Profile Page

Name	:	Dr Shailendra Singh Bhadauria
Designation	:	Associate Professor
Department	:	Industrial & Production Engg.
Qualification	:	Ph.D Applied Mechanics (NIT Bhopal)
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Research Interests :

Analytical, Experimental and Computational Fracture Mechanics and Stress-life, Stress-life and Multiaxial Fatigue life prediction of weldments, Stress Corrosion Cracking

Other Profile Links :

Google Scholar Link :

Google Scholar ID Click Here

Personal Web Link :

Orcid ID Click Here
Publons Researcher ID Click Here
Scopus ID Click Here
Microsoft Academic ID Click Here

Journal Publications :

Year	Journal	Publication
2022	https://doi.org/10.1177/09544062221111904	Ambekeshwar Ojha, Varun Sharma, Shailendra Singh Bhadauria (2022), Influence of forging action on the microstructural and mechanical characteristics of the friction stir welding joints of aluminum alloy with varied joint configurations
2022	https://doi.org/10.1080/00084433.2022.2120415	Sudhir Lenka, Varun Sharma & Shailendra Singh Bhadauria; (2022), Evaluating Corrosion behaviour of AA6061-T6 alloy and its friction stir welded joints
2022	https://doi.org/10.1080/00084433.2022.2111968	Navdeep Minhas, Varun Sharma & Shailendra Singh Bhadauria; (2022), A review on weldability and corrosion behavior of L-PBF printed AlSi10Mg all

2021	Journal of Bio- and Tribo-Corrosion, 7:43	Surinder Pal and Shailendra Singh Bhadauria, Pramod Kumar (2021), Electrochemical Corrosion Behavior of type F-304 Stainless Steel in Different Temperatures
2021	Material Science and Engineering Technology, Vol 52 (1), pp-1201-1213	Kamleshwar Kumar, Shailendra Singh Bhadauria, Abhinav Pratap Singh; (2021), Mitigation of chloride driven stress corrosion cracking susceptibility of 316L austenitic stainless steel using plasma sprayed TiO2 coating
2021	CIRP Journal of Manufacturing Science and Technology, 35 (2021), pp- 132-145	Ankit Thakur, Varun Sharma & Shailendra Singh Bhadauria (2021), Effect of tool tilt angle on weld joint strength and microstructural characterization of double-sided friction stir welding of AZ31B magnesium alloy
2021	Materials Today: Proceedings 45 (2021) 4653–4659	Kamleshwar Kumar, Shailendra Singh Bhadauria Abhinav Pratap Singh (2021), Finite element analysis of edge crack embedded in bend-beam specimen under deflection-controlled bending
2021	Materials Today: Proceedings 44 (2021) 3050–3054	Kamleshwar Kumar Shailendra Singh Bhadauria Abhinav Pratap Singh (2021), Finite element analysis of crack initiation and growth in a rectangular plate with pre-existing pits
2021	Materials Today: Proceedings 44 (2021) 865–870	Kamleshwar Kumar Shailendra Singh Bhadauria Abhinav Pratap Singh (2021), Finite element analysis of edge and cleavage cracks in U-bend specimen using contour integral approach
2021	Journal of Bio- and Tribo-Corrosion, 7:123	Kamleshwar Kumar Shailendra Singh Bhadauria Abhinav Pratap Singh (2021), Effect of Strain Loading on Stress Corrosion Cracking Susceptibility of 316L Stainless Steel in Boiling MgCl2 Solution
2020	Mechanics of Advanced Materials and Structures, Volume 29, 2022 - Issue 2, Pages 213-229	Millan Kumar, Pramod Kumar & Shailendra Singh Bhadauria (2020), Numerical simulation of delamination growth in fibre reinforced polymer laminates using cohesive zone modeling
2020	Polymer-Plastics Technology and Materials, 59, 2020 - Issue 10	Millan Kumar, Pramod Kumar & Shailendra Singh Bhadauria, Interlaminar fracture toughness and fatigue fracture of continuous fiber-reinforced polymer composites with carbon-based nanoreinforcements: a review
2019	Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science; Volume: 233 issue: 13, page(s): 4688-4706	Ruchin Kacker and Shailendra Singh Bhadauria, Investigations on critical anisotropic triaxiality at the crack tip under mixed-mode (I?+?II) fracture
2019	Journal of Bio- and Tribo-Corrosion, 5:91 https://doi.org/10.1007/s40735-019-0283-z	Surinder Pal and Shailendra Singh Bhadauria, (2019), Pitting Corrosion Behavior of Austenitic F-304 Stainless Steel under the Exposure in Ferric Chloride Solution
2019	Journal of Physics: Conf. Series1240 doi:10.1088/1742-6596/1240/1/012074	A Jagotra, D.K Singh, S.S Sandhu, S.Kango and S S Bhadauria, (2019) Experimental investigation on performance and emission characteristics of single cylinder CI engine using waste cooking oil (WCO) with diethyl ether (DEE), IOP Conf. Series
2018	International Journal of Applied Mechanics and Engineering, Vol. 23, (04), pp 941-961	A.K. Sharma, P. Sharma, P.S. Chauhan, S.S. Bhadoria; Study on Harmonic Analysis of Functionally Graded Plates using FEM
2018	Elsevier Materials Today: Proceedings	K. Gowtham Kumara , V. J. K. Silpab , B.V.S.Raghu Vamsic , Dr. S. S. Bhadauriad, Studies on the Critical Size of the Plastic Zone in Pure Mode-I and Mixed Mode (I/II) Fracture
2017	Mechanics Based Design of Structures and Machines, http://dx.doi.org/10.1080/15397734.2017.1357476	Ruchin Kacker, Shailendra Singh Bhadauria and Raghupati Talwar; Investigation on Triaxiality along the Yield Loci at the Crack Tip under Mixed Mode (I/II) Fracture

