

Profile Page



Name : Dr Sumit Sharma

Designation : Assistant Professor Grade-i

Department : Mechanical Engineering

Qualification : PhD Mechanical Engineering (NIT Jalandhar)
M.Tech Mechanical Engineering (NIT Jalandhar)
B.Tech Mechanical Engineering (Kurukshetra University)

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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 :

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Journal Publications :

Year	Journal	Publication
2023	Physica Scripta	Sharma A. and Sharma S. (2023), "Dynamic diffusion of water inside graphene reinforced PU/PTFE coatings: A molecular dynamics approach", Physica Scripta, https://doi.org/10.1088/1402-4896/acbfee
2023	Journal of Coatings Technology and Research	Sharma A. and Sharma S. (2023), "Graphene based polymer coatings for preventing marine corrosion: A review", Journal of Coatings Technology and Research, https://doi.org/10.1007/s11998-022-00730-x
2023	Nanoscience and Technology: An International Journal	Hussain S.A. and Sharma S. (2023), "Recent advances in modeling and experimental prediction of properties of graphene reinforced natural rubber composites: A review (Part 2)", Nanoscience and Technology: An International Journal, http://dx.doi.org/10.1615/NanoSciTechnolIntJ.2022044842

2023	Physica Scripta	Mani A. and Sharma S. (2023), "Interfacial Properties of Defective Carbon Nanotube/Polypropylene Composites: A Molecular Dynamics Approach", Physica Scripta, https://doi.org/10.1088/1402-4896/acc69d
2023	Nanoscience and Technology: An International Journal	Hussain S.A. and Sharma S. (2022), "Recent advances in modeling and experimental prediction of properties of graphene reinforced natural rubber composites: A review (Part 1)", Nanoscience and Technology: An International Journal
2023	Physica Scripta	Hussain S.A., Sharma S., Patel P.R. (2022), "Atomistic approach for predicting mechanical properties and creep behavior of graphene reinforced natural rubber composites", Physica Scripta
2023	Molecular Simulation	Sharma A. and Sharma S. (2023), "Atomistic study of adhesion of PU/PTFE coating on aluminium oxide surface", Molecular Simulation
2022	Composites: Mechanics, Computations, Applications: An International Journal	Kundan P, Sharma S, Kumar M (2022), "Mechanical Behavior of Rubberized Concrete Composites: An Experimental Study", Composites: Mechanics, Computations, Applications, An International Journal, Vol. 13(1), pp. 63-80.
2022	Modelling and Simulation in Materials Science and Engineering	Sharma N., Sharma S. (2022) "Analyzing the Effect of Chirality and Defects on Mechanical Properties of Carbon Nanotube Reinforced Polycarbonate Composites Using Molecular Dynamics", Modelling and Simulation in Materials Science and Engineering,
2022	Diamond and Related Materials	Bedi D., Sharma S., Tiwari S.K., Ajori S. (2022), Effect of defects and boundary conditions on the vibrational behavior of carbon nanotube and graphene: A molecular dynamics perspective, https://doi.org/10.1016/j.diamond.2022.109052
2022	Diamond and Related Materials	Bedi D., Sharma S., Tiwari S.K. (2022), Effect of chirality and defects on tensile behavior of carbon nanotubes and graphene: Insights from molecular dynamics, https://doi.org/10.1016/j.diamond.2021.108769
2022	Composites: Mechanics, Computations, Applications: An International Journal	Mishra B. and Sharma S. (2022), "Compressive behavior of carbon nanotube reinforced polypropylene composites under high strain rate: Insights from molecular dynamics", Composites: Mechanics, Computations, Applications: An International Journal
2022	Macromolecular Theory and Simulations	Srivastava A., Sharma S., Patel P.R. (2022), "Atomistic modeling of mechanical properties and creep behavior of graphene oxide reinforced natural rubber composites
2022	Journal of Reinforced Plastics and Composites	Srivastava A. and Sharma S. (2022), "Recent advances in experimental and molecular dynamics study of graphene-oxide natural rubber composites: A review", Journal of Reinforced Plastics and Composites
2022	Polymer-Plastics Technology and Materials	Singaravel DK, Sharma S, Kumar P (2022), Recent Progress in experimental and molecular dynamics study of carbon nanotube reinforced rubber composites: A review
2021	Materials Performance and Characterization	D. Bedi, S. Sharma, S. Kango, N. Sharma, and P. Rakt Patel "Effect of Coating of Carbon Nanotubes on Mechanical Properties of Polymer Composites: A Review." Materials Performance and Characterization 10, no. 1 (2021): 674-699.
2021	Modelling and Simulation in Materials Science and Engineering	Patel P.R., Sharma S., Tiwari S.K. (2021), Molecular dynamics simulation for interfacial properties of carbon nanotube– reinforced aluminum composites, https://doi.org/10.1088/1361-651X/abca1a
2021	Composites: Mechanics, Computations, Applications: An International Journal	Bedi R., Sharma S., Sonwani Y. (2021), "Prediction of mechanical properties of epoxy concrete using molecular dynamics siumulation", Composites: Mechanics, Computations, Applications: An International Journal, Vol. 12, No. 1, pp. 1-15.

