

## Profile Page



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### **Research Interests :**

Fracture Mechanics, Viscoelasticity, Material Science, Solid Mechanics, Phase Transformations, Mechanical Behavior of Materials, Mechanics of Composite Materials, Mechanical Vibrations, Molecular Dynamics, Density Functional Theory, FEM.

### **Other Profile Links :**

#### **Google Scholar Link :**

Dr Sumit Sharma [Click Here](#)

#### **Personal Web Link :**

Dr Sumit Sharma [Click Here](#)

### **Journal Publications :**

Year	Journal	Publication
2019	Computational Materials Science	Sharma S., Kumar P., Chandra R., Setia P. (2019) "Prediction of properties of silica nanoparticle/hydroxyapatite fiber reinforced Bis-GMA/TEGDMA composites using molecular dynamics ", Computational Materials Science, <a href="https://doi.org/10.1016/j.commatsci.2018.11.016">https://doi.org/10.1016/j.commatsci.2018.11.016</a>
2019	Journal of Engineering Tribology	Sharma S., Dhawan M., Chawla R. (2019), "A molecular dynamics study to predict the friction and wear behavior of carbon nanotube reinforced styrene-butadiene rubber", Journal of Engineering Tribology, doi.org/: <a href="https://doi.org/10.1177/1350650119836812">10.1177/1350650119836812</a> .
2019	Journal of Composite Materials	Sharma S., Setia P., Chandra R., Thakur N. (2019), "Experimental and Molecular Dynamics Study of Boron-Nitride Nanotube Reinforced Poly-Methyl Methacrylate Composites", Journal of Composite Materials, doi.org/10.1177/0021998319851221.

2019	IEEE Xplore	Sharma S., Dhawan M., Dondapati R.S. (2019), "Mechanical characterization of defective single-walled carbon nanotubes reinforced natural rubber composites", IEEE Xplore, <a href="https://doi.org/10.1109/iccs.2018.00042">https://doi.org/10.1109/iccs.2018.00042</a> .
2019	Materials Performance and Characterization, ASTM International	Sharma S., Dubey K.M., Setia P. (2019), "Mechanical properties of multiwalled carbon nanotube-reinforced cement composites", Materials Performance and Characterization, ASTM International, <a href="https://doi.org/10.1520/MPC20180074">https://doi.org/10.1520/MPC20180074</a> .
2018	Journal of Composite Materials	Sharma S., Kumar P., Chandra R. (2018) "Carbon nanotube reinforced titanium composites: An experimental and molecular dynamics study", Journal of Composite Materials, DOI: 10.1177/0021998318774931
2018	Composites: Mechanics, Computations, Applications: An International Journal	Sharma S., Kumar P., Kumar N., Chandra R. (2018), "Graphene/carbon nanotube reinforced nickel composites: a molecular dynamics study", Composites: Mechanics, Computations, Applications: An International Journal, doi: 10.1615/CompMechComputAppIntJ. 2018021097.
2018	Graphene Technology	Sharma S. and Chawla R. (2018), "A molecular dynamics study on efficient nanocomposite formation of styrene-butadiene rubber by incorporation of graphene", Graphene Technology, <a href="https://doi.org/10.1007/s41127-018-0018-9">https://doi.org/10.1007/s41127-018-0018-9</a>
2018	Materials Today Proceedings	Sharma S., Kedare R., Nanavare V., Midathada A., Ravella U.K. (2018), "Review on WEDM of Shape Memory Alloy", Materials Today: Proceedings, Vol. 5, pp. 28313–28319.
2018	Materials Today Proceedings	Sharma S., Sharma G., Rana R.S., Kaura S., Setia P., Midathada A., Ravella U.K. (2018), "Reinforced monolithic titanium alloys: A review", Materials Today: Proceedings, Vol. 5, pp. 28271–28278.
2018	Materials Today Proceedings	Sharma S., Tiwari S.K., Singh H., Midathada A., Ravella U.K. (2018), "Study of fabrication processes and properties of Al-CNT composites reinforced by carbon nano tubes - A review", Materials Today: Proceedings, Vol. 5, pp.28262–28270.
2018	Materials Today Proceedings	Sharma S., Kumar U., Rathi R., Kapur S., Upadhyay D. (2018), "Molecular dynamics simulation of nylon/CNT composites", Materials Today: Proceedings, Vol. 5, pp.27710–27717.
2018	Materials Today Proceedings	Sharma S., Mann G.S., Singh L.P., Singh G., (2018), "Comparative performance evaluation of mechanical properties of noncoated and coated carbide inserts under vacuum heat treatment", Materials Today: Proceedings, Vol. 5, pp. 28229–28237.
2018	IEEE Xplore	Sharma S., Setia P., Ravella U.K. (2018), "Molecular dynamics study of carbon nanotube/graphene reinforced nickel composites", IEEE Xplore, doi: 10.1109/ICASET.2018.8376860.
2018	IEEE Xplore	Sharma S., Setia P., Ravella U.K. (2018), "Molecular dynamics study of carbon nanotube reinforced titanium composites", IEEE Xplore, doi: 10.1109/ICASET.2018.8376861.
2018	Journal of Molecular Modeling	A molecular dynamics study on Young's modulus and tribology of carbon nanotube reinforced styrene-butadiene rubber
2018	Composite Interfaces	Sharma S., Dhawan M., Chawla R. (2018), "Variation of interfacial properties during carbon nanotube pullout from natural rubber", Composite Interfaces: <a href="https://www.tandfonline.com/doi/pdf/10.1080/09276440.2018.1522191?needAccess=true">https://www.tandfonline.com/doi/pdf/10.1080/09276440.2018.1522191?needAccess=true</a> .
2017	Composite Science & Technology	Sharma S. and Chawla R. (2017), "Molecular dynamics simulation of carbon nanotube pull-out from polyethylene matrix", Composite Science and Technology, Vol. 144, pp. 169-177.

