

BIO-DATA

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Present Position : Assistant Professor

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Academic Qualifications:

Degree	Name of College / University	Year of passing	Class
Ph.D. (Mechanical Engineering)	Sardar Vallabhbhai National Institute of Technology, Surat, Gujarat	January 2012	-
M.Tech (Mechanical Engg., Specialization: Production & Industrial Systems Engg)	Indian Institute of Technology, Roorkee	2006	First, 8.50 CGPA
B.Tech (Industrial Engineering)	Indian Institute of Technology, Roorkee	2001	First, 69.60%

PhD Thesis Title:

Multiple Attribute Decision Making in the Manufacturing Environment.

Research Publications:

(A) International Journals : 11

(B) International Conferences : 29

(C) National Journal : 02

(C) National Conferences : 05

Research Papers in International Journals:

Sr. No.	Title of paper and authors	Indexing
[1]	Shukla, R.S. and Singh, D. "Experimentation investigation of abrasive water jet machining parameters using Taguchi and evolutionary optimization techniques". Swarm and Evolutionary Computation , Vol. 32, pp. 167-183, 2017.	SCI
[2]	Singh, D. and Shukla, R.S. "Optimization of process parameter of electrochemical micromachining and electrochemical discharge machining processes using firefly algorithm". International Journal of Mechatronics and Manufacturing systems , Vol 9 (2), pp. 137-159, 2016.	SCOPUS
[3]	Shukla, R.S. and Singh, D. "Selection of parameters for advanced machining processes using firefly algorithm". Engineering Science and Technology, an International Journal , Vol. 20 (1), pp. 212-221, 2016.	SCOPUS
[4]	Ingole, S. and Singh, D. "Unequal-area, fixed-shape facility layout problems using the firefly algorithm". Engineering Optimization , Vol. 49, No. 7, pp. 1097–1115, 2017.	SCI
[5]	R. V. Rao, D. Singh, F. Bleicher, C. Dorn. "Weighted Euclidean distance based approach as a multiple attribute decision making method for manufacturing situations." International Journal of Multicriteria Decision Making , Vol. 2, pp 365-382, 2012.	SCOPUS
[6]	R. Venkata Rao and Dinesh Singh. "Weighted Euclidean distance based approach as a multiple attribute decision making method for plant or facility layout design selection". International Journal of Industrial Engineering Computations , Vol. 3, pp. 365-382, 2012.	SCOPUS
[7]	Dinesh Singha and R. Venkata Rao. "A hybrid multiple attribute decision making method for solving problems of industrial environment". International Journal of Industrial Engineering Computations , Vol. 2, pp. 631-644, 2011.	SCOPUS
[8]	R. Venkata Rao and Dinesh Singh. Evaluating flexible manufacturing systems using Euclidean distance-based integrated approach. International Journal of Decision Sciences, Risk and Management , Vol. 3, pp. 32-53, 2011.	-
[9]	R.V. Rao and D. Singh. "An improved grey relational analysis as a decision-making method for manufacturing situations". International Journal of Decision Sciences, Risk and Management , Vol. 2, pp. 1-23, 2010.	-

[10]	D. Singh and R.V. Rao. "Euclidean Distance Based Method for Decision Making in Manufacturing". <i>International Journal of Advanced Manufacturing Systems</i> , Vol. 1, pp. 117-125, 2010.	-
[11]	Dinesh Singha and R. Venkata Rao. "International Journal of Industrial Engineering Computations". <i>International Journal of Industrial Engineering Computations</i> , Vol. 2, pp. 631-644, 2011.	-

Research Papers in International Conferences:

