2018 in "Short Term Training Programme (STTP)" on "Advancements in Mechanical Engineering (**AME-2018**)" during December 17-23, 2018, sponsored by TEQIP-III, MMMUT Gorakhpur, India.
10. Delivered expert lecture On Machining of FRP (Epoxy) composites: A multi-objective optimization approach on 30-03-2019 in Short Term Course On the "Recent Advances

and Industrial Applications of Advanced Machining Processes" (RAIAMP-2019)" during March 26-30, 2019, Organised by Mechanical Engg. Department, BIET Jhansi UP.

11. Delivered expert talk on Processing and characterization of composite materials at Department of Mechanical Engineering, SVNIT Surat on dated 11/10/2019.

12. Delivered expert lecture On Synthesis, functionalization and Machinability of polymer composites on 24-03-2020 in TEQIP-III Sponsored One Week Short Term Course On Advanced Trends In Manufacturing & Material Characterization (TMMC-2020) during 24th Feb - 28th Feb 2020, organised by Department of Mechanical Engineering Institute of Engineering & Technology, Bundelkhand University, Jhansi.

13. Delivered expert lecture on "Polymer composites and its machining behaviour" on 25-06-2020 in TEQIP-III Sponsored One Week Online Faculty Development Program on Advances in Mechanical Engineering during 22nd June - 26th June 2020, organised by Department of Mechanical Engineering, Lok Nayak Jai Prakash Institute of Technology, Bihar State Govt. Institute, Chapra, Bihar.

14. Delivered expert lecture on "Virtual labs for Engineering Institution" on 25-06-2020 in TEQIP-III Sponsored Five Days National Workshop on Practical Learning Through Virtual Lab during 20th July - 24th July 2020, Jointly Organized by Department of Mechanical Engg. & Department Of Civil Engg., Institute of Engineering & Technology, Dr. Rammanohar Lohia Avadh University, Ayodhya, Uttar Pradesh.

15. Delivered expert lecture on "Role of Novel Polymer Nano-Composites Reinforced by MWCNT/Go for Emerging Engineering Applications" on 21-07-2020 in One Week Online Faculty Development Program on Emerging Trends, Issues and Chalages in Next Generation Technology 21st July - 25th July 2020, organised by Department of Mechanical Engineering, Rama University, Private Deemed to be University, Kanpur, Uttar Pradesh.

16. Delivered expert lecture on "Machining of Polymer Nanocomposites" in TEQIP-III Sponsored One Week Online short-term course On Advances in Design Manufacturing Engineering 03rd August - 07th August 2020, organised by Department of Mechanical Engineering, National Institute of Technology, Patna, Bihar.

17. Delivered expert lecture on "Tools for graph, data plotting and designing" in TEQIP-III Sponsored One Week Online short-term course On Tools and Scientific Communication for Research Article and Proposal Writing 19th September – 23rd

September 2020, organised by Department of Mechanical Engineering, G B PANT Institute of Engineering & Technology, Pauri (An Autonomous Institute of Uttarakhand Technical University, Government of Uttarakhand), Uttarakhand

18. Delivered expert lecture on "Polymer composites and its machining behaviour" in TEQIP-III Sponsored One Week Online short-term course On Advanced Manufacturing Processes – 2020 (AMP-2020)16th November – 20th November 2020, organised by Department of Mechanical Engineering, Department of Mechanical Engineering National Institute of Technology Manipur, Langol, Imphal.

19. Delivered expert lecture on "Polymer Nano-Composites: Machining and Machinability" on 12-02-2021 in One Week Online Faculty Development Program on "Novel Materials", Sponsored by AICTE Training and Learning (ATAL) Academy, 08th February - 12th February 2021, organised by Department of Mechanical Engineering, National Institute of Technology Patna, Bihar.

20. Delivered expert lecture on "Polymer Nanocomposites Reinforced by Carbon nano materials (CNMs) for Sustainable Engineering Applications" on 28-05-2021 in Two days International Conference on Sustainable Innovation in Mechanical Engineering (ICSIME-2021), 28th May - 29th May 2021, organised by Department of Mechanical Engineering, Rama University, Private Deemed to be University, Kanpur, Uttar Pradesh.

21. Delivered online expert talk on topic "Machining of MWCNT/Polymer nanocomposites" on 5 June 2021, at Faculty of Engineering, Shri Rawatpura Sarkar University Raipur, Chhattisgarh, India

22. Delivered expert lecture on "Polymer nanocomposites modified by graphene" in Online Faculty Development Program on Green Technology & Sustainability Engineering, Sponsored by AICTE Training and Learning (ATAL) Academy during 10 – 14 January, 2022 organised by Department of Mechanical Engineering, National Institute of Technology Manipur, India

23. Delivered expert lecture on "Novel Polymer Nano Composites for Structural Application" on 01/05/2023, in Two weeks online Short-Term Course (STC) on "Recent Advances in Mechanical Engineering (RAME-2023)" organized by the Department Mechanical Engineering, NIT-Patna, India during 01-10 May, 2023 in hybrid mode.

24. Delivered expert lecture on “Laminated Polymer nanocomposites: Fabrication and Machining aspect” in 9th international congress on engineering, architecture and design, 2022, Turkey Istanbul during May 14-16, Istanbul.

25. Delivered expert lecture on “Technology for a Better Tomorrow: Exploring Opportunities and Challenges" at UPCT Lucknow on 11 may 2024, technology day.

26. Delivered expert lecture on “Manufacturing aspect and advanced characterization of polymer composites” at FDP in HBTU Kanpur in Plastic engineering department, 23 may 2024.