2021	European Polymer Journal, Vol. 147, pp. 110295 (1-10).	Verma S., Sharma N., Kango S., Sharma S. (2021), "Development of PEEK (Polyetheretherketone) as a biomedical material: A focused review".
2021	Surface Topography: Meterology and Properties, Vol. 9, pp. 013002 (1-17).	Sharma N., Verma R., Sharma S., Kango S. (2021), "Qualitative potentials of surface textures and coatings in the performance of fluid-film bearings: A critical review".
2021	Surface Topography: Meterology and Properties, Vol. 9, pp. 025035 (1-19).	Patel P.R., Sharma S., Tiwari S.K. (2021), "Tribological properties of aluminium reinforced with differently oriented carbon nanotube: A molecular dynamics study".
2020	Engineering Solid Mechanics	Sharma S., Rathi R., Kumar U. (2020), "Carbon Nano-tube Reinforced Nylon 6,6 Composites: A Molecular Dynamics Approach", Engineering Solid Mechanics, Vol. 8, pp. 389-396.
2020	Advanced Materials Letters	Sharma S., Kumar P., Diwakar A.K. (2020), "Molecular dynamics and FEM modeling of composites having high thermal conductivity", Advanced Materials Letters, https://doi.org/ 10.5185/amlett.2020.091557 .
2020	Journal of Molecular Modeling	Patel P.R., Sharma S., Tiwari S.K. (2020), "A molecular dynamics investigation for predicting the effect of various parameters on the mechanical properties of carbon nanotube-reinforced aluminum composites", Journal of Molecular Modeling, https://doi.org/10.1007/s00894-020-04509-y .
2020	Defence Technology	Sharma S., Tiwari S.K., Shakya S. (2020), "Mechanical properties and thermal conductivity of pristine and functionalized carbon nanotube reinforced metallic glass composites: A molecular dynamics approach", Defence Technology, https://doi.org/ 10.1016/j.dt.2020.04.004 .
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, https://doi.org/10.1016/j.commatsci.2018.11.016
2019	Journal of Engineering Tribology	Dhawan M., Chawla R., Sharma S. (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/ 10.1177/1350650119836812 .
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	Dhawan M., Dondapati R.S., Sharma S. (2019), "Mechanical characterization of defective single-walled carbon nanotubes reinforced natural rubber composites", IEEE Xplore, https://doi.org/10.1109/iccs.2018.00042 .
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, https://doi.org/10.1520/MPC20180074 .
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/CompMechComputApplIntJ. 2018021097.