Sr. No.	Title of Paper and Authors
[1]	Singh, D and Shukla, R.S. "Parameter Optimization of Electrochemical Machining Process using Black hole Algorithm" International Conference on Material Engineering and Advanced Manufacturing Technology MEAMT-2017, 25 th – 27 th August, Busan, South Korea .
[2]	Shukla, R.S. and Singh, D. "Parameter Optimization of Wire Electric Discharge Machining Parameters Using Non dominated Sorting Genetic algorithm-II" International Conference on Manufacturing Technology and Simulation ICMTS -2017, 7 th – 8 th July, IIT Madras, Chennai .
[3]	Shukla, R.S. and Singh, D. "Parameter optimization of Ultrasonic machining process using Bio-geography based algorithm" International Conference on Advanced Production and Industrial Engineering ICAPIE-2017 , October 6-7, Delhi Technological University (DTU), Delhi, India .
[4]	Shukla, R.S. and Singh, D. "Investigation of Performance Parameters on Electro Discharge Machining Using Cuckoo Search Algorithm" International Conference on Industrial Engineering ICIE-2017, December 21-23, SVNIT, Surat .
[5]	Ingole Supriya and Singh Dinesh. "Biogeography-based optimization algorithm for unequal area facility layout problems." International Conference on Manufacturing Technology and Simulation (ICMTS-2017), July 7-8, 2017, IIT Madras, Chennai .
[6]	Ingole Supriya and Singh Dinesh. "Multi-objective facility layout problem using non dominated sorting genetic algorithm (NSGA-II)." International Conference on Advanced Production and Industrial Engineering (ICAPIE-2017), October 6-7, 2017, Delhi Technological University (DTU), Delhi .
[7]	Ingole Supriya and Singh Dinesh. "Flexible bay dynamic facility layout problems using aisle structure." International Conference on Industrial

	Engineering (ICIE-2017), December 21-23 2017, SVNIT , Surat.
[8]	Ingole Supriya and Singh Dinesh. "Facility layout problem using firefly and biogeography-based optimization algorithms." International Conference on Industrial Engineering (ICIE-2017), December 21-23, 2017, SVNIT , Surat.
[9]	Shukla, R.S. and Singh, D. "Investigation of Performance Parameters on Electro Discharge Machining Using Artificial Bee Colony Algorithm" International Conference on Industrial Engineering ICIE-2015, November 26-28, SVNIT , Surat.
[10]	Shukla, R.S. and Singh, D. "Investigation of Performance Parameters on Electrochemical Micro Machining Using Simulated Annealing Algorithm" International Conference on Industrial Engineering ICIE-2015, November 26-28, SVNIT , Surat.
[11]	Ingole Supriya and Singh Dinesh. "Biogeography-based optimization algorithm for single row facility layout problem." International conference on Industrial Engineering (ICIE), 26-28 November 2015, SVNIT , Surat.
[12]	Shukla, R.S. and Singh, D. "Performance Parameter Optimization of Electrochemical Micromachining (EMM) using Particle Swarm Optimization" International Colloquium on Materials, Manufacturing and Metrology ICMMM - 2014, 8 th – 9 th August, IIT Madras , Chennai.
[13]	Shukla, R.S. and Singh, D. "Performance Parameter Optimization of Electrical Discharge Machining using Genetic Algorithm". International Colloquium on Materials, Manufacturing and Metrology ICMMM -2014, 8 th – 9 th August, IIT Madras , Chennai.
[14]	Ingole Supriya and Singh Dinesh. "Facility layout problem solving using genetic algorithm." 19 th annual cum 4 th international conference of Gwalior academy of mathematical sciences (GAMS) on Advances in Mathematical Modelling to Real World Problems, 3–6 October, 2014, SVNIT , Surat.
[15]	Dinesh Singh. "VIKOR as a multiple attribute decision making method for supplier selection in supply chain management". International Conference on Best Practices in Supply Chain Management (BPSCM-2012), Nov. 22-23, 2012, Siksha 'O' Anusandhan University, Bhubaneswar, Odisha, India.
[16]	R V Rao, F Bleicher, D Singh, V Kalyankar, C Dorn. Selecting environmentally conscious manufacturing program using combinatorial mathematics approach. International Conference on Engineering, Project and Production Management (EPPM-2011), September 20-21, 2011, National University of Singapore , Singapore.
[17]	V. Kolpakov, R. Venkata Rao, D. Singh, V.D. Kalyankar, V. Kovalenko. Mathematical model and processing optimization in industrial laser system application. 5th International Conference on Laser Technologies in Welding and Materials Processing. May 24-27, 2011. House of Scientists, National Academy of Sciences of Ukraine , Katsiveli Crimea, Ukraine .