2016	Mechanics of Advanced Materials and Structures	Ruchin Kacker, Shailendra Singh Bhadauria; Triaxiality at crack tip for combined Lankford's coefficient and degree of anisotropy subjected to mixed-mode (I/II) fracture
2016	Journal of Solid Mechanics	Ruchin Kacker, Shailendra Singh Bhadauria; Crack Tip Constraint for Anisotropic Sheet Metal Plate Subjected to Mode-I Fracture
2015	International Journal of Mechanical and Production Engineering Vol. 3, No. 2, pp: 53-57	Shailendra Singh Bhadauria, Ruchin Kacker, Vishal Parashar, (2015)Effect of Strain Ratio on Stress Triaxiality subjected to Mode I Fracture
2015	International Journal of Mechanical and Production Engineering Vol 3, No. 2, pp 58-61	Vishal Parashar, Shailendra Singh Bhadauria, Yogesh Sahu, (2015)Optimization of Surface Roughness using Taguchi method in End Milling of Steel Grade EN19 with Tin coated carbide tool
2015	Academic Journal of Science, Vol. 4 No. 2, pp- 17-32	B.V.S. Raghuvamsi, Shailendra Singh Bhadauria, Ruchin Kacker (2015), Mathematical Modeling for CTOD based M-Criterion for the Determination of Triaxiality Under Mixed Mode (I/II) Fracture
2012	Journal of Material Science – Poland, Vol. 30, No.03, pp-197-203.	Shailendra Singh Bhadauria, K.K. Pathak, M.S. Hora (2012) Determination of Critical Stress Triaxiality on Yield locus of Isotropic Ductile Materials under Plane Strain Condition
2012	Journal of Mechanical and Civil Engineering, Vol. 03, No. 05, pp 27-34	Veerendra Patle, Shailendra Singh Bhadauria and Abhishek Jain, (2012) Analysis of Crack Tip Opening Displacement under Mixed Mode Fracture Using FEM Technique
2010	Journal of Solid Mechanics, Vol. 2, No. 3, pp 231-247	S.S. Bhadauria, K.K Pathak, M.S. Hora, (2010) Finite Element Modeling of Crack Initiation Angle under Mixed Mode (I/II) Fracture
2009	Journal of Solid Mechanics, Vol. 1, No. 3 (2009) pp. 226-232.	Shailendra Singh Bhadauria, M.S. Hora, K.K Pathak (2009) Effect of Stress Triaxiality on Yielding of Anisotropic Materials under Plane Stress Condition

