

Profile Page



Name : Dr Varun Sharma

Designation : Assistant Professor Grade-i

Department : Industrial & Production Engg.

Qualification : Ph.D. (SLIET, Longowal)
M.Tech. Manufacturing Systems Engineering (Punjab Technical University)
B.Tech. Mechanical Engineering (NIT Hamirpur)

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Research Interests :

Welding, Physical Metallurgy, Tribology, Optimization

Journal Publications :

Year	Journal	Publication
2022	International Journal of System Assurance Engineering and Management	Drishti Yadav, Tarun Kumar Sharma, Varun Sharma, OP Verma, Optimizing the energy efficiency of multiple effect evaporator house using metaheuristic approaches
2022	Surface Topography: Metrology and Properties	Vijay Kumar, Rajeev Verma, Vishal S Santosh, Varun Sharma, Recent progresses in super-hydrophobicity and micro-texturing for engineering applications
2022	Materials science and engineering B, 278, 115612	Ankit Thakur Navdeep Minha Sumit Mahalwal Varun Sharma, Influence of tool rotational speed on the microstructural characterization and mechanical properties of friction stir welded Al-Si10Mg parts produced by DMLS additive manufacturing process
2022	Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science	Ankit Thakur, Ambikeshwar Ojha, SS Bhadauria, Varun Sharma; Influence of forging action on the microstructural and mechanical characteristics of the friction stir welded joints of aluminum alloy with varied joint configurations
2021	Materials Today: Proceedings	Ankit Thakur, Gurmeet Singh, Navdeep Minhas, Varun Sharma, Anuj Bansal, 3D modeling and experimental investigation for tool deflection in end mill cutting of AISI 1045 steel
2021	Journal of Materials Engineering and Performance, 30, 1619–1640	Subodh Kumar, A.S. Shahi, Varun Sharma, Dikshant Malhotra, “Effect of welding heat input and post-weld thermal aging on the sensitization and pitting corrosion behavior of AISI 304L stainless steel butt welds

2021	Korean Journal of Chemical Engineering, 38, No.5, 906-923.	Drishti Yadav, Saurav Kumar, OP Verma, Varun Sharma, Nikhil Pachauri, "Approximate Solution of Non-linear Dynamic Energy Model of Multiple Effect Evaporator using Fourier series and Metaheuristics
2021	Arabian Journal for Science and Engineering, 46, 11671–11685	Navdeep Minhas, Ankit Thakur, Sumit Mehlwal, Rajeev Verma, Vishal Sharma, Varun Sharma", Multi-variable Optimization of the Shot Blasting of Additively Manufactured AISi10Mg Plates for Surface Roughness using Response Surface Methodology
2021	CIRP-journal of manufacturing science and technology, 35, 132-145.	Ankit Thakur, Varun Sharma, SS Bhadauria, "Effect of tool tilt angle on weld joint strength and microstructural characterization of double-sided friction stir welding of AZ31B magnesium alloy
2021	International Journal of System Assurance Engineering and Management	Varun Sharma, Sanjay Sharma, Om Prakash Verma, Bhuvnesh Bhardwaj, Tarun Kumar Sharma, Nikhil Pachauri, "Prediction and Optimization of Abrasive Wear Loss of Ultrahigh Strength Martensitic Steel using Response Surface Methodology, Harris Hawk and Artificial Neural Network
2020	Materials Today: Proceedings	Ajay Gupta, Varun Sharma, Parul Kumar, Ankit Thakur , Investigating the effect of ferritic filler materials on the mechanical and metallurgical properties of Hardox 400 steel welded joints
2019	Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications	Sharma, V., Shahi, A., & Kumar, S., Influence of different filler weld wire chemistries on metallurgical and mechanical behavior of ultrahigh strength steel welded joints
2018	Journal of Materials Processing and Technology, 253, 2-16	Varun Sharma and A.S. Shahi, Quenched and tempered steel welded with micro-alloyed based ferritic fillers.
2017	Journal on Design & Manufacturing Technologies, 11, 20-26	Bhuvnesh Bhardwaj and Varun Sharma, Optimization of CO2 laser cutting parameters for minimum kerf width during the cutting of AISI 304L steel.
2014	Materials and design, 53, 727-736	Varun sharma and A.S. Shahi, Effect of groove design on mechanical and metallurgical properties of quenched and tempered low alloy abrasion resistant steel welded joints.