27. Delivered expert lecture on “Development and machining investigation of polymer composites modified by Carbon nano materials” at Sant Longowal Institute of Engineering & Technology: Deemed university in Longowal, Punjab,on 29 July 2024.

28. Delivered expert lecture on “Production and machining investigation of polymer composites modified by Carbon nano materials” in 5 Days (26-30 September 2024) FDP on "Advanced Materials, Manufacturing & Energy System" at Jagadambha College of Engineering & Technology, Yavatmal, on 28 September 2024.

SESSION CHAIR IN INTERNATIONAL / NATIONAL CONFERENCE/ POSTER/SEMINAR

1. International Conference on Energy, Environment; Material Sciences (ICE2M), IEEE conference 1st -3rd December 2019 Organized by Department of Mechanical Engineering, Madan Mohan Malaviya University of Technology, Gorakhpur, Uttar Pradesh

2. International Conference on “Recent Advances in Manufacturing” (RAM-2020) 03rd – 05th July 2020 Organized by Department of Mechanical Engineering, S. V. National Institute of Technology, Surat, Gujrat

3. International Conference on “Recent Advances in Manufacturing” (RAM-2021) 10^{th} – 12^{th} June 2021 Organized by Department of Mechanical Engineering, S. V. National Institute of Technology, Surat, Gujrat

4. International Conference on Progressive Research in Industrial & Mechanical Engineering (PRIME - 2021), 5th -7th August 2021, organized by NIT, Patna

5. International Conference on Topic “Processing of advanced Materials” during AIMTDR 2023, organized by IIT-BHU Varanasi.

ACADEMIC INTERACTION WITH OTHER UNIVERSITIES/ ORGANISATIONS:

1. IIT Delhi, DTU Delhi, D.I.T.E Govt. of NCT Delhi, JNU New Delhi.
2. NIT Rourkela, NIT Meghalaya, NIT Patna, NIT Bhopal, MNNIT Allahabad
3. Jadavpur University Kolkata, NITTTR Kolkata, Under MHRD, Salt Lake City, Kolkata – 700106, West Bengal
4. HBTU Kanpur UP, BIET Jhansi UP
5. Bundelkhand University, Jhansi-284001, MJP Rohilkhand University Bareilly
6. Ashoka Institute of Technology & Management Varanasi – 221007, SR Group of Institutions Jhansi, KIT Varanasi.
7. Knit Sultanpur
8. Dr. Ram Manohar Lohia Avadh University, commonly known as Avadh University, Faizabad, Ayodhya

OTHER ASSIGNMENT(S):

1. **Technical committee member** of IEEE Sponsored 2nd International Conference on Control Computing Communication and Materials (ICCCCM-2016) 21st– 22ndOctober, 2016 jointly Organized by United College of Engineering & Research, Allahabad And Asian Institute of Technology, Thailand.
2. **Research paper reviewer** of IEEE Sponsored International Conference (IEEE Conference ID – 39191)
3. **Research paper reviewer of Textile Research Journal of** *sage publications* (http://www.sagepublications.com/)
4. **Research paper reviewer of** *Int. J. of Business Intelligence and Data Mining*, Inderscience Publishers Ltd. (https://indersciencesubmissions.com/)
5. **Research paper reviewer of** International Journal of Engineering Technology, Management and Applied Sciences (IJETMAS) ISSN 2349-4476. (http://conferenceinfo.org/aboutus.php)
6. **Research paper reviewer of** International Journal of Engineering, Technology, Science and Research (IJETSR) ISSN 2394-3386. (www.conferenceinfo.org)
7. **Research paper reviewer & Technical Member of** International Conference **ICIIF-2018**, organized by IITRAM Ahmedabad, Gujrat from 18-19 May 2018
8. **Research paper reviewer& Technical Member** International Conference **IC-RIDME-2018**, organized by NIT Shillong Meghalaya from 8-10 Nov. 2018.

TRAINING PROGRAMME/STC/WORKSHOP/SEMINAR ORGANIZED:

1. **File Sanction No**.I-15011/9(29)/HRD/2008/1504 Dated 25/11/2013
   Name of Project: Two nos. of Training programme under component "training through established institution" under Human Resource Development Scheme (HRD) scheme of Ministry of Textiles.
   Sponsored by: Ministry of Textiles, Govt. of India
   Cost of Workshop: 13, 90,000 (Thirteen lakhs nineteen thousand only)
   Two Nos. workshops organized as under:
   One month duration total No. of Candidates trained: One hundred twenty candidates (120) From 01/11/2014 to 30/11/2014
   Four-month Duration total No. of Candidates trained: Forty candidates (40) From 01/11/2014 to 15/03/2015
2. **Organising Secretary** (Centre Incharge) for one day seminar on 14 April 2017
   Name of Seminar: "BHIM app and its application"
   File no. 12012/3/2013-General, Dated 31/03/2017
   Sponsored by: Ministry of Textiles.
3. **Coordinato**r of seven days "**Short Term Training Programme (STTP**)" on "Advancements in Mechanical Engineering (**AME-2018**)" during December 17-23, 2018, sponsored by TEQIP-III, MMMUT Gorakhpur, India.
4. **Coordinato**r of one day technical event Research Scholar Day (**RSD-2018)** on 16 Dec. 2018, Mechanical Engineering Department, sponsored by TEQIP-III, MMMUT Gorakhpur, India.
5. **Organising Secretary** of **National Conference** on Futuristics in Mechanical Engineering (FME-2019) during March 28-29, 2019 sponsored by TEQIP-III, MMMUT Gorakhpur, India.
6. **Deputy Coordinator** of **National level seminar** in the series of Fourth malaviya research conclave (**MRC-2020**) during Feb. 22-24, 2020 sponsored by TEQIP-III, MMMUT Gorakhpur, India.