[18]	Rao R.V., Kovalenko V.S., Kolpakov V., Kalyankar V.D. and Singh D. Parameter optimization of laser beam machining process using hybrid ABC-SA algorithm. 5th International Conference on Laser Technologies in Welding and Materials Processing. May 24-27, 2011. House of Scientists, National Academy of Sciences of Ukraine , Katsiveli Crimea, Ukraine .
[19]	R. V. Rao, F. Bleicher, D. Singh, C. Dorn, V. Kalyankar. Selection of parameters in an environmentally conscious advanced machining process using a combinatorial mathematics based method. International conference on Advances in Mechanical Engineering (ICAME-2011), June 6-8, 2011, SVNIT Surat, India.
[20]	R. Venkata Rao and Dinesh Singh. Material handling equipment selection using grey relational analysis. RFBR and DST Sponsored 2-nd Russian-Indian Joint Workshop on "Computational Intelligence and Modern Heuristics on Automation and Robotics", 10-13 September, 2011. Novosibirsk State Technical University, Novosibirsk, Russia .
[21]	Dinesh Singh, R. Venkata Rao. Ant colony optimization and its industrial applications. DST-RFBR Sponsored Indo-Russian Joint Workshop on "Computational Intelligence and Modern Heuristics on Automation and Robotics", 20-22 September 2010, SVNIT Surat.
[22]	Dinesh Singh, R. Venkata Rao. A new multiple attribute decision making method for robot selection problems. Asia Pacific Industrial Engineering & Management Systems Conference (APIEMS-2010), December 7-10, 2010, Melaka, Malaysia .
[23]	Dinesh Singh, R. Venkata Rao. Euclidean distance based approach as a multiple attribute decision making method for machine tool selection. Asia Pacific Industrial Engineering & Management Systems Conference (APIEMS-2010), December 7-10, 2010, Melaka, Malaysia .
[24]	D. Singh and R.V. Rao. Euclidean Distance Based Method for Decision Making in Manufacturing. 4th International conference on Advances in Mechanical Engineering (ICAME), September 23-25, 2010, SVNIT Surat, India.
[25]	D. Singh and R.V. Rao. UTA as a Multiple Attribute Decision Making Method for Supplier Selection. International conference on Advances in Mechanical Engineering (ICAME-2010), January 3-5, 2010, SVNIT Surat, India.
[26]	Dinesh Singh, R. Venkata Rao. OWA: A multiple attribute decision making method for machine selection in flexible manufacturing cell. International Conference & Exhibition on Total Engineering, Analysis & Manufacturing Technologies (TEAM TECH 2009), November 19-21, 2009, Bangalore, India .
[27]	R.V. Rao and D. Singh. Fuzzy LINMAP as a decision making method in the manufacturing environment. International conference on Advances in Mechanical Engineering (ICAME-2009), August 3-5, 2009, SVNIT Surat, India.

[28]	D. Singh and R.V. Rao. Grey relational analysis as a decision making method for manufacturing situations. International conference on Advances in Mechanical Engineering (ICAME-2008), December 15-17, 2008, SVNIT Surat, India.
[29]	Dinesh Singh, P.K.Jain, N.K. Mehta. Multifactor job shop layout problem using ant colony optimization technique. International conference on Computer Aided engineering (CAE-2007), December 13-15, 2007. IIT Madras , Chennai.

Research Papers in National Journals:

Title of Paper	Authors	Journal	Page No.	Year
VIKOR as a Multiple Attribute Decision Making Method for Supplier Selection in Supply Chain Management.	Dinesh Singh	Industrial Engineering Journal, Vol 7(6)	38-42	2014
Facility layout problem using particle swarm optimization	Supriya R. Ingole and Dinesh Singh	Industrial Engineering Journal, Vol.8(10)	11-16	2015

Teaching Experience:

Organization	Position Held	Duration	Assignments
S. V. National Institute of Technology, Surat	Assistant Professor	26 th July 2007 to Till date	Teaching, Research & Administrative
Thaper University, Patiala	Lecturer	15 th June 2007 to 20 th July 2007	Teaching and Research
Inderprastha Engineering College, Ghaziabad (UP)	Senior Lecturer	10 th July 2006 to 14 th June 2007	Teaching

Sponsored Research and Development Projects:

S. N.	Project Details	Duration (Date)	Sponsoring Authority	Funds sanctioned	Status
1.	Indo-Autrian (DST-BMWF) Joint Research Project: Development of Decision Support Models for Environmentally Conscious Design and Manufacturing of Products	Two Years	DST	Rs. 3,86,400/-	Completed
2.	Project: Developing suitable pedagogical methods for various classes, intellectual calibres and research in e-learning headed by IIT Kharagpur. (National Mission Project on Education through ICT, Ministry of Human Resource Development, Government of India). Under this project a course on “Introduction to Manufacturing Processes” is allotted by P.I. of IIT Kharagpur is being developed. (Co-Developer)	Three Years (Sept. 2013 – Aug. 2016)	Ministry of Human Resource Development (MHRD), Govt. of India	Rs. 7,00,000	Completed