2016	Journal of Composite Materials	Sharma S., Chandra R., Kumar P. (2016), “Mechanical and thermal properties of graphene-carbon nanotube-reinforced metal matrix composites: A molecular dynamics study”, Journal of Composite Materials, doi: 10.1177/0021998316682363
2016	Journal of Composite Materials	Anjana R., Sharma S., Bansal A. (2016), “Molecular Dynamics Simulation of Carbon Nanotube Reinforced Polyethylene Composites”, Journal of Composite Materials, doi:10.1177/0021998316674264.
2016	International Journal of Multiscale Computational Engineering, Vol. 14, No. 6, pp. 555-584.	Graphene/carbon nanotube reinforced metallic glass composites: A molecular dynamics study
2016	Science and Engineering of Composite Materials, doi:10.1515/secm-2016-0167	Effect of coir fiber reinforcement on mechanical properties of vulcanized natural rubber composites: An experimental study
2016	International Journal of Multiscale Computational Engineering, Vol. 14, No 2, pp. 1-18	Carbon nanotube reinforced polyethylene composites: A molecular dynamics approach
2016	Composites: Mechanics, Computations, Applications: An International Journal, Vol. 7, No. 4, pp. 291-318	Mechanical properties of coir fiber reinforced vulcanized natural rubber composites
2016	The Journal of The Minerals, Metals & Materials Society (TMS), Vol. 68, No. 6, pp. 1717-1727	Mechanical properties of carbon nanofiber reinforced polymer composites-molecular dynamics approach
2016	Journal of Composite Materials, published online, doi: 10.1177/0021998316628973	Molecular dynamics simulation of functionalized SWCNT-polymer composites
2016	Journal of Composite Materials, Vol. 50, No. 13, pp. 1787-1804.	Molecular level analysis of carbon nanofiber reinforced polymer composites
2015	Composites: Mechanics, Computations, Applications: An International Journal, Vol. 6, No. 4, pp. 307-320	Experimental investigation of dynamic properties of fiber reinforced composites
2015	Comptes Rendus Mecanique, Vol. 343, No. 5-6, pp. 371-396.	Thermo-mechanical characterization of multi-walled carbon nanotube reinforced polycarbonate composites: A molecular dynamics approach
2015	Journal on Material Science, Vol. 3, No. 3, pp. 22-32.	Effect of wear load and heat treatment parameters on wear characteristics of ADI
2014	Computational Materials Science, Vol. 86, pp.1-8	Effect of Stone-Wales and vacancy defects on elastic moduli of carbon nanotubes and their composites using molecular dynamics simulation
2013	Nanomechanics Science and Technology: An International Journal, Vol. 4, No. 1, pp. 1-27.	Molecular dynamics simulation of carbon nanotubes
2013	Acta Mechanica Solida Sinica, Vol. 28, No. 4, pp. 409-419	Molecular dynamics simulation of polymer/CNT composites
2012	Composites Part B: Engineering, Vol.43, pp. 477-487	Transverse and shear properties of fiber reinforced nano composites