2018	Graphene Technology	Chawla R. and Sharma S. (2018), "A molecular dynamics study on efficient nanocomposite formation of styrene–butadiene rubber by incorporation of graphene", Graphene Technology, https://doi.org/10.1007/s41127-018-0018-9
2018	Materials Today Proceedings	Kedare R., Nanavare V., Midathada A., Ravella U.K., Sharma S. (2018), "Review on WEDM of Shape Memory Alloy", Materials Today: Proceedings, Vol. 5, pp. 28313–28319.
2018	Materials Today Proceedings	Sharma G., Rana R.S., Kaura S., Setia P., Midathada A., Ravella U.K., Sharma S. (2018), "Reinforced monolithic titanium alloys: A review", Materials Today: Proceedings, Vol. 5, pp. 28271–28278.
2018	Materials Today Proceedings	Tiwari S.K., Singh H., Midathada A., Ravella U.K., Sharma S. (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	Kumar U., Rathi R., Kapur S., Upadhyay D., Sharma S. (2018), "Molecular dynamics simulation of nylon/CNT composites", Materials Today: Proceedings, Vol. 5, pp.27710–27717.
2018	Materials Today Proceedings	Mann G.S., Singh L.P., Singh G., Sharma S. (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	Dhawan M., Sharma S., Chawla R. (2018), "Variation of interfacial properties during carbon nanotube pullout from natural rubber", Composite Interfaces: https://www.tandfonline.com/doi/pdf/10.1080/09276440.2018.1522191?needAccess=true .
2017	Composite Science & Technology	Chawla R. and Sharma S.(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
2022	International Conference on Materials Science and Engineering (ICMSE) 2022	Singaravel D.K., Sharma S., Kumar P. (2022), "Molecular dynamics simulation of carbon nanotube reinforced rubber composites", IOP Conference Series: Materials Science and Engineering, Vol. 1248, pp. 012057,
2022	International Conference on Materials Science and Engineering (ICMSE) 2022	Sharma A. and Sharma S. (2022), "A molecular dynamics study of adhesion of polyvinyl chloride coatings to the aluminum surface", IOP Conference Series: Materials Science and Engineering, Vol. 1248, pp. 012062,
2022	International Conference on Materials Science and Engineering (ICMSE) 2022	Hussain S.A. and Sharma S. (2022), "Molecular dynamics simulation of mechanical properties of graphene reinforced natural rubber composites", IOP Conference Series: Materials Science and Engineering, Vol. 1248, pp. 012058,

2022	International Conference on Materials Science and Engineering (ICMSE) 2022	Bedi D., Sharma S., Sharma A., Tiwari S.K. (2022), "Molecular dynamics simulation of carbon and boron nitride nanotubes: Tensile and compressive behavior", IOP Conference Series: Materials Science and Engineering, Vol. 1248, pp. 012101,
2022	International Conference on Materials Science and Engineering (ICMSE) 2022	Srivastava A. and Sharma S. (2022), "Molecular dynamics simulation of graphene-oxide/natural rubber composites", IOP Conference Series: Materials Science and Engineering, Vol. 1248, pp. 012059,
2021	2nd International Conference on Functional Materials, Manufacturing and Performances (ICFMMP-2021)	Mani A. & Sharma S. (2021), "Interfacial Shear Strength of Carbon Nanotube Reinforced Polymer Composites: A Review", Materials Today Proceedings, https://doi.org/10.1016/j.matpr.2021.09.194
2021	iCADMA 2020	Governing parameters for pull-out of carbon nanotubes from aluminium composites: A review, Materials Today: Proceedings, https://doi.org/10.1016/j.matpr.2020.11.694
2021	iCADMA 2020	Kundan P. and Sharma S. (2021), "Rubberized cemented concrete composites: A review", Materials Today: Proceedings, https://doi.org/10.1016/j.matpr.2020.11.696 .
2020	iCADMA 2020	Prediction of principal stresses and strains in laminated composites using MATLAB, Materials Today: Proceedings, https://doi.org/10.1016/j.matpr.2020.10.926 .
2020	iCADMA 2020	Anticorrosive properties of polymer composites: A review", Materials Today: Proceedings, https://doi.org/10.1016/j.matpr.2020.10.726
2020	iCADMA 2020	Shape memory materials with reversible shape change and self-healing abilities: A review", Materials Today: Proceedings, https://doi.org/10.1016/j.matpr.2020.10.820
2020	iCADMA 2020	Effect of nanoparticles on epoxy based composites: A short review", Materials Today: Proceedings, https://doi.org/10.1016/j.matpr.2020.10.924
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/ISSN No.	Year
Book	Damping in Fiber Reinforced Composite Materials	Elsevier	Pramod Kumar, SP Singh, Sumit Sharma	9780323911863	2023
Book Chapter	Tribology of polymeric systems: theory, modeling, and simulation	Elsevier	Sharma S. (2023), “Tribology of polymeric systems: theory, modeling, and simulation”, In: George S.C., Haponiuk J.T., Thomas S., Reghunath R., Sarath P.S. (eds) Tribology of Polymeric Systems: Theory, Modeling and Simulation, pp. 401-435, Elsevier, Radarweg, Amsterdam, Netherlands, https://doi.org/10.1016/B978-0-323-90748-4.00007-8 , ISBN: 978-0-323-90748-4.	978-0-323-90748-4	2023