Conference Publications :

Year	Conference	Publication
2021	Materials Today: Proceedings, Materials Today: Proceedings 44 (2021) 865–870	Kamleshwar Kumar, Shailendra Singh Bhadauria and Abhinav Pratap Singh, (2020), Finite element analysis of edge and cleavage cracks in U-bend specimen using contour integral approach
2021	Materials Today: Proceedings Materials Today: Proceedings 45 pp 4653–4659	Kamleshwar Kumar, Shailendra Singh Bhadauria and Abhinav Pratap Singh, (2021), Finite element analysis of edge crack embedded in bend-beam specimen under deflection-controlled bending
2021	Materials Today: Proceedings Materials Today: Proceedings 44 (2021) 3050–3054	Kamleshwar Kumar, Shailendra Singh Bhadauria and Abhinav Pratap Singh, (2021), Finite element analysis of crack initiation and growth in a rectangular plate with preexisting pits
2020	International Conference on Industrial & Manufacturing Systems (CIMS-2020), October, 09-11, 2020 at NIT Jalandhar	Rahul Soni, Ravi Pratap Singh and Shailendra Singh Bhadauria, (2020) Study on Electric Discharge Machining of Aluminium 7075-T651 Alloy
2020	International Conference on Industrial & Manufacturing Systems (CIMS-2020) held during October, 09-11, 2020 at NIT Jalandhar	Rahul Soni, Ravi Pratap Singh and Shailendra Singh Bhadauria (2020), Influence of Key Electric Discharge Machining Parameters on Various Process Characteristics: A Review

2020	International conference on Production and Industrial Engineering, organized by NIT Jalandhar from 8-10 June	Rahul Soni, Ravi Pratap, Shailendra Singh Bhadauria (2019), Effect of cutting parameters on MRR and surface roughness in turning of AISI1018 and AISI P20 using Taguchi Method
2019	International Conference on Materials Science and Engineering (ICMSE), organized by Department of Mechanical Engineering, NIT Jalandhar, June 11-12 2019	Milan Kumar, Pramod Kushwaha and S.S. Bhadauria, (2019), Finite element modeling of delamination growth in carbon fiber reinforced polymer laminates
2019	Conference on Production and Industrial Engineering	Ankit Thakur, Varun Sharma and Shailendra Singh Bhadauria, Investigating the Mechanical Properties and Pitting Potential of Heat Treated AISI 4340 Steel in Various Corrosive Environment
2019	Conference on Production and Industrial Engineering	Shailendra Singh Bhadauria, Varun Sharma and Ajay Gupta, Effect of cutting parameters on MRR and Surface Roughness in Turning of AISI 1018 and AISIP 20 using Taguchi Method
2016	International Conference on Production and Industrial Engineering, Organized by NIT Jalandhar, Punjab. 19-21 December 2016	Surinder Pal and Shailendra Singh Bhadauria (2016), Prediction of Edge Crack Propagation in 2D Plate Specimen using CASCA and FRANC2D
2016	International Conference on Recent Trends in Engineering and Material Science, organized by Jaipur National University, Jaipur, 17-19th March 2016	Surinder Pal and Shailendra Singh Bhadauria, (2016), Fundamental Dissension between hot and cold chamber pressure die casting
2015	Conference of the International Journal of Arts and Sciences (IJAS)	Mathematical Modeling for CTOD based M-Criterion for the Determination of Triaxiality under Mixed Mode (I/II) Fracture
2015	International Conference on Recent Innovations in Science, Engineering and Technology, organized by Institute of Research and Journals, Panjim Goa	Effect of Strain Ratio on Stress Triaxiality subjected to Mode I Fracture
2015	International Conference on Recent Innovations in Science, Engineering and Technology, organized by Institute of Research and Journals, Panjim Goa	Optimization of Surface Roughness using Taguchi method in End Milling of Steel Grade EN19 with Tin coated carbide tool
2013	International Conference on Mechanical Engineering: Theory and Application, WASET Singapore	Investigation of Anisotropic Mode I Fracture in Plane Stress Condition
2009	3rd International Congress on Computational Mechanics and Simulation IIT Bombay	Optimization of Stress Triaxiality Factor – Effects on Yielding of Isotropic Ductile Materials under Plane Strain Condition
2007	International and INCCOM-6 Conference on Future Trends in Composite Materials and Processing, Organized by IIT Kanpur India	Stress Analysis of Tensile Loaded Thin Plate with Central Hole
2007	International and INCCOM-6 Conference on Future Trends in Composite Materials and Processing, Organized by IIT Kanpur India.	Two Dimensional Linear Elastic Fracture Analysis Of A Finite Rectangular Plate With A Central Crack
	International Conference on Production and Industrial Engineering, Organized by NIT Jalandhar, Punjab	Non Linear Optimization of Parameters of Wire Electric Discharge Machining with MATLAB
	International Conference on Production and Industrial Engineering, Organized by NIT Jalandhar, Punjab.	Non-Linear Optimization of Parameters of Wire Electric Discharge Machining using Artificial Neural Network with MATLAB
	International Conference On Productivity And Quality Research (ICPQR) organized at IIT Delhi in association with International Society for Productivity and Quality Research, Miami USA	Impact of Simulation and Modeling Software on productivity improvement

