

## Profile Page



Name : Dr Dinesh Kumar Shukla

Designation : Professor

Department : Mechanical Engineering

Qualification : PhD Welding Technology (IIT Delhi)  
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### Research Interests :

Welding Technology

### Other Profile Links :

#### Google Scholar Link :

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### Journal Publications :

Year	Journal	Publication
2023	World Journal of Engineering	Experimental, analytical and numerical, investigation of peak temperature and cooling rate in butt joint weld of mild steel, Singh, M. P., Meena, P. K., Arora, K. S., Kumar, R., & Shukla, D. K.
2022	Transactions of the Indian Institute of Metals	Multi-objective Optimization of Process Parameters during Dissimilar Cold Metal Transfer Weld-Brazing of Al-Steel, Singh, J., Singh, A., Arora, K. S., & Shukla, D. K.
2022	Surface Topography: Metrology and Properties	Effect of slip boundary condition and non-newtonian rheology of lubricants on the dynamic characteristics of finite hydrodynamic journal bearing, Arif, M., Kango, S., & Shukla, D. K.
2022	International Journal of Mechanical Sciences	Analysis of textured journal bearing with slip boundary condition and pseudoplastic lubricants, Arif, M., Kango, S., & Shukla, D. K.
2021	Industrial Lubrication and Tribology	Investigating the effect of different slip zone locations on the lubrication performance of textured journal bearings, Arif, M., Kango, S., & Shukla, D. K.
2021	Surface Topography: Metrology and Properties	Thermal Analysis of Journal bearing with controlled slip/no-slip boundary condition and Non-Newtonian Rheology of lubricant, Arif, M., Kango, S., & Shukla, D. K.

2021	AIMS Materials Science	Finite element model updating of metallic and composite structures—A state of the art review, Sharma, A., Bagha, A. K., Shukla, D. K., & Bahl, S.
2021	J. Manuf. Sci. Eng.	Influence of Novel Torch Type on Mechanical and Microstructural Characteristics of Cold Metal Transfer Brazed Joints ,Singh, J., Arora, K. S., Shajan, N., Shome, M., & Shukla, D. K.
2020	Research on Biomedical Engineering	Blockchain technology and its applications to combat COVID-19 pandemic, Sharma, A., Bahl, S., Bagha, A. K., Javaid, M., Shukla, D. K., & Haleem, A.
2020	International Journal of Structural Integrity	The structural integrity of high-strength welded pipeline steels: a review, Singh, M. P., Shukla, D. K., Kumar, R., & Arora, K. S.
2020	Apollo Medicine	Multi-agent system applications to fight COVID-19 pandemic. Sharma, A., Bahl, S., Bagha, A. K., Javaid, M., Shukla, D. K., & Haleem, A.
2020	Fatigue & Fracture of Engineering Materials & Structures	Influence of heat input on microstructure and fracture toughness property in different zones of X80 pipeline steel weldments, Singh, M. P., Arora, K. S., Kumar, R., Shukla, D. K., & Siva Prasad, S.
2020	Tribology Online	mplication of Surface Texture and Slip on Hydrodynamic Fluid Film Bearings: A Comprehensive Survey, Arif, M., Shukla, D. K., Kango, S., & Sharma, N.
2020	International Journal of Fatigue	High cycle fatigue performance of cold metal transfer (CMT) brazed C-Mn-440 steel joints, Singh, J., Arora, K. S., & Shukla, D. K.
2020	Journal of Materials Processing Technology 283,116728	Lap weld-brazing of aluminium to steel using novel cold metal transfer process, Singh, J., Arora, K.S., Shukla, D.K.
2020	International Journal of Advanced Manufacturing Technology 108(11-12), pp. 3491-3505	Influence of wire feed rate to speed ratio on arc stability and characteristics of cold metal transfer weld–brazed dissimilar joints, Singh, J., Arora, K.S., Shajan, N., Shome, M., Shukla, D.K.
2020	Nanocomposites 6(2), pp. 76-84	Effects of Al <sub>2</sub> O <sub>3</sub> nanoparticles volume fractions on microstructural and mechanical characteristics of friction stir welded nanocomposites, Singh, T., Tiwari, S.K., Shukla, D.K.
2020	Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications 234(2), pp. 274-290	Effect of nano-sized particles on grain structure and mechanical behavior of friction stir welded Al-nanocomposites, friction stir welded Al-nanocomposites Singh, T., Tiwari, S.K., Shukla, D.K.
2020	Materials Characterization 159,110047	Mechanical and microstructural characterization of friction stir welded AA6061-T6 joints reinforced with nano-sized particles, Singh, T., Tiwari, S.K., Shukla, D.K.
2020	Journal of Manufacturing Science and Engineering	Influence of novel torch type on mechanical and microstructural characteristics of CMT brazed joints, Singh, J., Arora, K.S., Shajan, N., Shome, M., Shukla, D.K.
2019	Journal of Alloys and Compounds, 783, pp. 753-764	Dissimilar MIG-CMT weld-brazing of aluminium to steel: A review, Singh, J., Arora, K.S., Shukla, D.K.
2019	Materials Research Express 6(2),026561	Phase transformation and impact toughness in HAZ of micro alloyed X80 line pipe steel, Singh, M., Kumar, R., Shukla, D.K., Arora, K.S.
2019	Results in Materials	Friction-stir welding of AA6061-T6: The effects of Al <sub>2</sub> O <sub>3</sub> nano-particles addition, Tanvir Singh, S.K. Tiwari, D.K. Shukla
2019	Materials Research Express 6(11),116551	Influence of filler wire composition and heat input on microstructure and strength of CMT brazed DP steel joints, Singh, J., Arora, K.S., Shajan, N., Shome, M., Shukla, D.K.
2019	Journal of Thermal Analysis and Calorimetry	Comparative analysis of continuous cooling transformation behaviour in CGHAZ of API X-80 and X-65 line pipe steels: Singh, M.P., Arora, K.S., Shajan, N., (...), Kumar, R., Shukla, D.

