## **Profile Page**



Name	:	Dr Rajiv Kumar Garg		
Designation	:	Professor Hag		
Department	:	Industrial & Production Engg.		
Qualification	:	<ul> <li>Ph.D. Industrial Engineering and Management (Thapar Institute of Engg and Tech, Patiala)</li> <li>M.E. Hons. Industrial Engg (Thapar Institute of Engg and Tech, Patiala)</li> <li>B.Sc. Engg. Hons. Mechanical Engg (REC Kurukshetra)</li> </ul>		
Address	:	Professor HAG, Department of Industrial and Production Engg. NIT Jalandhar Jalandhar, Punjab - 144011		
Email	:	gargrk@nitj.ac.in		
Phone	:	0181-5037650		

#### **Research Interests :**

Supply Chain Management, non-traditional machining, Hybrid machining, welding, Wirecut machining, powder mix EDM, Reliability Management, materials and sustainability.

### **Journal Publications :**

Year	Journal	Publication
2022	Journal of Materials Processing	A multi-tier layer-wise thermal management study for long-scale wire-arc
	Tech., Volume 306, August 2022,	additive manufacturing.
	Article No 117651	
2022	JOURNAL OF Engineering	Surface Modification for EN-19 steel in Powder Mixed Electrical
	Science and Technology Review,	Discharge Machining Process due to Complex Material Transfer
	15 (4) (2022), 183 - 189	Phenomena
2022	Journal of Asia Business Studies,	Restorative measures to diminish the covid-19 pandemic effects through
	© Emerald Publishing Limited	circular economy enablers for sustainable and resilient supply chain.
	https://doi.org/10.1108/jabs-05-20	
	21-0217	
2022	Industrial Robot: the international	Framework development and evaluation of Industry 4.0 technological
	journal of robotics research and	aspects towards improving the circular economy-based supply chain.
	application 49/3 (2022) 555–581 ©	
	Emerald Publishing Limited [ISSN	
	0143-991X]	

2021	International Journal of Computer	A multi-objective optimization of TIG welding parameters using
2021	-	
	aided Engineering and Technology	response surface methodology
	https://dx.doi.org/10.1504/IJCAET	
	.2021.115363 2021 Vol.14 No.4,	
	pp.575 - 590	
2021	Advances in Manufacturing and	Commencement of green supply chain management barriers: a case of
	Industrial Engineering. Lecture	rubber industry.
	Notes in Mechanical Engineering.	
	Springer, Singapore pp. 685-699.	
	https://doi.org/10.1007/978-981-15	
	-8542-5_59	
2021	Journal of Cleaner Production	Sustainable oil selection for cleaner production in Indian foundry
	https://doi.org/10.1016/j.jclepro.20	industries: A three phase integrated decision-making framework
	21.127827 313 (2021) 127827	
2021	International Journal of	Conception of circular economy obstacles in supply chain context: A case
2021	Productivity and Performance	of rubber industry.
	Management,	or rubber muusuy.
	ahead-of-p(ahead-of-print)	
2020	Rapid Prototyping Journal	Multi-physics continuum modelling approaches for metal powder
2020		additive manufacturing
2020	Silicon	
2020	Silicon	Hole Quality Measures in Rotary Ultrasonic Drilling of Silicon Dioxide
2020		(SiO2): Investigation and Modeling through Designed Experiment
2020	Archives of computational	Measurement and mitigation of residual stress in wire-arc additive
	methods in Engineering	manufacturing: A review of macro-scale continuum modelling approach
2020	Recent Advances in Mechanical	Assessment of barriers of green supply chain management using
	Engineering. Lecture Notes in	structural equation modeling.
	Mechanical Engineering. Springer,	
	Singapore	
	https://doi.org/10.1007/978-981-15	
	-8704-7_55 pp. 441–452.	
2019	Advances in Reliability Analysis	Reliability analysis of complex repairable systems in thermal power plant
	and its Applications (Springer	
	Series in Reliability Engineering)	
2018	Uncertain Supply Chain	Supply chain collaboration: A state-of-the-art literature review
	Management, Vol. 6, pp 149-180	
2018	Uncertain Supply Chain	Investigating the interactions among benefits of information sharing in
	Management, Vol. 62, pp 255-270	manufacturing supply chain
2018	Benchmarking: An International	Framework to precede collaboration in supply chain
	Journal	
2018	International Journal of Quality &	Availability analysis of distillery plant using petri nets
	Reliability Management,	
	https://doi.org/10.1108/IJQRM-06-	
	2017-0108	
2018	Journal of Uncertain Supply Chain	Supply chain collaboration: A state-of-the-art literature review.
2010	Management, volume 6, Issue 2,	Supply shall condition. It state of the art filefature fevrew.
	Pp. 149-180.	
2018	Journal of Enterprise Information	Supply chain collaboration and firm's performance: The critical role of
2018	-	
	Management, Vol. 31 Iss 3 pp.	information sharing and trust
0010	358-379	
2018	Journal of Uncertain Supply Chain	Investigating the interactions among benefits of information sharing in
	Management, volume 6, Issue 3, Pp. 255-270.	manufacturing supply chain