Book/Chapter Publications :

Type	Title	Publisher	Authors	ISBN/ISSN No.	Year
Text Book	DBS Handbook of Theory of Machines	DBS Imprints, Edition 1 2021 New Delhi	Shailendra Singh Bhadauria (NIT Jalandhar) and Debashish Das (NIT Hamirpur)	987-9386648-52-5	2021
Conference Proceeding	Investigating the Mechanical Properties and Pitting Potential of Heat-Treated AISI 4340 Steel in Various Corrosive Environments	Springer Nature	1. Shailendra Singh Bhadauria, Varun Sharma, Ajay Gupta		2019
Conference Proceeding	Effect of Cutting Parameters on MRR and Surface Roughness in Turning of AISI 1018 and AISI P20 Using Taguchi Method, Optimization Methods in Engineering	Springer Nature	Ankit Thakur, Varun Sharma, Shailendra Singh Bhadauria and Ajay Gupta		2019

Research Projects :

Role	Project Type	Title	Funding Agency	From	To	Amount	Status	Co-Investigator
Principal Investigator	TEQIP-II Sponsored	Stress Corrosion Cracking of gas nitrocarburising head treating AISI 4340 Steel at different R-Ratios	TEQIP-II	January 2017	June 2017	50,000	Completed	NIL
Principal Investigator	TEQIP-II Sponsored	Stress corrosion cracking behaviour of heat-treated gas nitrocarburising AISI 4340	TEQIP-II	January 2017	June 2017	50,000	Completed	NIL

Events Organized :

Category	Type	Title	Venue	From	To	Designation
Faculty Development Program	National	Introduction and Application of Finite Element Method	National Knowledge Networks (NKN), NIT Jalandhar Centre	13-06-2016	17-06-2016	Coordinator