2019	Journal of Manufacturing Processes, Volume 44, August 2019, Pages 207-215	Role of bead shape and dispersed intermetallic phases in determining the strength of CMT brazed DP780 lap joints
2018	International Journal of Modern Manufacturing Technologies 10(1), pp. 50-56	Impression creep studies on simulated reheated haz of P91 and P91b steels: Khajuria, A., Kumar, R., Bedi, R., Swaminathan, J., Shukla, D.K.
2017	International Journal of Mechanical Engineering and Technology 8(7), pp. 1638-1651	A review of friction stir processing of aluminium alloys using different types of reinforcements, Kumar, K., Gulati, P., Gupta, A., Shukla, D.K.
2017	International Journal of Mechanical Engineering and Technology 8(7), pp. 1524-1531	Tensile and impact strength evaluations of fs welded magnesium alloys: Influence of speed ratios ( $v/V$ ), Gupta, A., Gulati, P., Singh, J., Shukla, D.K.
2017	Advanced Materials Manufacturing & Characterization Vol 7 Issue 2	Investigation of the Effects of Plunge Depth on the Resulting Temperature Distribution, Microstructure and Mechanical Properties of Friction Stir Welded AZ31B Magnesium Alloy: Piyush Gulati, Dinesh Kumar Shukla
2016	Journal of Manufacturing Processes 21, pp. 14-22	Mathematical modeling of effect of polarity on weld bead geometry in submerged arc welding, Singh, R.P., Garg, R.K., Shukla, D.K.
2016	Journal of Materials & Metallurgical Engineering (JoMME) Vol 6 Issue 3	Effect of Pin Profile on Micro Structure and Mechanical Properties of Friction Stir Welded AZ31B Magnesium Alloy: Piyush Gulati, Dinesh Kumar Shukla
2015	Multidiscipline Modeling in Materials and Structures 11(4), pp. 494-506	Optimization of response parameters for polarity in submerged arc welding, Singh, R.P., Garg, R.K., Shukla, D.K.
2014	Journal of Materials and Metallurgical Engineering 4 (2), 10-15	Effect of Tool Tilt on Formation of Tunnel in Friction Stir Welded 5083 Joints: An Experimental Study: SK Tiwari, DK Shukla, R Chandra
2013	International Journal of Mechanical, Aerospace, Industrial, Mechatronic and Manufacturing Engineering Vol 7 Issue 12 pp 2403-2408	Friction stir welding of aluminum alloys: a review : SK Tiwari, Dinesh Kumar Shukla, R Chandra
2012	International Journal of Thermal Sciences 59, pp. 161-175	Optimizing electric discharge machining parameters for tungsten-carbide utilizing thermo-mathematical modelling, modelling Singh, H., Shukla, D.K.
2012	Advanced Materials Research 488-489, pp. 1737-1741	Dilution control by advanced submerged arc welding, Shukla, D.K., Pandey, S.
2012	International Journal of Thermal Sciences, Volume 59, September 2012, Pages 161-175	Optimizing electric discharge machining parameters for tungsten-carbide utilizing thermo-mathematical modelling, Harminder Singh, D.K. Shukla

