Details of Professor Ravipudi Venkata Rao

Personal data:

Surname:	**Ravipudi**
Name:	**Venkata Rao**
Date of birth:	**04-07-1967**
Citizenship:	**India**

Address for Correspondence:

Dr. Hab. Ravipudi Venkata Rao
Professor (Higher Administrative Grade)
Department of Mechanical Engineering
Sardar Vallabhbhai National Institute of Technology (SV NIT)
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Education:

i) Education, name of the university and year of graduation:

D.Sc., Cracow University of Technology (Politechnica Krakowska), Cracow, Poland, 2017.
Degree: **D.Sc.**
Academic title: **Habilitation (D.Sc. in Technical Sciences)**
Habilitation (D.Sc.) thesis: Applications of advanced optimization algorithms to selected problems of thermal engineering; Prof. Hab. Jan Taler (Mentor), Cracow University of Technology, Cracow, Poland, 2017.

ii) Education, name of the university and year of graduation:

Ph.D., B.I.T.S. Pilani,Rajasthan, India, 2002.
Degree: **Ph.D.**
Academic title: **Ph.D. (Mechanical Engineering)**
Ph.D. thesis: Machinability evaluation, cutting fluid selection, and failure analysis of machine tools using graph theory and matrix approach; Prof. O. P. Gandhi (Supervisor), IIT Delhi, New Delhi, 2002.

iii) Education, name of the university and year of graduation:

M.Tech., Banaras Hindu University (IIT- BHU now) Varanasi,U.P., India, 1991.
Degree: **M.Tech.**
Academic title: **M.Tech. (Mechanical Engineering)**

(iv). Education, name of the university and year of graduation:
B.Tech., Nagarjuna University, A.P., India, 1988.
Degree: **B.Tech.**
Academic title: **B.Tech. (Mechanical Engineering)**

Teaching/Research Experience: 32 years (Out of 32 years, nearly 17 years as Professor)

Listed in Top 2% of Most Influential Scientists

A new ranking from Stanford University published in 2022 featured the world's top 2% of most influential scientists from all areas. This list, compiled using Scopus citation information, is largely considered to be the most prestigious of its type. Professor John PA Loannidis and his research team at Stanford University compiled it. Please refer to the link (https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/4).

I was listed in the "Career-long Citation Impact" as well as in "Single Year" categories under "Engineering" field in the sub-field-2 of "Industrial Engineering & Automation" (sub-field-1: "Artificial Intelligence & Image Processing"). I was placed at 181st position out of 546033 authors in sub-field-1. My name can be located as "Rao, Ravipudi Venkata".

Administrative Positions Held at SVNIT, Surat:

- Director (Incharge): 8 months (24thOctober 2021 – 29thJune 2022)
- Dean (Faculty Welfare):3 years (September 2018-September 2021)
- Dean (Academic): 1 year (June 2013-June 2014)
- Head (Dept. of Mech. Engg.): 3 years (January 2007–January 2010)
- Coordinator, QIP Centre: 3 years
- Professor Incharge (Central Library): Since 16th September 2021

Scientometric Indicators:

No. of Research Papers Published: More than 375

	H-index	No. of Citations *(as on 31/07/2023)*
Google Scholar	68	23392
Scopus (Author ID: 12764013600)	56	15186

Details of research papers are available at the following links:

Google Scholar
https://scholar.google.com/citations?hl=en&user=4NoqGCEAAAAJ&view_op=list_works
Scopus
https://www.scopus.com/authid/detail.uri?authorId=12764013600

Areas of Research Interest:

Applications of Artificial Intelligence and Advanced Intelligent Optimization Techniques in Mechanical Engineering {(i).Thermal Engineering, (ii). Manufacturing and Industrial Engineering, and (iii).Mechanical Design}. These techniques can be used in any discipline of engineering and sciences.

In addition, fuzzy multi-attribute decision making methods and their engineering applications is another area of my research interests.

Students who are interested to do their Ph.D. theses or M.Tech. dissertation works in the above research areas may contact me.

Significant Research Contribution:

My main area of research is "Intelligent Single and Multi-Objective Optimization Algorithms and Their Engineering Applications". **I have to my credit five innovative and novel advanced optimization algorithms named as (i). Teaching-Learning-Based Optimization (TLBO) algorithm (developed in 2011), (ii). Jaya Algorithm (developed in 2016), (iii). Three Rao algorithms (2020), and a multi-attribute decision making method named as "R-method" (developed in 2021).**

The main limitation of the existing advanced optimization algorithms is that different algorithm-specific parameters are to be tuned for proper working of the algorithms. Improper tuning may lead to local optimum or inferior solution. Therefore, I (and my**research scholars) had developed TLBO, Jaya and Rao algorithms which are free from the algorithm-specific parameters and hence no tuning is required and designer's burdenis reduced. These algorithms are very simpler and converge to the optimum solution veryfast and the computational efforts required are comparatively less. These algorithms can be efficiently used for single as well as multi- and many-objective designoptimization of various types of systems, products, processes and systems.**