Workshop / Short Term Programmes Organized:

S.N.	Name of the Training Programme/Workshop	Year
1.	DST-RFBR funded Indo-Russian Joint Research Workshop on Computational Intelligence and Modern Heuristics on Automation and Robotics (CIMHAR), September 20-22, 2010, SVNIT Surat, India. (as a Co-coordinator)	2010
2.	One Week Short Term Training Program on “Advanced Engineering Optimization through Intelligent Techniques”, January 02-06, 2012, SVNIT Surat, India. (as a Co-coordinator)	2012
3.	One Week Short Term Training Program on “Modelling and Optimization Techniques for Engineering Applications (MOTEA)”, May 19-23, 2014, SVNIT Surat, India. (as a Coordinator)	2014

4.	One Week Short Term Training Program on “Modelling and Optimization Techniques for Engineering Applications (MOTEA-II)”, Dec. 26-30, 2016, SVNIT Surat, India. (as a Coordinator)	2016
5.	Two days workshop on “Advanced Optimization Techniques and Decision Making Methods”, February 17-18, 2017, SVNIT Surat, India. (as a Coordinator)	2017
6.	One Week Short Term Training Program on “Modelling and Optimization Techniques for Engineering Applications (MOTEA-III)”, Feb. 27- March 03, 2017, SVNIT Surat, India. (as a Coordinator)	2017

Ph.D. Guided:

Completed:

Sr. No.	Name of the Student and Admission No.	Thesis Title	Date of Completion
1.	Shukla Rajkamal Santoshbhai (D13ME004)	Parameter Optimization of Selected Non-Traditional Machining Processes and Development of Semi-Empirical Models for Abrasive Water Jet Machining Process	29/06/2018

Ongoing: 02

M. Tech. Dissertation Guided:

S.N.	Name of the Student and Admission No.	Dissertation Title	Year
[1]	Manish U. Sonar (P08IP711)	Optimization of nozzle reinforcement using design by analysis approach	2009-10
[2]	Jitendra Sharma (P10ME127)	Optimization of process parameters in electrochemical machining	2011-12
[3]	Sameer J.Ratandhayra (P10CC097)	Selected study of ERP implementation issues in manufacturing organizations	2011-12
[4]	Devalla Laxmi K. Yashaswi	Cuckoo Algorithm for the Process Parameters optimization of some Traditional	2013-14

	(P12CC007)	and Non-Traditional Machining Processes	
[5]	Ankit K. Solanki (P13CC021)	Analysis of Localized Stresses on a Static Equipment Supported by Multiple Saddles during Hydrotest	2014-15
[6]	Vishva Bharti (P13CC002)	Parameter Optimization of Welding Processes using Biogeography Based Optimization (BBO) Algorithm	2014-15
[7]	Rathod Uday Dineshbhai(P13CC016)	Optimization of Casting Process Parameters using Krill Herd Optimization Algorithm	2014-15
[8]	Patel Tarunkumar N. (P13CC012)	Material Handling Equipment Selection using Type1 and Type2 Fuzzy Multi Attribute Decision Making Methods	2014-15
[9]	Mr. Avinash Chaudhari (P12CC019)	Cutting Parameters Optimization of some Machining Processes using Genetic Algorithm & Particle Swarm Optimization	2015-16
[10]	Vinay Kr Yadav (P14CC010)	Design Parameter optimization of gears using heat transfer search algorithm	2015-16
[11]	Bittu Kumar Sarraf (P14MF014)	Parameter optimization of some machining processes using heat transfer search algorithm	2015-16
[12]	Manoj Kumar (P14CC017)	Experimental investigation of CNC turning process parameters on EN8 steel and titanium alloy using Taguchi and response surface method.	2015-16
[13]	Korra Nagu (P15CC019)	Parameter optimization of welding processes using krill heard algorithm	2016-17
[14]	Jitendra Kumar (P15MF014)	Parameter optimization of selected casting processes using heat transfer search algorithm	2016-17

Expert Lectures delivered: 50

[On multiple attribute decision making (MADM) methods, like, **AHP, VIKOR, TOPSIS, OWA, UTA, GRA, CMBA, WEDBA**, etc. and their applications to various manufacturing situations] and [**Ant Colony Optimization (ACO)** for discrete optimization problems, like facility layout design]