### Conference Publications :

Year	Conference	Publication
December, 2018	19th ISME CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING (Mechanical Systems and Sustainability)	Continuous cooling transformation behaviour in the CGHAZ of X80 line pipe steel using a dilatometer, Mayur Pratap Singh, Rajneesh Kumar, Dinesh Kumar Shukla, Kanwer Singh Arora
December 2018	19th ISME CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING (Mechanical Systems and Sustainability)	Influence of heat input and torch position on the microstructure and mechanical properties of CMT brazed lap joints with Cu - base filler metal, Jaivindra Singh, Kanwer Singh Arora, Dinesh Kumar Shukla

Decemb er 2018	19th ISME CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING (Mechanical Systems and Sustainability)	Effect of size on the fracture toughness behaviour of X-80 line pipe steel, Mayur Pratap Singh, Rajneesh Kumar, Dinesh Kumar Shukla, Kanwer Singh Arora
2019	ICMPC-2019	Microstructural and Wear Characteristics of Friction Stir Processed Al-7075/SiC Reinforced Aluminium Composite, Rohan Ande, Piyush Gulati, Dinesh Kumar Shukla, Hitesh Dhingra
2017	5th International Conference on Materials Processing and Characterization	Defect formation analysis of Friction Stir welded Magnesium AZ31B alloy, Piyush Gulatia, Dinesh Kumar Shukla, Akash Gupta,
2015	4th International Conference on Materials Processing and Characterization	Effect of Tool rotation speed and feed rate on the formation of tunnel defect in Friction Stir Processing of AZ31 Magnesium alloy Akash Gupta, Prabhjot Singh, Piyush Gulati, Dinesh Kumar Shukla
2012	Proceedings of the International Conference on Advances in Aeronautical and Mechanical Engineering – AME	Behaviour of Welding Current in Submerged Arc Welding, Dinesh Kumar Shukla, Sunil Pandey
2010	Welding Roadmap to Excellence	Study of Metal Transfer in Advanced Submerged Arc Welding, Dinesh Kumar Shukla, Sunil Pandey
2009	24th Indian Engineering Congress	Cladding of Stainless Steel 308L on Carbon Steel Substrate by Submerged Arc Welding, Dinesh Kumar Shukla, Manoj Kumar, Zaheer Khan YusufZai, Sunil Pandey
2009	National Welding Seminar 2009 at Mumbai	Welding Current Behaviour In Advanced Submerged Arc Welding , Dinesh Kumar Shukla, Manoj Kumar, Zaheer Khan YusufZai, Sunil Pandey
2008	International Congress 2008 at International Institute of Welding, Chennai India	Prediction of Welding Current and Weld Bead Geometry in Submerged Arc Welding, Dinesh Shukla and Sunil Pandey
2007	Global Conference on Production and Industrial Engineering” held at NIT Jalandhar (PB) India	CO <sub>2</sub> shielding of Gas Metal Arc Welding Process: A case study, Dinesh Kumar Shukla, Manoj Kumar, Anchal Sondhi and Sunil Pandey
2007	Global Conference on Production and Industrial Engineering” held at NIT Jalandhar (PB) India	Study of process parameters on dilution in Advanced Submerged Arc Welding, Dinesh Kumar Shukla, Manoj Kumar, Sunil Pandey
2007	Global Conference on Production and Industrial Engineering” held at NIT Jalandhar (PB) India	To enhance the wear resistance of impact absorbing flanges of railway coach through welding, Manoj Kumar, Dinesh Kumar Shukla, R Arulmani, Sunil Pandey
2007	Global Conference on Production and Industrial Engineering” held at NIT Jalandhar (PB) India	Design and Development of Hardfacing SMAW Electrode, Manoj Kumar, Dinesh Kumar Shukla, Sunil Pandey
2007	National Conference on Recent Developments in Manufacturing & Quality Management (RDMQM–2007), Dept of Mechanical Engineering, Punjab Engineering College, Chandigarh	Surfacing through Tubular covered electrodes , Arulmani R, Dinesh Shukla and Sunil Pandey
2007	National Conference on Welding – Productivity and Quality” held at Naval Materials Research Laboratory, Research and Development Organisation, Ambernath, Thane MS	Comparative study of Gas Metal Arc Welding (GMAW) and Submerged Arc Welding (SAW) processes, Dinesh Kumar Shukla, Manoj Kumar, Nibha Meena and Sunil Pandey