Conference Publications :

Year	Conference	Publication
2022	ICRITDME-2022	Hemant Gupta, Varun Sharma, Rakesh Kumar Sharma, Bhuvnesh Bhardwaj; Optimization of friction stir welding parameters for improved ultimate tensile strength
2021	CAMSE 2021	Ambikashwer Ojha, Ankit Thakur, Shailendra Singh Bhadauria, Om Prakash Verma and Varun Sharma, Effect of strain rate on the tensile properties of Friction Stir Welded Aluminium alloy of 6061-T6
2021	CAMSE 2021	Lenka Sudheer, Navdeep Minhas, Shailendra Singh Bhadauria and Varun Sharma, Study of the corrosion behavior of AA6061-T6 at different concentrations of NaCl in ambient conditions
2020	CIMS 2020, (CIMS_ 278)	Bhuvnesh Bhardwaj, Subodh Kumar, Varun Sharma and Shailender Singh Bhadauria, "Effect of friction welding conditions on the mechanical properties of welded joints during welding of dissimilar materials

2020	CIMS 2020, (CIMS_ 275)	Subodh Kumar, Bhuvnesh Bhardwaj, Varun Sharma and Shailender Singh Bhadauria, Influence of welding speed on the metallurgical and corrosion performance of AISI 316 SS welded joints
2020	CIMS 2020, (CIMS_139)	Sarika Kumari, Varun Sharma and Raj Kumar Bansal, Optimizing the Three-Body Abrasion Wear Behaviour of Quenched & Tempered Steel
2020	ICRITDME-2020	Jitendra Kumar Gupta, Bhuvnesh Bhardwaj and Varun Sharma, Friction welding process of AA7075 aluminium alloy to mild steel (123)
2020	ICRITDME-2020	Tej Bahadur Singh, Ravi Yadav, Dr Bhuvnesh Bhardwaj and Dr Varun Sharma, Effect of EDM parameters on surface roughness during the machining of Hastelloy C-276 (124)
2020	ICRITDME-2020	Gaurav Kumar, Varun Sharma, Rakesh Kumar, Ankit Thakur, Navdeep Minhas, Om Prakash Verma, Effect of Tool Tilt Angle on the Mechanical and Metallurgical Properties of Aluminium Alloy 6061-T6 Welded by Friction Stir Welding Process
2019	6th International Conference on Production & Industrial Engineering (CPIE)	Shailendra Bhadauria, Varun Sharma and Ajay Gupta, Investigating The Mechanical Properties And Pitting Potential Of Heat Treated AISI 4340 Steel In Various Corrosive Environment
2019	6th International Conference on Production & Industrial Engineering (CPIE)	Himanshu Bisht, Ravi Pratap Singh and Varun Sharma, Study Of Impact Strength In TIG Welding Of INCOLOY-800 Super Alloy: An Experimental Investigation And Optimization
2019	6th International Conference on Production & Industrial Engineering (CPIE)	Bhuvnesh Bhardwaj, Varun Sharma, Subodh Kumar and Suneel Dut, Multi Response Optimization Of EDM Machining Parameters Using Taguchi Methodology With Grey Relational Analysis
2019	6th International Conference on Production & Industrial Engineering (CPIE)	Subodh Kumar, Varun Sharma and Bhuvnesh Bhardwaj, Effect Of Welding Current On The Metallurgical And Corrosion Performance Of AISI 304 SS Cladding
2019	6th International Conference on Production & Industrial Engineering (CPIE)	Ranbir Singh Multani, Varun Sharma, Ajay Gupta and Jaswant Singh, Effect Of Welding Processes On The Mechanical Properties Of HARDOX 400 Steel Welded Joints
2019	6th International Conference on Production & Industrial Engineering (CPIE)	Ankit Thakur, Shailendra Bhadauria, Varun Sharma and Ajay Gupta, Effect of Cutting Parameters on MRR and Surface Roughness in Turning of AISI 1018 and AISI P20 using Taguchi Method
2018	ISME conference on Advances in Mechanical Engineering (Mechanical Systems and Sustainability)	Ankit Thakur, Om Prakash Verma, Afzal Sikander, Varun Sharma, Modeling of 3-Dimensional cutting force and cutter deflection in end milling for machining AISI 1045
2017	Proceedings International Conference on Emerging Trends in Engineering Innovations & Technology Management (ICET EITM-2017)	Varun Sharma, Bhuvnesh Bhardwaj & Subodh kumar, An Investigation on the Sliding Abrasive Wear Behaviour of Ultra High Strength Steel using RSM with Box-Cox Transformation