WORKSHOP/SHORT-TERM COURSES ATTENDED:

1. QIP short term course on "Emerging Trends in Carbon Nanotechnology", November 07-12th, 2011 organized by Department of Mechanical Engineering, Indian Institute of Technology **IIT-Kanpur**, Kanpur-208016, UP, INDIA (Sponsored by QIP-AICTE)

2. Quality Improvement & Continuing Education Programme (QIP-CEP), Short Term Course on "Advanced Steel Design (October 8-12, 2012)" organized by Department of Civil Engineering Indian Institute of Technology **IIT-Delhi**, Delhi Hauz Khas, New Delhi-110016 INDIA (Sponsored by QIP-AICTE)
3. Short Term Course on "Multi-Objective Optimization Methods and Applications in Manufacturing (MOOMAM-2014)" held during June 6-8, 2014, organized by Department of Mechanical Engineering, National Institute of Technology **(NIT),** Rourkela-769008
4. Short Term Course on "Numerical and optimization Technique (NOT-2015)" from September 30th to October 4th, 2015, organized by Department of Civil Engineering Motilal Nehru National Institute of Technology **(MNNIT),** Allahabad UP, INDIA
5. Short Term Course on "advances in Design & Manufacturing (ADM-2016)" (Sponsored by TEQIP II) from July 04-10, 2016 organised by Mechanical Engineering Department, Madan Mohan Malaviya University of Technology**(MMMUT)** Gorakhpur-273 010, (U.P.)
6. Workshop on "Opportunities and Challenges for Industry- Institute interface" from 23-24 July 2016, organized by Indian Institute of Carpet Technology (IICT) Bhadohi Under Ministry of Textiles, Govt. of INDIA, Chauri Road, Bhadohi-221401 UP
7. Short term course on "Technological Advancement of Polymer Nanocomposites" from 04-08 April 2019, organized by Center for Development of Technical Education, Indian Institute of Technology (IIT) Kanpur, UP
8. Workshop on "Panel of Confrence Organizers (POCO-2019)" on 25 September 2019, organized by IEEE-UP Section (INDIA) at Madan Mohan Malaviya University of Technology, Gorakhpur, UP
9. Short term course on "Research Method and Data Analysis Using SPSS & AMOS" from 27-31 January 2020, organized by Madan Mohan Malaviya University of Technology, Gorakhpur, UP
10. One Week Pedagogical Training Program on "Curriculum design, Delivery and Assessment for Outcome Based Education" from 11-16 May 2020, organized by Internal Quality Asurance Cell (IQAC), Madan Mohan Malaviya University of Technology, Gorakhpur, UP

List of Publications

SCI/SCIE	Scopus/ESCI/SCImago	Book Chapter(s)	Patents	Copyright Documents	Conference Paper(s)
40	**43**	**21**	**16**	**04**	**76**

National/International Patents

1. ***Indian Patent 202111012813:*** *"Method for Synthesis of Carbon Nano Onions (CNOs)"***,** March 24, 2021: ***Published***
2. ***Indian Patent 202111025285:*** *" Graphene Oxide and Carbon Fiber Reinforced Nanocomposite Material "***,** June 20, 2021: ***Published***

3. ***Indian Patent 202111032430:*** *" Method of Fabrication of a Polymer Composite from Polyester Carpet"***,** July 20, 2021: ***Published***
4. ***Indian Design Patent 356986-001:*** *" Tiles"***,** January 19, 2022: ***Accepted***
5. ***Indian Design Patent 361488-001:*** *" EMF Reduction Box"***,** March 29, 2022: ***Accepted***
6. ***Indian Design Patent 361489-001:*** *" Electromagnetic Field Reduction Box Cap "***,** March 29, 2022: ***Accepted***
7. ***Indian Design Patent 365180-001:*** *" Modified Acetabular Cup Liner Without Fastening Mechanism "***, 2022: Accepted**
8. ***Indian Design Patent 366426-001:*** *" Multi-Row Paddy Transplanting Machine"***,** 2022: ***Accepted***
9. ***Indian Design Patent 381036-001: "****Anti-Topple FRP Road Safety Barriers"***,** March 07, 2023: ***Accepted.***
10. ***Indian Patent 202341035739 A: "****Shape free solar panel"***,** June 30, 2023: ***Application Published.***
11. ***Indian Design Patent 389505-001: "****GRASS AND LEAF TRIMMING DEVICE"***,** July 03, 2023***: Application Published.***
12. ***Indian Patent 202341039958 A: "****Spiral Air Distribution System in Updraft Gasifier"***,** September 22, 2023: ***Application Published.***
13. ***Indian Design Patent 396547-001: "****Modified controlled irrigation system"***,** October 04, 2023***: Application Published.***
14. ***Indian Design Patent 395775-001: "****Adjustable Orthopedic Screw"***,** September 09, 2023***: Application Published.***
15. ***Indian Design Patent 412441-001: "****Modified Extruder Design for Nanocomposite Polymer Material Extrusion"***,** April 02, 2024***: Application Published.***
16. ***Indian Design Patent 427073-001: "****Solar panel design mimicking natural photosynthesis"***,** August 14, 2024***: Application Submitted.***

National/International Copyrights

1. **Diary No.:** 11514/2021-CO/L, **Registration Number:** L-107279/2021, **Title:** MWCNT/Epoxy Nanocomposites, **Author:** Dr. Rajesh Kumar Verma, **Status:** Registered, **Dated:** 03/09/2021
2. **Diary No.:** 11506/2021-CO/L, **Title:** Structural Composite Material Developed from discorded Carpet, **Author:** Dr. Rajesh Kumar Verma, **Status:** Registered, **Dated:** 22/05/2021
3. **Diary No.:** 13755/2021-CO/L, **Title:** MWCNT-HA-PMMA bone cement Nanocomposites, **Author:** Dr. Rajesh Kumar Verma, **Status:** Submitted, Dated: 22/06/2021
4. **Diary No.:** 3790/2022-CO/L, **Title:** Structural Nanocomposite Developed From Discarded Jute Carpet And MWCNT Nanomaterial., **Author:** Dr. Rajesh Kumar Verma, **Status:** Submitted, Dated: 21/02/2022