Book Chapter	In-silico approaches for elastomers	Elsevier	Sharma S. (2023), “In-silico approaches for elastomers”, In: Thomas M., Thomas J., Thomas S., Kornweitz H. (eds) In-Silico Approaches to Macromolecular Chemistry, Chapter 11, Elsevier Science, Radarweg, Amsterdam, Netherlands, https://doi.org/10.1016/B978-0-323-90995-2.00002-3 , ISBN: 9780323909952.	9780323909952	2023
Book Chapter	Simulation of graphene elastomer composites	CRC	Sharma S. and Patel P.R. (2022), “Simulation of graphene elastomer composites”, In: Bhowmick A.K., Mondal T. (eds) Graphene Rubber Nanocomposites: Fundamentals to Applications, pp. 245-264, CRC Press, Boca Raton, https://doi.org/10.1201/9781003200444-10 , ISBN: 9781003200444.	9781003200444	2022
Book	Composite Materials: Mechanics, Manufacturing and Modeling	Routledge CRC	Sumit Sharma	9780367687557	2021
Book	Mechanics of Particle- and Fiber-Reinforced Polymer Nanocomposites: Nanoscale to Continuum Simulations	Wiley	Sumit Sharma	978-1119653622	2021

Book Chapter	Identification of vegetable fiber origin	Springer	Sharma S., Singh G., Asiri A.M., Khan A. (2021), "Identification of vegetable fiber origin", In: Jawaid M., Khan A. (eds) Vegetable Fiber Composites and their Technological Applications, Composites Science and Technology, Springer, Singapore, https://doi.org/10.1007/978-981-16-1854-3_16 .	978-981-16-1854-3_16	2021
Book Chapter	Sustainable product packaging using vegetables fibres and its composite	Springer	Singh G., Sharma S., Sandhu K., Asiri A.M., Khan A. (2021), "Sustainable product packaging using vegetables fibres and its composite", In: Jawaid M., Khan A. (eds) Vegetable Fiber Composites and their Technological Applications, Composites Science and Technology, Springer, Singapore, https://doi.org/10.1007/978-981-16-1854-3_12 .	978-981-16-1854-3_12	2021

Book Chapter	Recent advances of reinforced natural polymers: A review	Springer	Singh S., Kango S., Sharma N., Sharma S. (2021), "Recent advances of reinforced natural polymers: A review", In: Patnaik A., Kozeschnik E., Kukshal V. (eds) Advances in Materials Processing and Manufacturing Applications, iCADMA 2020, Lecture Notes in Mechanical Engineering, Springer, Singapore. https://doi.org/10.1007/978-981-16-0909-1_46 .	978-981-16-0909-1_46	2021
Book chapter	Molecular dynamics simulation of single-wall carbon nanotube aluminum composite	Springer, Singapore	Patel P.R., Sharma S., Tiwari S.K. (2020), "Molecular dynamics simulation of single-wall carbon nanotube aluminum composite", In: Saha S.K. and Mukherjee M. (eds) Recent Advances in Computational Mechanics and Simulations, Lecture Notes in Mechanical Engineering. Springer, Singapore, https://doi.org/10.1007/978-981-15-8315-5_5 .		2020