2017	International Journal of Reliability	A methodology to determine maintenance criticality using
2017	and Safety, Vol. 11 (3-4), pp	Dempster–Shafer theory
	182-199	Dempster-Sharer meory
2017		Process normation antimination of any motal and molding on IS20(2 mild
2017	Journal of Manufacturing	Process parameter optimization of gas metal arc welding on IS2062 mild
2017	Processes, Vol. 25, pp 296-305	steel using response surface methodology
2017	Journal of Manufacturing	Process parameter Optimization of Gas Metal Arc Welding on IS:2062
	Processes, Volume 25, Pp 296–30	Mild Steel using Response Surface Methodology"
2017	Int. J. Logistics Systems and	Barrier analysis for green supply chain management implementation in
	Management, Vol. 27, No. 2, Pp 225-259	power industry using ISM
2016	Int. J. of Industrial and Systems	Literature Review of multi-aspect Research Works carried out on the
	Engineering, Vol 23, No 2, pp	concept and implementation of GSCM
	233-253.	
2016	International Journal of	An investigation into surface roughness of workpiece produced by
	Manufacturing Research, Vol 11,	chromium powder suspended dielectric in PMEDM process
	No 2, Pp 189-208	
2016	Journal of manufacturing	Mathematical modelling of effect of polarity on welding bead geometry
2010	Processes, Vol 21, Pp 14-22	in submerged arc welding
2016	The Electricity Journal, Vol 29(4),	Implementation of green supply chain management in India: Bottlenecks
2010	Pp 43-50	and remedies
2015	International Journal of	"Optimization of Response Parameters for Polarity in Submerged Arc
2015	Multidiscipline Modeling in	Welding"
		weiding
	Materials and Structures, Vol. 11,	
2015	Issue 4	
2015	European journal of advances in	Analytic Network Process (ANP): An approach for supplier selection in
	engineering and technology, pp 83-89	an automobile organization
2015	International Journal of Advanced	Parametric modeling and optimization for wire electrical discharge
	Manufacturing Technology, Vol	machining of Inconel 718 using response surface methodology
	79, 1(4), pp 31-47	
2015	International Journal of	Technological Innovations in Machining of Inconel 718: A State of the
	Manufacturing, Materials, and	Art
	Mechanical Engineering, (Francis	
	and Taylor), Vol 5, Issue 2, pp	
	17-43	
2015	Journal of Manufacturing	GSCM: practices, trends and prospects in Indian context
	Technology Management	r
	(Emerald), Vol. 26 Issue 6, pp.889	
	- 910	
2015	International Journal of	Optimization of Response Parameters for Polarity in Submerged arc
2015	Multidiscipline Modeling in	Welding"
	Materials and Structures. Vol 11,	in cruing
	issue 4, pp 494-506	
2015		Analytic Natwork Process (AND): An anneagh for symplice selection in
2015	European journal of advances in	Analytic Network Process (ANP): An approach for supplier selection in
	engineering and technology, Vol 2,	an automobile organization
-	issue 9, pp 83-89	
2015	VIVECHAN-International Journal	A Comprehensive Review of Cost of Quality
	of Research, Vol 6, Issue 1, pp	
	70-88	