Short Term Course	National	Skill Development Program on Ansys – A FEA Package	IT Park, NIT Jalandhar	28-03-2016	30-03-2016	Coordinator
Training Program	National	Introduction to Abaqus – A FEA Package	T&P Hall, NIT Jalandhar	25-06-16	27-06-16	Coordinator
Training Program	National	Design & Assembly with Solid Works	T&P Hall, NIT Jalandhar	13-08-16	14-08-16	Coordinator
Workshop	National	Workshop on e-Foundry: Casting Design and Simulation	NKN Centre, NIT Jalandhar	9-04-2014	9-04-2014	Coordinator
Workshop	National	Modeling of Metal Forming and Machining Processes	NKN Hall NIT Jalandhar	17-07-17	22-12-17	Assistant Professor
Conference	National	National Conference on Creativity in Mechanical Engineering	LAXMI NARAIAN COLLEGE OF TECHNOLOGY BHOPAL (M.P)	15-04-2007	16-04-2007	AICTE Sponsored EMD Cell
STC	National	Computational and Experimental Analysis of Failure of Materials	NIT Jalandhar	13-09-2020	17-09-2020	TEQIP-III funded course
STC	National	Modeling of Metal Forming and Machining Processes	NIT JALANDHAR	17-07-2017	22-07-2017	TEQIP-III funded course

PhD Supervised :

Scholar Name	**Research Topic**	**Status**	**Year**	**Co-Supervisor**
Kamleshwar Verma	Investigation of Stress Corrosion Cracking of 316L Austenitic Stainless Steel Subjected to Various Configuration of Protective Coatings	Awarded	2022	Dr. Abhinav Pratap, Dept. of Physics
Milan Kumar	Fracture of Carbon Nano Tube Composites	Awarded	2022	Dr. Pramod Kumar, Dept. of Mechanical Engg
Surinder Pal	Experimental Investigation of Stress Corrosion Cracking (SCC) on Gate Valve Disc	Awarded	2021	Dr. Pramod Kumar, Dept. of Mechanical Engg
Pradeep Kumar Sahu	Assessment of life of Friction Stir Welded Al-7075 alloy subjected to multiaxial fatigue loading in mode - I fracture	Undergoing	2021	Nil
Manoj Kumar	Fracture and fatigue behavior of friction stir welded joint of Al-7075 Alloy	Undergoing	2019	Dr. Varun Sharma
Navdeep Minhas	Investigation of mechanical and corrosion properties of additively manufactured AlSi10Mg Aluminium alloy	Undergoing	2019	Dr. Varun Sharma
Ruchin Kacker	Investigation on Stress Triaxiality for Anisotrpy and Unified Strength Theory under Mixed Mode (I/II) Fracture	Awarded	2018	Sole Supervisor
Ankit Thakur	Investigation of mechanical metallurgical and fatigue properties of multi-pass friction stir welding joints of aluminium and magnesium alloy	Undergoing	2018	Dr. Varun Sharma

PG Dissertation Guided :