Books/Chapter contributed to reputed publishers

1. **Rajesh Kumar Verma**, Prakhar Kumar Kharwar, Arpan Kumar Mondal, Kumar Abhishek and Jogendra Kumar,(2020) Exploration of MOORA Based Hybrid Taguchi Method for

Multi-response Optimization—A Case Study, *Advances in Mechanical Engineering*, Lecture Notes in Mechanical Engineering, pp 515-525 **First Online:** 17 January 2020, **Online ISBN**978-981-15-0124-1, **Print ISBN**978-981-15-0123-4, **DOI:** https://doi.org/10.1007/978-981-15-0124-1_47, **Publisher Name:** Springer, Singapore.

2. Vikas Kumar, **Rajesh Kumar Verma**,(2020) **"**Utility Theory Embedded Taguchi Optimisation Method in Machining of Graphite Reinforced Polymer Composites (GRPC)" Advances in Intelligent Systems and Computing book series (AISC, volume 979), **First Online**-08 April 2020, **Print ISBN**978-981-15-3214-6, **Online ISBN**978-981-15-3215-3, **DOI:** https://doi.org/10.1007/978-981-15-3215-3_43, **Publisher Name:** Springer, Singapore

3. Vikas Kumar, **Rajesh Kumar Verma**,(2020) **"**PCA-GRA Coupled Multi-Criteria Optimization Approach in Machining of Polymer Composites" Advances in Intelligent Systems and Computing book series (AISC, volume 979), **First Online**-08 April 2020, **Print ISBN**978-981-15-3214-6, **Online ISBN**978-981-15-3215-3, **DOI:** https://doi.org/10.1007/978-981-15-3215-3_47, **Publisher Name:** Springer, Singapore

4. Jogendra Kumar, **Rajesh Kumar Verma** and Prateek Khare (2020) **"**Graphene functionalized Carbon/Glass fiber reinforced polymer nanocomposites: Fabrication and Characterization for manufacturing applications", in Handbook Of Functionalized Nanomaterials: Environmental Health and Safety , **Publisher Name:** Elsevier Inc. Publication, **DOI:** 10.1016/B978-0-12-822415-1.00011-1

5. Prasanth Kottapalli, Rahul Narkhede, Harshit K. Dave, Himanshu V. Patel, **Rajesh Kumar Verma** (2021) "Experimental and Simulation Study on Permeability of Hybrid Composite", in Advances in Manufacturing Processes. Lecture Notes in Mechanical Engineering. **Publisher Name:** Springer, Singapore. **DOI:** 10.1007/978-981-15-9117-4_29

6. Shivi Kesarwani, Vinay Kumar Patel, Vijay Kumar Singh and **Rajesh Kumar Verma**, Prakhar Kuma Kharwar (2022) **"**Recent trends in the manufacturing of reduced Graphene oxide modified epoxy nanocomposites as advanced functional material", in Trends in Fabrication of Polymers and Polymer composites, **Publisher Name:** AIP Publications, USA, **DOI:** 10.1063/9780735423916_009

7. Prakhar Kumar Kharwar, **Rajesh Kumar Verma** and and Abhishek Singh (2022) **"**Synthesis of catalyst-free Carbon Nano Onions (CNOs) for advanced functional materials", in Trends in Fabrication of Polymers and Polymer composites, **Publisher Name:** AIP Publications, USA, **DOI:** 10.1063/9780735423916_008

8. Sanjeev Kumar, Vinay Kumar Patel and **Rajesh Kumar Verma** (2020) **"** Importance of Chemical Treatments of Natural Fibers in Fabrication of High-Performance Natural Fiber-Reinforced Polymer Composites", in Trends in Applications of Polymers and Polymer composites, **Publisher Name:** AIP Publications, USA, **DOI:** 10.1063/9780735423916_010

9. Umang Dubey, Shivi Kesarwani, Panagiotis Kyratsis and **Rajesh Kumar Verma**, "Development of modified Polymethyl methacrylate and Hydroxyapatite (PMMA/HA)

Biomaterial composite for Orthopaedic products" In Advances in Product Design Engineering, **PP.** 159–178**, Publisher Name:** Springer Nature, **DOI:** 10.1007/978-3-030-98124-2_7

10. Jogendra Kumar, Shivi Kesarwani, Balram Jaiswal, Kaushlendra Kumar, Devendra Kumar Singh, Kuldeep Kumar, Rahul Vishwakarma and **Rajesh Kumar Verma** (2022) **"**Study on Drilling behavior of Polymer Nanocomposites modified by Carbon nanomaterial with Fiber: A Case study" in Computational Intelligence in Manufacturing, **PP.** 87–109**, Publisher Name:** Elsevier Inc. Publication, **DOI:** 10.1016/B978-0-323-91854-1.00004-2

11. Shivi Kesarwani, **Rajesh Kumar Verma**, Prakhar Kuma Kharwar (2022) **"**Basalt fiber reinforced polymer composites and its significance in the future of composites", in Trends in Applications of Polymers and Polymer composites, **Status-**In Press, **Publisher Name:** AIP Publications, USA