2014	International Journal of	A Strategic Level Model for Supply Chain of an Automotive Industry:
	Engineering and Management	Formulation and Solution Approach
	Research, ISSN No.: 2250-0758,	
	Volume-4, Issue-1, Page Number:	
	51-57	
2014	International Journal of	Literature Review of multi-aspect Research Works carried out on the
	Engineering (IJISE)	concept and implementation of GSCM
2014	Advanced Mechanics and	Effect of wire materials on cutting performance of WEDM for machining
	Materials Journal (Springer), Vol	of Inconel superalloy
	624, pp 124-128	
2014	International Journal of	A Strategic Level Model for Supply Chain of an Automotive Industry:
	Engineering and Management	Formulation and Solution Approach
	Research, Volume-4, Issue-1, pp	
	51-57	
2014	Applied Mechanics and Materials,	Effect of Wire Materials on Cutting Performance of WEDM for
	Volume 624, pp 124-128	Machining of Inconel Superalloys
2014	Journal of Environmental Research	Categorization of Cost of Quality- A Study in Engineering Industry
	And Development, Vol. 8 No. 3A,	
	pp 846-849	
2013	Emerald Journal of Measuring	Trust among supply chain partners: A Review
	Business Excellence, Vol. 17	
	Issue: 01, pp 51-71	
2013	Advanced Materials Research,	Parametric optimization of PMEDM process with chromium powder
	Vol. 816-817, Pp 23-27	suspended dielectric for triangular electrodes
2012	International Journal of	Parametric Effect on Mechanical Properties in Submerged arc welding
	Engineering Science and	process - A review
	Technology (IJEST) ISSN :	r
	0975-5462, Vol. 4 No.02, pp	
	783-793	
2012	Advanced Materials Research	Parametric Optimization of PMEDM Process with Chromium Powder
	Journal, Vols. 383-390, pp	Suspended Dielectric for Minimum Surface Roughness and Maximum
	3202-3206	MRR
2012	International Journal of	An investigation into the effect of Nickel micro powder suspended
	Mechatronics and Manufacturing	dielectric and varying triangular shape electrodes on EDM performance
	Systems, Vol. 5, No. 1, pp 66-92	measures of EN-19 steel
2012	Int. J. Business Continuity and	Continuity and change forces in Indian automobile industry: a case of
	Risk Management, Vol 3, No 2, pp	tractor company
	99-116	
2012	International Journal of IT,	OEE Improvement by TPM Implementation: A Case Study
	Engineering and Applied Sciences	
	Research (IJIEASR), Volume 1,	
	No. 1, pp 113-122	
2012	International Journal Of	Evolution and Development of Bullwhip Effect and its Contribution
	Management & Information	towards Supply Chain Management: A Literature Review
	Technology (IJMIT), Vol 1, No 3,	
	pp 89-98	
2011	Journal of Engineering and	The effect of Nickel micro-powder suspended dielectric on EDM
	Applied Sciences, Vol 6, Issue 1,	performance measures of EN-19 steel
	pp 27-37	
2011	Journal of Engineering and	Parametric optimization of PMEDM process with Nickel powder
	Applied Sciences ISSN:	suspended dielectric and varying triangular shapes electrodes on EN-19
	1816-949X, Vol 6, Issue 2, pp	steel.

2011	Journal of Engineering Science	An overview of technology and research in electrode design and
-	and Technology Review, Vol4,	manufacturing in sinking electrical discharge machining
	Issue 3, pp 342-349	
2011	International journal of Applied	Experimental investigation and modelling of PMEDM process with
	Science and Engineering (IJASE),	Chromium powder suspended dielectric
	Vol 9, Issue 2, pp 65-81	
2011	Journal of Tribology - Materials,	Effect of chromium powder suspended dielectric on surface roughness in
	Surfaces & Interfaces, Volume 5,	PMEDM process
	Number 4, pp. 165-171	
2010	Int. J. Business Continuity and	Status of Continuity forces in Indian Industry: A Survey
	Risk Management, Vol-1, No 2, pp	
	166-186.	
2010	The International Journal of	Review of research work in sinking EDM and WEDM on metal matrix
	Advanced Manufacturing	composite materials
	Technology (IJMT).	
	DOI:10.1007/s00170-0102534-5,	
	Vol 50, No 5-8, pp 611-624	
2010	International Journal of Minerals	MRR Improvement in sinking electrical discharge machining: A review
	and Materials Characterization and	
	Engineering, Vol 9, No 8, pp	
	709-739	
2010	Journal of Manufacturing	Experimental investigations of electrical discharge machining of high
	Engineering, Vol 5, No 1, pp 5-10	carbon high chromium steel
2010	Indian Journal of Engineering &	Analysis & Evaluation of Heat Affected Zones in Electrical discharge
	Material Science (IJEMS), Vol.	Machining of EN-31 Die steel.
	17, pp 91-98	
2009	International Journal of Tribology-	Structure Analysis of Electro-discharge Machined Surfaces of EN-31
	Material Surfaces & Interfaces,	Tool Steel.
	Vol. 3, pp 134-145	
2008	International Journal of Surface	When Shot Peening Doesn't Enhance Fatigue Life of Leaf Springs
	Science and Engineering, Vol. 2,	
	Nos. 3/4, Pp 281-293	
2008	Global Journal of Flexible Systems	Impact of Change Management on Competitiveness: A Study of Small
	Management, Vol. 9, Nos. 2 & 3,	Scale Industry in Punjab
	pp 65-70	
2007	Global Journal of Flexible Systems	Managing Change – A Case of Indian Engineering Industry,
	Management, Vol. 8, Nos 1 & 2,	
	pp 65-79.	
2006	Global Journal of Flexible Systems	Management of change – a comprehensive review
	management, Vol. 7, Number 1&2,	
	pp 25-36	
2006	Industrial Engineering Journal of	Opportunities and Challenges for Indian Automotive Industry by Recent
	IIIE, Special Issue, 2006, pp	Developments
	02-06	
2005	Global Journal of Flexible Systems	Status of Socio-technical change in Indian Automobile Industry – A
	management, Volume 6, No 3 & 4,	Longitudinal Study
	pp 25-36.	
2005	Industrial Engineering Journal of	Getting Success through Organizational Change and Customer
	IIIE, Vol 4, No 7, pp 20-33	Relationship Management
2002	Global Journal of Flexible Systems	Managing change for Competitiveness
	management, No 3, Volume 4, pp	