Book Chapter	Recent innovation on synthesis methods of graphene-based composites	Springer	Kumar R., Rathi R., Sharma S. (2020), "Recent innovation on synthesis methods of graphene-based composites", In: Prakash C., Singh S., Krolczyk G., Pabla B. (eds) Advances in Materials Science and Engineering. Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-15-4059-2_2 .	978-981-15-4059-2_2	2020
Book	Fiber Reinforced Nanocomposites: Fundamentals and Applications	Elsevier	Baoguo Han, Sumit Sharma, Tuan Ahn Nguyen, Li Longbiao, K. Bhat Subrahmanya	9780128199046	2020
Book	An Introduction to Molecular Dynamics Simulation of Polymer Composites	NOVA Publishers	Sumit Sharma	9781536174083	2020

Book chapter	Advances in Materials Science and Engineering, Lecture Notes in Mechanical Engineering.	Springer, Singapore.	Tiwari S.K., Sharma H., Umamaheswararao A., Sharma S. (2020), "Synthesis and characterization of aluminum composite reinforced by multiwall carbon nanotubes", In: Prakash C., Singh S., Krolczyk G., Pabla B. (eds) Advances in Materials Science and Engineering, Lecture Notes in Mechanical Engineering. Springer, Singapore.		2020
Book	Metallic Glass-based Nanocomposites: Molecular Dynamics Study of Properties	CRC press	Dr. Sumit Sharma	0367076705, 9780367076702	2019
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

Research Projects :

Role	Project Type	Title	Funding Agency	From	To	Amount	Status	Co-Investigator
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PI	External	Molecular Dynamics Modeling of Polymer Derived SiBOC Ceramics	Indian Space Research Organization (ISRO)	09-11-2022		Rs. 2,12,500/-	In-progress	Dr Nitin Sharma
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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
Expert Lecture	National	One week Short Term Course on "Nanoscience for Engineering Applications	Webinar through webex	22-06-20	26-06-20	Expert lecture
STC	National	One week e-Short Term Course on "Material Characterization Techniques" 24-28 August 2020	Online through google meet	24-08-20	28-08-20	Organizing Secretary
STC	National	One week e-Short Term Course on "Future Scope in Engineering Materials and Tribology" 15-19 September 2020	Online through google meet	15-09-20	19-09-20	Convener
FDP	National	Prediction of mechanical properties using molecular dynamics simulation in "Multiscale analysis and simulation techniques in Engineering and Science (MASMES-2021)"	Google Meet	22-03-2021	26-03-2021	Expert
FDP	National	Multiscale analysis and simulation techniques in Engineering and Science (MASMES-2021)	Google Meet	22-03-2021	26-03-2021	Expert

Conference	International	International Online Conference on Nanomaterials (ICN 2021)	Google Meet	09-04-21	11-04-21	Expert
Conference	International	2nd International Conference on Materials Science and Engineering (ICMSE 2022)	Department of Mechanical Engineering, Dr BR Ambedkar National Institute of Technology, Jalandhar	11-06-2022	12-06-2022	Organizing Secretary
Conference	International	2nd International Conference on Functional Materials, Manufacturing and Performances (ICFMMP-2021)	School of Mechanical Engineering, Lovely Professional University, Punjab	17-09-2021	18-09-2021	Session Chair
Conference	International	13th International e-Conference on Advancements in Polymeric Materials (APM-2022) – Probing Innovative & Sustainable Product Design and Manufacturing	CIPET:SARP ARSTPS, Chennai through virtual platform	08-03-2022	12-03-2022	Invited lecture
Conference	International	2nd International Conference on Materials Science & Engineering, (ICMSE) 2022	Department of Mechanical Engineering, Dr BR Ambedkar National Institute of Technology, Jalandhar	11-06-2022	12-06-2022	Session Chair
Conference	International	3rd International Conference on Functional Materials, Manufacturing and Performances (ICFMMP-2022)	School of Mechanical Engineering, Lovely Professional University, Punjab	29-07-2022	30-07-2022	Session Chair
Workshop	National	3 Day Workshop on Molecular Dynamics Simulation and Analysis (MDSA-2022)	Department of Mechanical Engineering, Dr BR Ambedkar National Institute of Technology, Jalandhar	05-08-2022	07-08-2022	Course Coordinator
Conference	National	20th ISME Conference on Advances in Mechanical Engineering	Indian Institute of Technology (IIT) Ropar, Punjab, India.	19-05-22	21-05-22	Joint Secretary