12. Jogendra Kumar, Prakhar Kumar Kharwar and **Rajesh Kumar Verma** (2022) **"**The machining potential and damage modeling of carbon/polymer composites for high-performance applications", in Trends in Applications of Polymers and Polymer composites, **Status-**In Press, **Publisher Name:** AIP Publications, USA

13. Kuldeep Kumar, Jogendra Kumar, Vijay Kumar Singh, Rajesh Kumar Verma and Abhishek Singh. "A novel approach for optimization of Machining characteristics of polymer nanocomposites", CIMS 2020, July 2022 in Optimization of Industrial Systems DOI:10.1002/9781119755074.ch28 **Publisher Name:** Wiley, Online ISBN: 9781119755074.
14. Shivi Kesarwani., Prakhar Kumar Kharwar., **and Rajesh Kumar Verma** (2023). "Artificial Neural Network (ANN) for Parametric Appraisal and Milling Efficiency Evaluation of Carbon/Epoxy Nanocomposites". In: Jain, P.K., Ramkumar, J., Prabhu Raja, V., Kalayarasan, M. (eds) Advances in Simulation, Product Design and Development. Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-19-4556-4_14 **Publisher Name:** Springer, Singapore, Online ISBN 978-981-19-4556-4.

15. Devendra Kumar Singh **and Rajesh Kumar Verma** (2023) "Realizing the Application Potential of Graphene-Modified Bionanocomposites for Prosthesis and Implant Applications". In: Bhattacharyya, B., Mathew, J., Saravanakumar, N., Rajeshkumar, G. (eds) Advances in Micro and Nano Manufacturing and Surface Engineering. Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-19-4571-7_29 **Publisher Name:** Springer, Singapore, Online ISBN 978-981-19-4571-7.

16. Kuldeep Kumar, **and Rajesh Kumar Verma** (2023) "Combined Compromise Solution for Machining Performance Optimization of Modified Polymer Composite". In: Dixit, U.S., Kanthababu, M., Ramesh Babu, A., Udhayakumar, S. (eds) Advances in Forming, Machining and Automation. Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-19-3866-5_17 **Publisher Name**: Springer, Singapore, Online ISBN 978-981-19-3866-5.

17. Rahul Vishwakarma, **Rajesh Kumar Verma** and Kishore Debnath (2023). "Investigation on Micro Electric Discharge Machining of Polymer Nanocomposites Modified by Graphene Nanoplatelet". In: Dixit, U.S., Kanthababu, M., Ramesh Babu, A., Udhayakumar, S. (eds) Advances in Forming, Machining and Automation. Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-19-3866-5_28 **Publisher Name**: Springer, Singapore, Online ISBN 978-981-19-3866-5.

18. Jogendra kumar, Balram jaiswal, Kuldeep kumar, Kaushlendra kumar, and **Rajesh kumar Verma** (2023) "Reuse of waste carpet into a sustainable composite: a case study on recycling approach" In: Khanna, N., Gajrani, K.K., Giasin, K., & Davim, J.P. (Eds.). (2023). Sustainable Materials and Manufacturing Technologies (1st ed.). https://doi.org/10.1201/9781003291961 **Publisher Name**: CRC Press. Online ISBN: 9781003291961.

19. Rajesh Kumar Verma, Virat Mani Vidyasagar, Devendra Kumar Singh, Umang Dubey, and Panagiotis Kyratsis. "12 Characterization and mechanical properties analysis of carbon nanotube and hydroxyapatite-modified polymethyl methacrylate bone cement for bio-nanocomposite". Nanocomposite and Nanohybrid Materials: Processing and Applications, edited by Rajesh Kumar Verma, Devendra Kumar Singh and J. Paulo Davim, https://doi.org/10.1515/9783111137902-012. **Publisher Name**: De Gruyter, 2024, pp. 237-258. Online ISBN: 9783111137902.

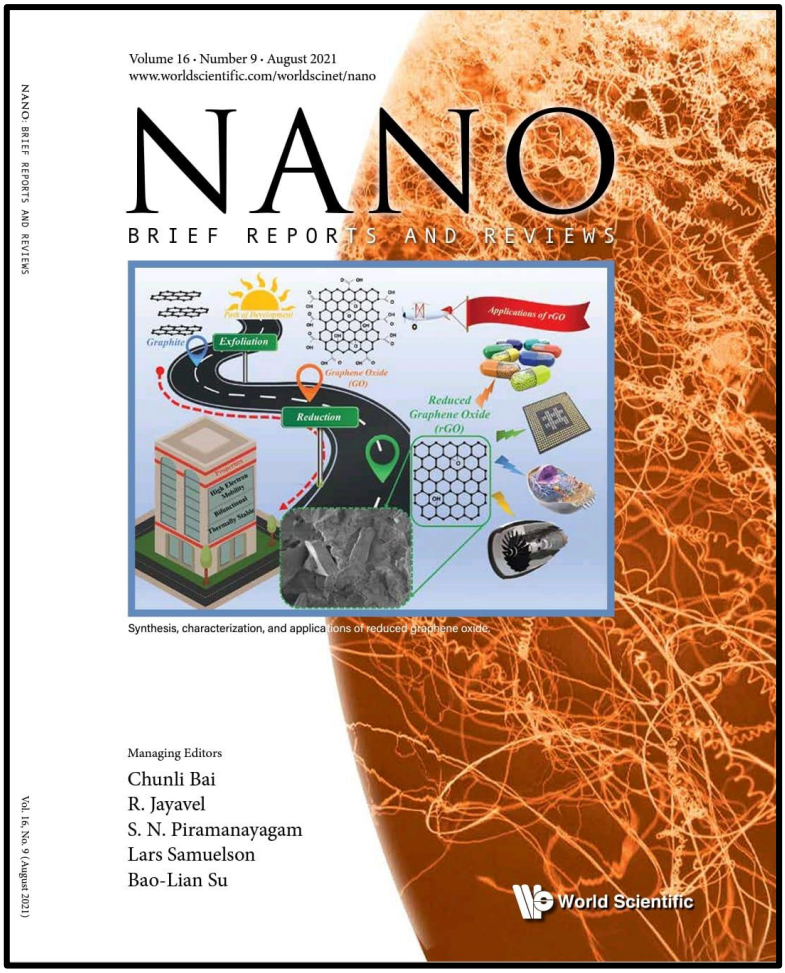
20. Rajesh Kumar Verma, Kuldeep Kumar, Shivam Kumar Dubey, Shivi Kesarwani, Prakhar Kumar Kharwar, Arpan Kumar Mondal, and Mark J. Jackson. "13 Role of nanomaterials in enhancing the performance of polymer composite materials". Nanocomposite and Nanohybrid Materials: Processing and Applications, edited by Rajesh Kumar Verma, Devendra Kumar Singh and J. Paulo Davim, https://doi.org/10.1515/9783111137902-013 **Publisher Name**: De Gruyter, 2024, pp. 259-276. Online ISBN: 9783111137902.