International Journal of Quality &	Availability analysis of distillery plant using petri nets
Reliability Management,	
https://doi.org/10.1108/IJQRM-06-	
2017-0108	

### **Conference Publications :**

Year	Conference	Publication
2022	Proceedings of the ASME 2022 International	Environmental sustainability of additive
	Mechanical Engineering Congress and Exposition	manufacturing: a case study of Indian manufacturing
	IMECE2022 at Columbus, Ohio	industry
2022	Fourth International Conference on Materials Science	Experimental and analytical investigation into Cutting
	and Manufacturing Technology 2022 (ICMSMT	forces during turning of EN-31 Steel in different
	2022) jointly organized by Akshaya College of	machining conditions
	Engineering and Technology (Academic Partner),	
	Coimbatore, and Diligentec Solutions (Industry	
	Partner), Coimbatore, Tamil Nadu.	
2022	2022 IMECE @ International Mechanical	Environmental Sustainability of Additive
	Engineering Congress and Exposition organized by	Manufacturing: A Case Study of Indian
	ASME at Columbus, Ohio	Manufacturing Industry
2022	20th ISME Conference on Advances in Mechanical	Environmental Sustainability of Additive
	Engineering At IIT Rupnagar	Manufacturing: A case of Indian manufacturing
		industry
2022	"Advances in Mechanical Engineering-2022"	Research Progress in Life Cycle Assessment for
	(ICAME-2022) At G H Raisoni College of	Sustainable Manufacturing Industries: A Bibliometric
	Engineering, Nagpur.	Analysis
2022	"Advances in Mechanical Engineering-2022"	Experimental investigation and optimization of
	(ICAME-2022) At G H Raisoni College of	WEDM process for AISI 420 stainless steel
	Engineering, Nagpur.	
2021	2nd International Conference on Industrial and	Optimization of Titanium Grade-5(Ti6Al4V) alloy on
	Manufacturing Systems (CIMS 2021) at PEC	Die Sinking EDM by using Copper Tungsten
	Chandigarh	electrode
2020	International Conference on Industrial and	Hurdle Assessment for the Implementation of Circular
	Manufacturing Systems (CIMS-2020)	Economy Notions
2020	International Conference on Industrial and	Exploring the Interaction among the Barriers of
	Manufacturing Systems (CIMS-2020)	Circular Supply Chain: A Case of Indian Rubber
		Industry.
2020	International Conference on Industrial and	Prioritizing Circular Economy Performance
	Manufacturing Systems (CIMS-2020)	Indicators: A Case of Indian Rubber Industries.
2019	International Conference on Industrial and	An application of fuzzy FMEA for improving service
	Manufacturing System	quality in trauma emergency centre
2019	International Conference on Industrial and	Commencement of green supply chain management
	Manufacturing System	barriers: A case of Rubber industry
2019	International Conference on Industrial and	Hurdle assessment for the implementation of circular
	Manufacturing System	economy
2019	International Conference on Industrial and	Exploring the interaction among the barriers of
	Manufacturing System	circular supply chain: A case of Indian Rubber
		Industry
2019	International Conference on Innovative Technologies	Assessment of barriers of green supply chain
	in Mechanical Engineering (ITME-2019)	management using SEM
2019	4th International Conference on Advanced Production	Commencement of green supply chain management
	and Industrial Engineering (ICAPIE-2019)	barriers: A case of Rubber industry