Student Name	Dissertation Title	Status	Year	Co-Supervisor
Rakesh Kumar	Effect of tool pin profile on microstructure and mechanical properties of single pass friction stir welded Al-7075 T6 Alloy	Undergoing	2022	Dr. Varun Sharma
Rahul Soni,	Study and optimization of performance characteristic in EDM of Al7075T651	Completed	2021	Dr. Ravi Pratap Singh
Sondagar Hardik Dalsukhbhai,	Artificial Neural Network based prediction of process parameter in Additive Manufacturing	Completed	2021	Sole
Ambikashwer Ojha	Effect of Variation in Tool Tilt Angle on Weld Strength and Microstructural Characterization of Friction Stir Welded AA6061-T6 Joints	Completed	2021	Dr. Varun Sharma
Sudhir Lenka	To study the corrosion behavior of AA-6061-T6 Aluminium alloy and its friction stir welded joints, joint	Completed	2021	Dr. Varun Sharma
Rohit Tiwari	Finite Element Modelling of Anisotropic Material with varying Degree of Anisotropy	Completed	2019	Sole
Ravi Jaiswal	Analysis of Helical Coil Suspension Spring using Finite Element Method	Completed	2019	Sole
Md. Wasim Rahi	Experimental Studies on Investigating the Concept of Thermo-Physical properties and Heat Transfer Characteristics of Zn/Water Nano fluid in Single Pass Cross Flow Compact Heat Exchanger	Completed	2018	Sole
Rajkumar Mandal	Investigating the mechanical properties and pitting potential of heat treated AISI 4340 steel in various corrosive environment	Completed	2017	Sole
Ankita Pandey	Fatigue Life Impovement by using Fillet at Stress Concentration Site in Universal Yoke Joint	Completed	2017	Sole
Vishal Mourya	Finite Element Analysis of Effect of Pit on Stress Distribution in Thermal Barrier Coating	Completed	2017	Sole
Vinay Kumar	Impact analysis of high speed tool on work piece using Finite Element Method	Completed	2015	Sole
Raghuvir Talwar	Effect of CTOD and Energy Release Rate with the application of UST under mixed mode fracture	Completed	2015	Sole
Nagesh Verma,	Experimental Investigation of EDM Parameter Optimization	Completed	2015	Sole
Kamleshwar Verma,	Finite Element Analysis of Thin Cylinder with application of Unified Strength Theory	Completed	2015	Sole
Ankur Gupta	Mathematical Modeling for Unified Strength Theory based Strain Energy Criterion subjected to Mixed Mode Fracture	Completed	2014	Sole
Charchil Badaya	Shakedown Analysis of a Thick Walled Cracked Cylinders subjected to Internal Pressure with the Unified Strength Theory under Mixed Mode Fracture	Completed	2014	Sole
Akhilesh Singh Chauhan,	Mode I Delamination Propagation and FEM Analysis of Laminated Composite Materials	Completed	2014	Sole
Jai Singh	Investigation on Delamination Parameters and Analysis of Laminated Composite Materials	Completed	2014	Sole

Manoj Kumar	Investigation of Crack Tip Constraint using Plastic Zone Envelops under Mixed Mode Fracture Subjected to Plane Strain Condition	Completed	2014	Sole
Sahil Garg	Mathematical Modeling and FE Analysis of Strain Energy Density and CTOD based Stress Triaxiality subjected to Mixed Mode Fracture under plane stress and plane strain conditions	Completed	2013	Sole
BVS Raghuwamsi	Mathematical Modeling and FE Analysis of Stress Triaxiality, Energy Release Rate and CTOD Based M-Criteria subjected to Mixed Mode Fracture under Plane Stress and Plane Strain Condition	Completed	2013	Dr. M.S. Hora
Virendra Patle	Finite Element Analysis of CTOD based Mixed Mode Fracture	Completed	2013	Sole

Patents :

Name	Reg./Ref. No.	Date of Award/Filling	Organization	Status
A friction stir welding fixture of tapered plate for 3-axis vertical milling machines and method THE	202111009992	10-03-2021	NIT Jalandhar	Filed
Preparation method of biodiesel utilizing waste catering grease	Application No. 202241028397	Filling Date: 17/04/2022		Under Review

Admin. Responsiblities :

Position Held	Organization	From	To
Boy's Hostel Warden No. 02	NIT Jalandhar	2012	2016
Coordinator Campus Amenities	NIT Jalandhar	2015	2016
Member of NSS	NIT Jalandhar	2012	2013
Warden, Boy's Hostel No. 03	NIT Jalandhar	01-03-17	Feb 2018
Senior Warden of First Year Boy's Hostel No. 1 and 2	NIT Jalandhar	Feb 2018	May 2018
Coordinator Heartfulness Meditation Club	NIT Jalandhar	May 2022	
Coordinator Green Club	NIT Jalandhar	August 2022	

Award and Honours :

Title	Activity	Given by	Year
Outstanding Research Presentation award	International Conference on Academic Disciplines, organized at Florence, Italy	Chairman of Conference	2015
Best Teacher award	Confederation of Education Excellence, New Delhi	Chairman	2015
Excellent paper award	International Conference on Recent Innovations in Science, Engineering and Technology, Goa	Chairman	2014