21. Devendra Kumar Singh **and Rajesh Kumar Verma** (2024). "Enhancing Wear Performance of Reinforced UHMWPE Composites: A Comprehensive Exploration" Machining and Tribology of Advanced Materials from Coatings, Lubrications, Surface Treatments to Modeling and Simulation, edited by Nishant Kumar Singh, Rajesh Kumar Verma, Virendra Kumar and J. Paulo Davim, **Publisher Name**: De Gruyter, 2024. Online ISBN: 978-3-11-137642-4. (**Status**: Accepted)

Publications in International Journals

LIST OF SCI JOURNALS

1. Prakhar Kumar Kharwar, **Rajesh Kumar Verma** *"Exploration of Nature Inspired Grey Wolf Algorithm and Grey Theory in Machining of Multiwall Carbon Nanotube/Polymer Nanocomposites"* Engineering with Computers, Springer Publications, Volume 38, 1127-1148, July 2020, **DOI:** 10.1007/s00366-020-01103-x, **SCI (IF 7.963)**
2. Jogendra Kumar, **Rajesh Kumar Verma** and Kishore Debnath, "*A new approach to control the delamination and thrust force during drilling of polymer nanocomposites reinforced by graphene oxide/carbon fiber"* Composite Structures, Elsevier Publications, Volume 253, 112786, December 2020, **DOI:** 10.1016/j.compstruct.2020.112786, **SCI (IF 5.138)**
3. Shivi Kesarwani and **Rajesh Kumar Verma**, *"Ant Lion Optimizer (ALO) algorithm for Machinability assessment during Milling of Polymer composites modified by Zero-dimensional Carbon Nano onions"* Measurement, Elsevier Publications, Volume 187, 110282, **SCI (IF 3.364)**
4. Jogendra Kumar and **Rajesh Kumar Verma**, *"A novel methodology of Combined Compromise Solution and Principal Component Analysis (CoCoSo-PCA) for machinability investigation of Graphene nanocomposites*" CIRP Journal of Manufacturing Science and Technology, Elsevier Publications, Volume 33, 143-157, May 2021, **SCI (IF 3.602)**
5. Balram Jaiswal, ***Rajesh Kumar Verma*** and Sanjay Mishra *"Use of discarded carpet material in the development of polymer (epoxy) composites for structural functions"* The Journal of the Textile Institute, Taylor & Francis Publications, **Status-** Online, **DOI:** 10.1080/00405000.2021.2025302, January 2022, **SCI/SCIE (IF 1.880)**
6. Shivi Kesarwani and **Rajesh Kumar Verma**, *"A critical review on synthesis, characterization and multifunctional applications of reduced Graphene oxide (rGO)/composites"* Nano, World Scientific Publications, Volume 16 No. 9, August 2021, **DOI:** 10.1142/S1793292021300085, **SCI (IF 1.556)**



7. Prakhar Kumar Kharwar, **Rajesh Kumar Verma** (2020) Machining performance optimization in drilling of multiwall carbon nano tube/epoxy nanocomposites using GRA-PCA hybrid approach, Measurement Elsevier, Vol. 158, pp1-14, 2020 **DOI:** https://doi.org/10.1016/j.measurement.2020.107701, **SCI (IF 3.364)**
8. Jogendra Kumar, Kuldeep Kumar, Balram Jaiswal, Kaushlendra Kumar, and ***Rajesh Kumar Verma***, *"Investigation on the physio-mechanical properties of carpet waste polymer composites incorporated with Multi-wall carbon nanotube (MWCNT)"* The Journal of the Textile Institute, Taylor & Francis Publications, **Status-** Online, **DOI:** 10.1080/00405000.2022.2062860, **SCI/SCIE (IF 1.880)**
9. Jogendra Kumar, Kaushlendra Kumar, Kuldeep Kumar, Balram Jaiswal, and ***Rajesh Kumar Verma***, *"Development of waste carpet (jute) and Multi-wall carbon nanotube incorporated epoxy composites for lightweight applications"* Progress in Rubber Plastics and Recycling Technology, SAGE Publications, **Status-** Online, **DOI:**10.1177/14777606221110252, **SCI/SCIE (IF 2.171)**
10. Jogendra Kumar and **Rajesh Kumar Verma**, "*Experimental investigation for machinability aspects of graphene oxide/CFRP nanocomposites and predictive modeling using hybrid approach"* Defence Technology, Elsevier Publications, 2020, Volume 17 (5), 1671-1686, October 2021, **DOI:** 10.1016/j.dt.2020.09.009, **SCI (IF 3.172)**
11. Shivi Kesarwani and **Rajesh Kumar Verma,** "Investigation on Interface Temperature and Parametric Optimization During Machining of Reduced Graphene Oxide Nanoflakes