2017	Proceedings International Conference on Emerging Trends in Engineering Innovations & Technology Management (ICET EITM-2017)	Bhuvnesh Bhardwaj, Varun Sharma & Subodh kumar, Study of Wear Characteristics of AISI D3 Steel against AISI 1020 Steel
2016	4th international conference on advancements in engineering & technology (ICAET-2016)	Varun Sharma, Subodh Kumar and A.S. Shahi, Sliding wear analysis of ultra high strength steel using full factorial design approach.
2016	4th international conference on advancements in engineering & technology (ICAET-2016)	Subodh Kumar, Varun Sharma and A.S. Shahi, Carbide precipitation behavior of austenitic stainless steel welded joints.
2016	IVth international conference on production and industrial engineering (CPIE-2016)	Varun sharma and Bhuvnesh Bhardwaj, Experimental investigations on three-body abrasion wear behaviour of abrasion resistant steel.
2013	3rd international conference on production and industrial engineering (CPIE-2013)	Varun sharma and A.S. Shahi, Sliding wear modeling of quenched and tempered low alloy abrasion resistant steel.

Book/Chapter Publications :

Type	Title	Publisher	Authors	ISBN/ISSN No.	Year
Book Chapter	Effect of Tool Tilt Angle on the Mechanical and Metallurgical Properties of Aluminium Alloy 6061-T6 Welded by Friction Stir Welding Process	Springer	Gaurav Kumar, Varun Sharma, Rakesh Kumar, Ankit Thakur, Navdeep Minhas, Om Prakash Verma		2022
Book Chapter	Optimizing the Three-Body Abrasion Wear Behaviour of Quenched & Tempered Steel	Lecture Notes on Multidisciplinary Industrial Engineering (Book Title: Optimization in Industrial and Manufacturing Systems and Applications): Springer	Sarika Kumari, Varun Sharma and Raj Kumar Bansal		2021
Book Chapter	Effect of Welding Processes on the Mechanical Properties of Hardox 400 Steel Welded Joints	Lecture Notes on Multidisciplinary Industrial Engineering (Book Title: Manufacturing Engineering): Springer	Ranbir Singh Multani, Varun Sharma, Ajay Gupta, Jaswant Singh		2020

Book Chapter	Investigating the Mechanical Properties and Pitting Potential of Heat-Treated AISI 4340 Steel in Various Corrosive Environments	Lecture Notes on Multidisciplinary Industrial Engineering (Book Title:Manufacturing Engineering): Springer	Shailendra Singh Bhadauria Varun Sharma Ajay Gupta		2020
Book Chapter	Effect of Cutting Parameters on MRR and Surface Roughness in Turning of AISI 1018 and AISI P20 Using Taguchi Method	Lecture Notes on Multidisciplinary Industrial Engineering (Book Title:Manufacturing Engineering): Springer	Ankit Thakur Varun Sharma Shailendra Singh Bhadauria Ajay Gupta		2020
Book Chapter	A New System Approximation Approach for Modelling of DC–DC Converter	Advances in Intelligent Systems and Computing book series (AISC, volume 1053)	Afzal Sikander, Shiv Sagar, Om Prakash Verma, S. Sathiya, Varun Sharma and Suneel Dutt		2019
Book Chapter	A Monte Carlo Simulation Study of the Angular Correlations by Using Z+Jets Events at Centre of Mass Energy of 14 TeV	Soft Computing: Theories and Applications	Monika Bharti, Varun Sharma, Afzal Sikander, Om Prakash Verma and Suneel Dutt		2019

Research Projects :

Role	Project Type	Title	Funding Agency	From	To	Amount	Status	Co-Investigator
Co-PI	Seed Grant for Innovative R&D Project	Development and Evaluation of Durable Micro-Textured Superhydrophobic Surfaces	TEQIP Phase-III, vide order no. NITJ/TEQIP-III/7719	03.12.2018	05.6.2020	3.85 Lac.	Completed	Rajeev Verma, Saurabh Kango, Nitin Sharma

Events Organized :

Category	Type	Title	Venue	From	To	Designation
Conference	International	6th International Conference on Production & Industrial Engineering (CPIE - 2019)	NIT Jalandhar	08/06/2019	10/06/2019	Convener
STC	International	Advancement in Manufacturing and Material Processing	NIT Jalandhar	02/01/2020	06/01/2020	Coordinator