Professional Affiliations :

Designation	Organization
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
Member	Indian Society of Mechanical Engineers (ISME)
Member	Materials Research Society (MRS)
Reviewer	Journal of Materials Research (JMRS)
Reviewer	Ceramics International
Reviewer	Heliyon
Reviewer	Scientific Reports
Reviewer	RSC Advances
Reviewer	Micro & Nano Letters
Reviewer	Applied Physics A
Reviewer	Silicon
Reviewer	Cement & Concrete Composites
Reviewer	Europhysics Letters (EPL)
Reviewer	Composites Communications
Reviewer	Mechanics of Advanced Materials and Structures
Reviewer	Macromolecular Theory and Simulations

PhD Supervised :

Scholar Name	Research Topic	Status	Year	Co-Supervisor
Aashish Kumar	Composites	In Progress	2022	Dr Ashok Kumar
Sajid Mohammad Chippa	Molecular dynamics with machine learning	In Progress	2021	Dr Ashok Kumar
Deepa Bedi	Multiscale modeling of polymer composites	In Progress	2019	Dr. S K Tiwari
Pramod Rakt Patel	Experimental and Molecular dynamics study of CNT-Al composites	In Progress	2018	Dr. S K Tiwari

PG Dissertation Guided :

Student Name	Dissertation Title	Status	Year	Co-Supervisor
Shahbaz P	C3N and Nitrogen Doped Boron-Carbide Nanosheets	In Progress	2023	NA
Sanjeev Kumar	Molecular dynamics modeling of Pentagraphene	In Progress	2023	Nitin Sharma
Aditya Sharma	Molecular dynamics modeling of Phagraphene	In Progress	2023	NA
Amit Sharma	Molecular dynamics simulation of polymer coatings for anti-corrosion applications	Completed	2022	NA
Syed Asad	Molecular dynamics simulation of graphene/rubber composites	Completed	2022	NA
Aviral Srivastav	Molecular dynamics simulation of graphene oxide/rubber composites	Completed	2022	NA
Dhinesh Kumar	Molecular dynamics modeling of carbon nanotube reinforced rubber composites	Completed	2022	Dr Pramod Kumar

Akash Mani	Molecular dynamics simulation of interfacial properties of carbon nanotube/polymer composites	Completed	2021	NA
Brijesh Mishra	Molecular Dynamics Modeling of the Effect of Strain Rate on Mechanical Properties of Carbon Nanotube Reinforced Polymer Composites.	Completed	2021	NA
Puneet Kundan	Rubberized Cemented Concrete Composites	Completed	2021	Dr Manoj Kumar
Nikshunj Sharma	Molecular Dynamics Modeling of the Effect of Chirality and Defects in Carbon Nanotubes on the Mechanical Properties of Polymer Composites.	Completed	2021	NA
Ajay Diwakar	Modeling and analysis of composite material using Materials Studio and Abaqus	Completed	2019	Dr. Pramod Kumar, Dr Manoj Kumar
Yogesh Sonwani	STUDY OF MECHANICAL PROPERTIES OF EPOXY CONCRETE WITH MOLECULAR DYNAMICS SIMULATION	Completed	2019	Dr. Raman Bedi
Sagar	Molecular dynamics study of CNT Reinforced Metallic Glass composites	Completed	2019	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
Institute Transport Incharge	Dr BR Ambedkar National Institute of Technology Jalandhar	01-02-2020	till date
Member of Committee on Unnat Bharat Abhiyan	Dr BR Ambedkar National Institute of Technology Jalandhar	15-06-20	till date
Associate Dean III (Student Welfare)	Dr BR Ambedkar National Institute of Technology Jalandhar	21-02-23	

Award and Honours :

Title	Activity	Given by	Year
Best Teacher Award	Teaching and Research	Dr BR Ambedkar National Institute of Technology Jalandhar	2019
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