Dispersed Polymer-based Carbon Fiber Reinforced (rGO/CF) Nanocomposites", Silicon, Springer Publications, (2022) **Status-** Online, **DOI:** 10.1007/s12633-022-01844-y, **SCI (IF 2.670)**

12. Anastasios Tzotzis, Nikolaos Tapoglou, ***Rajesh Kumar Verma*** and Panagiotis Kyratsis, "3D-FEM Approach of AISI-52100 Hard Turning: Modelling of Cutting Forces and Cutting Condition Optimization" Machines, MDPI Publications, Vol.10(2), 74, **DOI:** 10.3390/machines10020074, **SCI/SCIE (IF 2.428)**
13. Shivi Kesarwani and ***Rajesh Kumar Verma*** "A novel hybridization of Seagull algorithm and Combined Compromise Solution (SOA-CoCoSo) in Drilling investigation of Carbon Nano Onions modified polymer composites for structural application" Surface Review and Letters, World Scientific Publications, **Status-** Online, **DOI:** 10.1142/S0218625X22500548, **SCI/SCIE (IF 1.152)**
14. Umang Dubey, Shivi Kesarwani and **Rajesh Kumar Verma,** "Incorporation of Graphene nanoplatelets/Hydroxyapatite in PMMA Bone cement for characterization and enhanced mechanical properties of Biopolymer composites", Journal of Thermoplastic Composite Materials, SAGE Publications, **Status-** Online, **DOI:** 10.1177/08927057221086833, **SCI (IF 3.330)**
15. Shivi Kesarwani, ***Rajesh Kumar Verma*** and Kishore Debnath "Modified JAYA Algorithm for machinability assessment and conflicting response optimization during Milling of nanostructured Carbon onions reinforced epoxy composites" Experimental Techniques, Springer Publications, January 2022, **Status-** Online, **DOI:** 10.1007/s40799-021-00543-4, **SCI/SCIE (IF 1.19)**
16. Prakhar Kumar Kharwar and **Rajesh Kumar Verma,** "Nature instigated Grey Wolf Algorithm for parametric optimization during Machining (Milling) of Polymer Nanocomposites", Journal of Thermoplastic Composite Materials, SAGE Publications, February 2021, **DOI:** 10.1177/0892705721993202, **SCI (IF 1.529)**
17. Jogendra Kumar, **Rajesh Kumar Verma**, A.K. Mondal and Vijay Kumar Singh, "An integrated approach to control the machining performances during Milling of polymer nanocomposites reinforced by Graphene oxide/Carbon fiber" Polymers and Polymer Composites, SAGE Journals, August 2021, **DOI:** 10.1177/09673911211046789, **SCI (IF 2.00)**
18. Jogendra Kumar and **Rajesh Kumar Verma**, "A new criterion for Drilling Machinability evaluation of Nanocomposites modified by Graphene/Carbon fiber@ epoxy matrix and Optimization using Combined Compromise Solution (CoCoSo)" Surface Review and Letters, World Scientific Publications, Vol. 28, No. 09, 2150082, April 2021, **DOI:** 10.1142/S0218625X21500827, **SCI/SCIE (IF 0.748)**
19. Rahul Vishwakarma and **Rajesh Kumar Verma,** "Micro Electric discharge machining (μ-EDM) of polymer nanocomposites modified by Graphene nanoplatelets/Carbon using rotating electrode tool" Journal of Micromechanics and Microengineering, IOP Publishing Ltd, July 2021, **DOI:** 10.1088/1361-6439/ac11cb **SCI/SCIE (IF 1.881)**
20. Shivi Kesarwani and ***Rajesh Kumar Verma***, "Weighted Aggregated Sum Product Assessment (WASPAS) Method for Correlated Response Optimization During Drilling of Nano Onions Structured Carbon Reinforced Polymer Composites" International Journal of

Industrial Engineering: Theory, Applications, and Practice, Volume 28, 425-450, **DOI:** 10.23055/ijietap.2021.28.4.7529, **SCI/SCIE (IF 0.444)**

21. Prakhar Kumar Kharwar, **Rajesh Kumar Verma** and Abhishek Singh "Neural network modelling and Combined Compromise Solution (CoCoSo) method for optimization of Drilling Performance in polymer nanocomposites", Journal of Thermoplastic Composite Materials, SAGE Publications, June 2020, **DOI:**10.1177/0892705720939165, **SCI (IF 1.529)**

22. Jogendra Kumar, **Rajesh Kumar Verma**, A.K. Mondal, "Taguchi- Grey Theory Based Harmony Search Algorithm (GR-HSA) for Predictive Modeling and Multi-Objective Optimization in Drilling of Polymer Composites" Experimental Techniques, Springer Publications, December 2020, **DOI:** 10.1007/s40799-020-00428-y, **SCI (IF 1.058)**

23. Din Bandhu, Ashish Thakur, Rajesh Purohit, **Rajesh Kumar Verma** and Kumar Abhishek,(2018) Characterization & evaluation of Al7075 MMCs reinforced with ceramic particulates and influence of age hardening on their tensile behavior" ***Journal of Mechanical Science and Technology*** Vol. 32(7), PP 3123-3128 (2018) ISSN: 1976-3824, 09/8/2018 **DOI:** 10.1007/s12206-018-0615-9 **, SCI/SCIE (IF: 1.734)**


ARCHIVES OF METALLURGY AND MATERIALS

CERTIFICATE OF RECOGNITION
EDITORS' CHOICE

proudly presented to

Devendra Kumar Singh, Rajesh Kumar Verma,
Sanjay Mishra

In recognition of your outstanding contribution to the Archives of Metallurgy and Materials through the publication of your article titled:

Effect of Zirconia and Graphene Nanoparticles Loading on Thermo-Mechanical Performance of Hybrid Polymer Nanocomposite

Your work has been selected and honored by the editors of our journal from among the articles published in the quarterly issue 1/2024. This commendation reflects the exceptional quality, innovation, and significance of your research.