STC	International	Impact & strategies for higher education: Comprehensive Research Pedagogy, Methodology & Design (ISHE-2020)	NIT Jalandhar	17/08/2020	21/08/2020	Coordinator
STC	International	Contemporary Material Technologies	NIT Jalandhar	08/09/2020	12/09/2020	Coordinator
STC	International	Machine Learning: Theory and Applications (MLTA-2020)	NIT Jalandhar	09/09/2020	13/09/2020	Coordinator
STC	International	Computational and Experimental Studies for Failure of Materials	NIT Jalandhar	13/09/2020	17/09/2020	Coordinator
Conference	International	International congress on Advances in Materials Science and Engineering (CAMSE-2020)	Shobit University, Uttar Pradesh	28/12/2020	30/12/2020	Organizing Secretary
Conference	International	1st International Conference on Industrial and Manufacturing Systems	NIT Jalandhar	09/10/2020	11/10/2020	Convener

Professional Affiliations :

Designation	Organization
Life time member	STEM (Science, Technology, Engineering and management)
Life time member	SOMME (Society of Materials and Mechanical Engineers)

PhD Supervised :

Scholar Name	Research Topic	Status	Year	Co-Supervisor
Hemant Bansal	Welding	Ongoing	2021	Dr Rakesh Kumar Sharma
Ajay Sharma	Coatings	Ongoing	2021	Dr Rajeev Verma
Vikas Chaudhary	Coatings	Ongoing	2021	Dr Rajeev Verma
Vinod Kumar	Tribological studies of welded joints	Ongoing	2020	Dr Rajeev Verma
Retaish Uppal	Welding	Ongoing	2020	Dr Rakesh Kumar Sharma
Navdeep Minhas	Friction stir welding of Aluminum alloys	Ongoing	2019	Dr. S.S Bhadauria
Manoj Kumar	Fatigue and fracture of friction stir welded joints	Ongoing	2019	Dr. S.S Bhadauria
Ankit Thakur	Friction stir welding	Ongoing	2018	Dr S S Bhadauria

PG Dissertation Guided :

Student Name	Dissertation Title	Status	Year	Co-Supervisor
Rajit Kumar	Friction stir welded joints	Ongoing	2022	Dr RK Bansal
Jadhav Vaibhav Dattatray	Corrosion of welded joints	Ongoing	2022	Dr SS Bhadauria
Rakesh Kumar	Friction stir welded joints of high strength aluminum alloys	Ongoing	2022	Dr SS Bhadauria

Ambikeshwar Ojha	Effect of tilt angle variation on mechanical and microstructural properties of friction stir welded joints of AA 6061-T6 aluminum alloy	Completed	2021	Dr SS Bhadauria
Lenka Sudheer	To study the corrosion behaviour of friction stir welded joints of AA 6061-TC6 aluminum alloy	Completed	2021	Dr S.S Bhadauria
Sarika Kumari	To study the influence of filler material variation on the wear performance of high strength steel welded joints	Completed	2020	Prof. R.K. Bansal
Gaurav Kumar	Effect of tool tilt angle on the mechanical and metallurgical properties of Aluminium alloy 6061-T6 welded by Friction Stir Welding process	Completed	2020	Dr Rakesh Kumar
Brijesh Kumar Yadav	Investigating the effect of groove volume on the mechanical and metallurgical properties of quenched and tempered steel welds	Completed	2019	None
Parul Kumar	Investigating the influence of fillers materials on the mechanical and metallurgical properties of ultra-high strength welded joints	Completed	2019	Dr Ajay Gupta
Himanshu Bisht	Investigation and optimization of welding parameters in TIG welding of Incoloy-800 using designed experiments	Completed	2019	Dr Ravi Pratap Singh

Patents :

Name	Reg./Ref. No.	Date of Award/Filling	Organization	Status
Device and method for creating a plurality of geometrical shapes in minimal time	202011011813	18/03/2020	NIT Jalandhar	Published
A friction stir welding fixture of tapered plate for 3-axis vertical milling machines and method thereof	202111009992	10/03/2021	NIT Jalandhar	Complete filing

Admin. Responsibilities :

Position Held	Organization	From	To
Warden	NIT Jalandhar	February 2019	October 2019
Member	Unnat Bharat Abhiyan	2019	2020
Member	Yoga and Meditation Club	2019	2020
Member	Screening committee of non-faculty position of Technical Assistant for IPE & Mechanical Engineering Department	2021	
Member	IPR cell	2021	till date