### Conference Publications :

Year	Conference	Publication
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2018	19th ISME conference on Advances in Mechanical Engineering	Sharma S., Kumar P., Chandra R. (2018), "Experimental and molecular dynamics study of multi-walled carbon nanotube reinforced cement composites".
2017	ICRAME 2017	Mechanical and structural properties of carbon nanotube reinforced polycarbonate
2017	ICRAME 2017	Review of mechanical properties of fiber reinforced cementitious composites
2017	ICRAME 2017	3D ELECTROMAGNETIC FIELD SIMULATION OF MICROWAVE JOINING OF INCONEL-718
2017	ICRAME 2017	EFFECT OF VACANCY DEFECTS ON THE MECHANICAL PROPERTIES OF CARBON NANOTUBE REINFORCED POLYPROPYLENE

### Book/Chapter Publications :

Type	Title	Publisher	Authors	ISBN/ISS N No.	Year
Book	Molecular Dynamics Simulation of Nanocomposites using BIOVIA Materials Studio, Lammmps and Gromacs	Elsevier	Dr. Sumit Sharma	9780128169544	2019
Book Chapter	Carbonaceous Composite Materials	Materials Research Forum LLC	Sharma S. and Singh M. (2018), "Molecular Dynamics Simulation of Capped Single Walled Carbon Nanotubes and their Composites", Chapter 3, Carbonaceous Composite Materials, pp. 57-92.	1945291974, 9781945291975	2018

### Events Organized :

Category	Type	Title	Venue	From	To	Designation
Conference	International	ICRAME 2017	Lovely Professional University	13-04-17	14-04-17	Organizing Secretary
Conference	International	ICCMEMMS 2018	Lovely Professional University	15-03-18	17-03-18	Publication Chair
Conference	International	International Conference on Materials Science & Engineering (ICMSE 2019)	Dr B R Ambedkar National Institute of Technology Jalandhar	11-06-2019	12-06-2019	Organizing Secretary

### Professional Affiliations :

Designation	Organization
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Reviewer	Journal of Computational Materials Science
Reviewer	Journal of Computational Condensed Matter
Reviewer	International Journal of Mechanical Sciences
Reviewer	Journal of Composite Science & Technology
Reviewer	Materials Letters
Reviewer	Journal of Thermoplastic Composite Materials
Reviewer	Journal of Nanostructure in Chemistry
Member	American Society of Testing & Materials (ASTM)
Editorial Board Member	American Journal of Nano Research and Applications

### Research Supervised :

Scholar Name	Research Topic	Status	Year	Co-Supervisor
Pramod Rakt Patel	Experimental and Molecular dynamics study of CNT-Al composites	On-going	2018-2021	Dr. S K Tiwari
Sagar	Experimental characterization of CNT/Metallic glass composites.	On-going	2018-19	Dr. Pramod Kumar
Rahul Anjana	Molecular dynamics simulation of CNT/polymer composites	Completed	2016	---
Yogesh Patil	Experimental characterization of coir fiber reinforced vulcanized natural rubber composites	Completed	2016	---
Shanu Chandan	FEM and micromechanics modeling of graphite fiber polymer composites	Completed	2016	---
Mandeep Singh	Molecular dynamics study of capped SWCNT-polymer composites	Completed	2016	---
Krishan Mohan Dubey	Experimental study of CNT reinforced cementitious composites	Completed	2016	---

### Admin. Responsibilities :

Position Held	Organization	From	To
NBA Cordinator	NIT Jalandhar	10-01-2018	till date
B.Tech Project Cordinator	NIT Jalandhar	10-01-2018	till date
Research Cordinator	Lovely Professional University	01-08-2015	30-12-2017
Coordinator of Department Digital Repository	NIT Jalandhar	1-11-2018	till date

### Award and Honours :

Title	Activity	Given by	Year
American Chemical Society Reviewer Recognition	Review of Technical Paper	American Chemical Society	2018
Materials Letters Reviewer Recognition	Review of Technical Paper	Elsevier	2017
LPU Research Award	Research	Lovely Professional University	2017
LPU Research Award	Research	Lovely Professional University	2016
M.Tech Gold Medal		NIT Jalandhar	2010