2007	National Conference on Welding – Productivity and Quality” held at Naval Materials Research Laboratory, Research and Development Organisation, Ambernath, Thane MS	Parametric study of Plasma Enhanced Shielded Metal Arc Welding (PESMA) process, Sunil Pandey, S. Thiruchitrabalam, Dinesh Kumar Shukla Manoj Kumar and Anchal Sondhi
2006	NSWT-06, A National Symposium on Welding Technology, Sant Longowal Institute of Engineering and Technology (SLIET), Sangrur (PB) Punjab.	Weld Penetration behavior in Plasma Enhanced Shielded Metal Arc Welding, Dinesh Kumar Shukla, Sunil Pandey and Manoj Kumar
2006	NSWT-06, A National Symposium on Welding Technology, Sant Longowal Institute of Engineering and Technology (SLIET), Sangrur (PB) Punjab.	To Enhance the Residual Life of Buffers of Railway Coach through Welding, Manoj Kumar, Sunil Pandey and Dinesh Kumar Shukla
2004	7th International Symposium TRANSPORT NOISE AND VIBRATIONS, (June 8-10,2004), St. Petersburg, Russia.	Effect of impact noise on humans- A case study for drop forge hammers, Bedi Raman, D K Shukla, Sachdeva Anish
2004	National Seminar on Energy Management” 17-18th March, 2004, NITTTR, Chandigarh	Energy and Environment Conservation through Waste Management – A case study for Re-refining of used Oils, Bharj R S, Bedi Raman & Shukla D K.
2003	XIII National Conference of Indian Society of Mechanical Engineers at Department of Mechanical and Industrial Engineering, Indian Institute of Technology Roorkee, 247667 (India), (December 30-31, 2003)	Parametric Optimization of Electric discharge machining of Hot Work Tool Steel (DB-6) by taguchi method, Dinesh Kumar Shukla, Dr Sehj Pal Singh, Raman Bedi

### Events Organized :

Category	Type	Title	Venue	From	To	Designation
STC	National	Welding: Roadmap to Excellence	Mechanical Engineering Department NIT Jalandhar	27-12-2010	31-12-2010	Coordinator
STC	National	Perspective of Welding Technology	Mechanical Engineering Department NIT Jalandhar	28-12-2009	02-01-2010	Coordinator
STC	National	Recent Trends in Materials Research	Mechanical Engineering Department NIT Jalandhar	15-12-2017	19-12-2017	Co-Coordinator
Conference	National	19th ISME Conference on Advances in Mechanical Engineering	Mechanical Engineering Department NIT Jalandhar	20-12-2018	22-12-2018	Treasurer
GIAN course	International	SMART MANUFACTURING	Mechanical Engineering Department NIT Jalandhar	19-02-2018	24-02-2018	Coordinator

### Professional Affiliations :

Designation	Organization
Member	ISME
Member	IWS

## PhD Supervised :

Scholar Name	Research Topic	Status	Year	Co-Supervisor
Mayur Pratap Singh	Experimental investigation of mechanical and metallurgical properties of SAW welded HAZ in X-80 pipeline steel	Completed	2023	Dr Rajneesh Kumar
Tanvir Singh	Study of addition of nanoparticles on the properties of friction stir welded aluminum alloy	Completed	2021	Dr S k Tiwari
Jaivindra Singh	Experimental Investigation of Mechanical and Metallurgical Properties of MIG brazed joints	Completed	2021	Dr Kanwer Singh Arora
Gurveen Singh	PARAMETRIC STUDY ON USING SURFACE ACTIVE ELEMENTS IN GTAW PROCESS	Completed	2019	
Piyush Gulati	STUDY OF PROCESS PARAMETERS IN FRICTION STIR WELDING ON MAGNESIUM ALLOYS	Completed	2019	
Shalabh Kumar Tiwari	Some Investigations on Friction Stir Welding of Aluminum Alloy 5083	Completed	2016	Dr Rakesh Chandra
Jaswant Singh	Development of Hardfacing Alloy for Agriculture Equipment	On Going		
Mohammad Arif	Study of textured journal bearing performance for non-newtonian rheology of lubricants	On Going		Dr Saurabh Kango
Uma Sharma	Welding Technology	On Going		Dr Saurabh Kango

## Admin. Responsibilities :

Position Held	Organization	From	To
Coordinator NCC	Dr B R Ambedkar National Institute of Technology Jalandhar	11-08-2011	till date
Workshop Superintendent	Dr B R Ambedkar National Institute of Technology Jalandhar	03-04-2013	05-01-2015
Head (Mechanical and Mining Engineering)	Dr B R Ambedkar National Institute of Technology Jalandhar	24-01-2019	04-02-2021
Member BOS Industrial Engineering	Dr B R Ambedkar National Institute of Technology Jalandhar		
Associate Dean (Faculty Welfare-II)	Dr B R Ambedkar National Institute of Technology Jalandhar	04-2-2021	
Head, Workshop	Dr B R Ambedkar National Institute of Technology Jalandhar	27-04-2022	till date

## Award and Honours :

Title	Activity	Given by	Year
Best Teacher Award		Dr B R Ambedkar National Institute of Technology	2020
Overall Bronze Medal	152 PRCN	NCC Officers Training Academy (OTA) Kamptee, Maharastra	2013