The TLBO, Jaya, and Rao algorithms have proved their effectiveness and superiority over the other competing optimization algorithms. These algorithms have gained wide acceptance by the optimization research community in different engineering and science disciplines such as mechanical design, thermal engineering, manufacturing engineering, electrical engineering, civil engineering, structural engineering, computer engineering, electronics engineering, physics, biotechnology, etc. **More than 15000 research papers have been published so far in reputed international journals by various researchers based on these algorithms.**

In addition to the above, I have worked on "Fuzzy Multi-Criteria Decision-Making Methods and Their Engineering Applications". A number of MCDM methods have been applied by me to the decision-making problems of the manufacturing and industrial engineering environment. A new MCDM method named as "R-method" was proposed by me recently in 2021 and it is also gaining popularity now.

I had authored more than 375 research papers published in international journals and conference proceedings out of which more than 160 papers were published in SCI and Scopus indexed journals. Seven (07) books based on my research works were published by Springer. In addition, three (03) edited proceedings were also published by Springer.

Visiting Professor Assignments Abroad:

1. Deputed by the Ministry of Education (MoE) of the Government of India to Asian Institute of Technology, Bangkok, **Thailand**, as a Visiting Professor **four times**, each time for a semester duration (January-May 2008, August-December 2010, January-May 2015, and January-May 2018).
2. Acted as a Visiting Professor at Politechnica Krakowska (Cracow University of Technology, Cracow), **Poland, six times**, each time for 15 days (in January 2016, October 2016, June 2018, May 2019, December 2019, and October 2022).
3. Acted as a Visiting Professor at Birla Institute of Technology and Science, Dubai, **UAE** for 6 months (June – December 2017).

Editorship of International Journals (Editor/Associate Editor/Editorial Board Member):

Editorship of International Journals	
1.	Energy (Elsevier), (Editorial Board Member (equivalent to Associate Editor of other journals)), ISSN: 1855-6531 ***(covered by Clarivate Analytics, Impact Factor 2022: 9.0)***.
2.	Applied Soft Computing, Elsevier, USA (Editorial Board Member (equivalent to Associate Editor of other journals)), **ISSN: 1568-4946 *(covered by Clarivate Analytics, Impact Factor 2022: 8.7)*.**
3.	Computational Design and Engineering, Oxford University Press (Editorial Board Member), ISSN: 2288-5048 ***(covered by Clarivate Analytics, Impact Factor 2022: 4.9)***.
4.	International Journal of Intelligent Computing and Cybernetics, Emerald, USA (Editorial Board Member), ISSN: 1756-378X ***(covered by Clarivate Analytics, Impact Factor 2022: 4.3)***
5.	Journal of Advances in Production Engineering Management, University of Maribor, Slovenia (Editorial Board Member) **ISSN: 1854-6250 *(covered by Clarivate Analytics, Impact Factor 2022: 3.419)***.
6.	The International Journal of Advanced Manufacturing Technology, Springer Science+Business Media, London (Editorial Board Member), **ISSN: 0268-3768 *(covered by Clarivate Analytics, Impact Factor 2022: 3.4)***.
7.	International Journal of Industrial Engineering Computations, Growing Science Publishers, Canada (Editorial Board Member), **ISSN : 1923-2934 *(covered by Clarivate Analytics, Impact Factor 2022: 3.3)***
8.	Engineering Optimization, Taylor & Francis, UK (Editorial Board Member), **ISSN: 0305-215X *(covered by Clarivate Analytics, Impact Factor 2022: 2.7)***
9.	Scientia Iranica: International Journal of Science and Technology, Sharif University of Technology, Iran (Mechanical Engineering Editorial Board Member), **ISSN: 1026-3098 *(covered by Clarivate Analytics, Impact Factor 2021: 1.416)***

10.	Journal of Advanced Manufacturing Systems, World Scientific Publishers, USA (Editorial Board Member), **ISSN: 0219-6867 *(covered by Clarivate Analytics, Impact Factor 2022: 1.4)***
11.	Archives of Thermodynamics, Poland (Editorial Board Member), ISSN: 1231-0956 ***(covered by Clarivate Analytics, Impact Factor 2022: 0.9)***
12.	International Journal of Engineering Project, Production Management, NUS Singapore, (Editor), **ISSN** : 2221-6529 ***(covered by Scopus)***.
13.	International Journal of Materials, Manufacturing and Mechanical Engineering, IGI Publishers, USA (Editorial Board Member), ISSN: 2156-1680 ***(covered by Scopus)***
14.	Decision Science Letters, Growing Science Publishers, Canada (Editorial Board Member), **ISSN : 1**929-5812 ***(covered by Scopus)***
15.	International Journal of Research in Industrial Engineering, Iran (Member, Editorial Board), ISSN: 1925-7505
16.	International Journal of Applied Evolutionary Computation, IGI Global Publishers, USA (Associate Editor), ISSN: 1942-3594
17.	Advances in Robotics Research, An International Journal, Techno-Press Publishers, Daejeon, South Korea (Editorial Board Member), ISSN : 2287-4976
18.	Technology Audit and Production Reserves (Ukrainian Journal published in English), (Editorial Board Member), ISSN: 2664-9969, 2020.
19.	International Journal of Industrial Optimization, Indonesia (Editorial Board Member), ISSN: 2156-1680
20.	Systems and Soft Computing Journal, Elsevier, USA (Editorial Board Member), **ISSN: 2666-2221*(a new journal of Elsevier).***