Editor-in-Chief
MACIEJ SZCZERBA, PH.D. D.SC. ENG.

24. Devendra Kumar Singh, **Rajesh Kumar Verma** and Sanjay Mishra (2023) "Effect of Zirconia and Graphene Nanoparticles Loading on Thermo-Mechanical Performance of

Hybrid Polymer Nanocomposite" Archives of Metallurgy and Materials. (Manuscript ID: AMM-00313-2022-01) SCI (IF: 0.633) Status: **Published**. **SCI/SCIE (IF: 0.6)**

25. Shivi Kesarwani and **Rajesh Kumar Verma** (2023), "Investigation of physiochemical and mechanical properties of reduced Graphene Oxide (rGO) modified Carbon fiber Polymer composites" The Journal of the Textile Institute (JOTI). SCI/SCIE (IF 1.770). Status: Accepted.

26. Ankit Dhar Dubey, Jogendra Kumar, Panagiotis Kyratsis and **Rajesh Kumar Verma (2023)** "Stacking effect of Carbon/Glass fiber during Drilling operation of laminated polymer composite" **Archives of Metallurgy and Materials.(**AMM-00268-2022-02**) Status Accepted.**

27. Shivi Kesarwani, **Rajesh Kumar Verma** and S.C. Jayswal(2023) "Evaluation of the cutting force, burr formation, and surface quality during the machining of carbon nanoparticle modified polymer composites for structural applications" Materials Today Communications, Elsevier Publication, Volume 34, March 2023, 105375. DOI: https://doi.org/10.1016/j.mtcomm.2023.105375 Status Published (SCI/SCIE: 3.662)

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23. **Rajesh Kumar Verma**, Pradip Kumar Pal "*Parametric appraisal and multi-response optimization in turning of GFRP composites: Exploration of weighted principal component analysis (WPCA)*" 3rd International Conference on Advancements and Recent Innovations in Mechanical, Production and Industrial Engineering (ARIMPIE – 2017) April 21-22, 2017, organized by Department of Mechanical Engineering, ITS Engineering college, Greater Noida. INDIA**. [Paper ID ARIMPIE17-P-2]**

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25. **Rajesh Kumar Verma** *"Application of fuzzy expert system and Imperialist Competitive Algorithm (ICA) for multi response optimization problems"* International Conference on Innovations in Control, Communication and Information Systems (ICICCI-2017) 12th - 13th August, 2017 Organised by UCER Delhi-NCR, Greater Noida, INDIA. (IEEE Conference ID - 40867)

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44. Ankit Dhar Dubey, Kishore Debnath and **Rajesh Kumar Verma**, "Flexural strength analysis of hybrid composites using different stacking sequence of Carbon/Glass fiber layers in polymer composites", International Conference on Progressive Research in Industrial & Mechanical Engineering (PRIME - 2021) 5th -7th August 2021, **Accepted [Submission No.: 355]**

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1. **Presented and Published** a research paper on "*Introducing Combined Quality Loss Concept in Taguchi's Philosophy for Parametric Optimization of Wire EDM*", in the Proceeding of "4th International Conference on Advances in Mechanical Engineering", held on September 23-25, 2010 at S.V. National Institute of Technology, Surat – 395 007, Gujarat, INDIA. **[Paper ID PI-56], Page No. 497-501.**

2. **Presented and Published** a research paper on "*A case study to solve multi response optimization problem*", Proceedings of 2nd International Conference on Production and Industrial Engineering (CPIE 2010), December 3-5, 2010, organized by Department of Industrial and Production Engineering, Dr. B. R. Ambedkar National Institute of Technology, Jalandhar-144011. **[Paper ID: F001], Page No. 353-357.**

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10. **Presented and Published** a paper entitled *A fuzzy-ICA based hybrid approach for parametric appraisal in machining (turning) of GFRP composites*, in the ***6th*** *International conference on Innovative trends in Mechanical, Material, Manufacturing, Automobile,*

*Aeronautical Engineering and Applied Physics" (*ITMAEAP 2014) held during 20th December, 2014 at School of Social Science Auditorium, Jawaharlal Nehru University (JNU), New Delhi-110067.

11. **Presented and Published** a paper entitled "*Machining performance optimization in Drilling of GFRP composites: A utility theory (UT) based approach* " International Conference on Control Computing Communication and Materials (ICCCCM-2016) 21st and 22nd October, 2016, UCER Allahabad UP (IEEE Conference ID – 39191, paper ID ICCCM- 2016-229)

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21. **Presented and published** a paper entitled "Utility-Taguchi based hybrid Optimization Approach in Machining of Graphite Composites" 2019 International Conference on Energy, Environment & Material Sciences (ICE2M), IEEE conference 1st -3rd December 2019 Organized by Madan Mohan Malaviya University of Technology, Gorakhpur Department of Mechanical Engineering IEEE conference **(Paper ID - 08)**

22. **Presented and published** a paper entitled " Study on polymer (epoxy) composite using carpet waste for lightweight structural applications: A new approach for waste management ", 11th ICMPC 2020, Dec. 15-17, 2020, IIT Indore, INDIA **[Paper ID: MATPR-D20-21411]**

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