2014	2014 National Conference on "Latest development in	Gaurav Tejpal, R K Garg and Anish Sachdeva,
	Science, Engineering and Management at ACET	"Impact of information technology on supply chain
	Amritsar", pp 1-9	partners relationship in Indian industries"
2014	International Conference on Mechatronics, Materials	R. K. Garg, Vivek Aggarwal and Sehijpal Singh,
	and Manufacturing (ICMMM 2014) at Chengdu,	"Effect of wire materials on cutting performance of
	China	WEDM for machining of Inconel superalloy"
2014	National Conference on "Advances in Manufacturing	Sheetal Soda, Anish Sachdeva and R K Garg, "Green
	Systems" CAMS-2014 at SBSCET Ferozpur	supply chain management practices in Indian context"
2014	National Conference on "Advances in Manufacturing	Harjeet Singh, R K Garg and Anish Sachdeva,
	Systems" CAMS-2014 at SBSCET Ferozpur	"Warehouse location problem using Hub model"

# **Book/Chapter Publications :**

Туре	Title	Publisher	Authors	ISBN/ISS	Year
				N No.	
Proceedings	Proceedings of 5th International	GLOGIFT	Dr Sushil, Dr R	978-93-83	2018
	Conference of Production and Industrial	Socirety New	K Garg, Dr Anish	893-07-2	
	Engineering (CPIE-2018) in academic	Delhi	Sachdeva, Dr		
	collaboration with GIFT Society of		Ajay Gupta, Dr		
	Flexible Systems Management from June		Rajeev Trehan		
	26-29, 2018 at Bangkok		and Dr Vishal		
			Sharma		
Chapter	Green Supply chain management driver	Springer	Sushil, T P Singh	978-981-1	2017
	analysis using TISM contributed in the		and Kulkarni	0-4887-6	
	book titled "Flexibility in Resource				
	Management"				
Text Book	A Text Book of Production Planning and	Dhanpat Rai and	Rajiv Kumar		2000
	Control Management	Sons, New Delhi	Garg and V		
			Sharma		
Text Book	Engineering Drawing	Dhanpat Rai and	M L Aggarwal		1998
		Sons, New Delhi	and Rajiv Kumar		
			Garg		
Text Book	Machine Drawing	Dhanpat Rai and	M L Aggarwal		1998
		Sons, New Delhi	and Rajiv Kumar		
			Garg		
Text Book	Design and Planning of Production	Kohli Publishers	Rajiv Kumar		1994
	Systems	Delhi	Garg, M Adithan		
			and S S Banwait		

## PhD Supervised :

Scholar Name	Research Topic	Status	Year	Co-Supervisor
Mukesh Kumar	Investigations on nanoparticle embedded phase	Awarded	2022	Dr Anish Sachdeva
	change material on performance of flat plate			
	collector			
Shekhar	Modelling and analysis of metal additive	Awarded	2022	Dr Anish Sachdeva
Srivastava	manufacturing process using FEM approach			
Ankur Behl	Performance modelling of a distillery plant in	Awarded	2019	Prof A Sachdeva
	presence of uncertain and imprecise information			
Harjit Singh	Impact of information sharing of supply chain	awarded	2019	Prof A Sachdeva
	management			
Vivek Aggarwal	Parametric studies on machining characteristics	Awarded	2016	Prof Sehijpal Singh
	of inconel with WEDM			

Ravinder Pal	Effect of polarity in submerged arc welding	Awarded	2016	
Singh				
Sheetal Soda	Optimizing organizational gains by implementing	Awarded	2016	Prof A Sachdeva
	green supply chain management			
Gaurav Tejpal	Impact of Flexibility, Trust and Information	Awarded	2015	Prof A Sachdeva
	Technology for enhancing Supply Chain			
	Performance for Indian Industries			
Amit Gupta	Design and modeling of supply chain of an	Awarded	2015	Prof O P Singh
	automobile organization			
Rajeev Trehan	Study of Cost of Quality Practices in Indian	Awarded	2015	Prof A Sachdeva
	Engineering Industry			
Sumit Jain	Managing Continuity and Change in Indian	Awarded	2013	Prof Sushil, IIT Delhi
	Industry			
Kuldeep Ojha	Experimental study of powder mixed	Awarded	2012	Dr K K Singh
	electro-discharge machining process for different			
	tool shape designs			