Books Authored: 07; Edited Proceedings: 03

S.No.	Title	Author's Name	Publisher	Year of Publication
1	Decision Making in the Manufacturing Environment Using Graph theory and Fuzzy Multiple Attribute Decision Making Methods	R. Venkata Rao	Springer Verlag, UK	2007
2	Advanced Modeling and Optimization of Manufacturing Processes: International Research and Development	R. Venkata Rao	Springer Verlag, UK	2011
3	Mechanical Design Optimization Using Advanced Optimization Techniques	R. Venkata Rao V. J. Savsani	Springer Verlag, UK	2012
4	Decision Making in the	R. Venkata Rao	Springer Verlag, UK	2013

	Manufacturing Environment Using Graph theory and Fuzzy Multiple Attribute Decision Making Methods (Volume-2)			
5	Teaching-learning-based optimization and its engineering applications	R. Venkata Rao	Springer, Cham, Switzerland	2016
6	Jaya: An advanced optimization algorithm and itsengineering applications	R. Venkata Rao	Springer Nature, Switzerland	2018
7	Design optimization of renewable energy systems using advanced optimization algorithms	R. Venkata Rao H. S. Keesari	Springer Nature, Switzerland	2022
8	Edited Proceedings: Advanced Engineering Optimization Through Intelligent Techniques	R. Venkata Rao J. Taler	Springer Nature, Singapore	2019
9	Edited Proceedings: Intelligent Computing Applications for Sustainable Real-World Systems	R. Venkata Rao	Springer Nature, Singapore	2020
10	Edited Proceedings: Advanced Engineering Optimization Through Intelligent Techniques-2022	R. Venkata Rao J. Taler	Springer Nature, Singapore	2022

- **No. of sponsored projects completed: 05** (FIST:1, DST-International Division: 2 (with Austria and Slovenia), GUJCOST Gandhinagar: 1; CSIR: 1)
- No. of bilateral workshops conducted: 02 (Funded by DST-International Division (conducted in India and Russia with Novosibirsk State Technical University, Russia).
- **No. of Ph.D. students supervised: 17 awarded; 3 ongoing**
- **No. of M.Tech. students supervised: 61**

Significant Awards/Prizes Received:

S.No.	Name of Award	Awarding Agency	Year
1	Maharashtra State National Award for the best Research work done by teachers of Engg. Colleges for the year 2020.	Indian Society for Technical Education (ISTE), New Delhi, India	2020
2	M. P. Baya "National Award" for Advancement of Technology in Mechanical Engineering for the year 2014.	Institution of Engineers (India), Kolkata, India	2014
3	Most Cited Award for 2013	Elsevier, The Netherlands	2013 and

	and 2014 (Computer Aided Design journal).		2014
4	Fellowship.	Indian Institution of Industrial Engineering (IIIE), Navi Mumbai, India	2012
5	National Award for the year 2001 for Best Research Work Done.	Indian Society for Technical Education (ISTE), New Delhi, India	2001

No. of One-Week Short-Term Training Programs (STTPs) Organized: 32

These 32 programs are based on advanced intelligent optimization techniques, fuzzy decision-making methods and AI.

International Conferences/Workshops Organized:

International Conferences:

- Fourth International Conference on Advanced Engineering Optimization Through Intelligent Techniques held at SVNIT Surat during 28-30 September 2023
- Third International Conference on Advanced Engineering Optimization Through Intelligent Techniques held at SVNIT Surat during 29-31 January 2022
- Second International Conference on Advanced Engineering Optimization Through Intelligent Techniques held at SVNIT Surat during 03-05 August 2018
- International Conference on Advanced Engineering Optimization Through Intelligent Techniques held at SVNIT Surat during 01-03 July 2013
- Fifth International Conference on Advances in Mechanical Engineering (ICAME) held at SVNIT Surat during 06-08 June 2011
- Fourth International Conference on Advances in Mechanical Engineering (ICAME) held at SVNIT Surat during 23-25 September 2010
- Third International Conference on Advances in Mechanical Engineering (ICAME 2010) held at SVNIT Surat during 4-6 January 2010
- Second International Conference on Advances in Mechanical Engineering (ICAME 2009) held at SVNIT Surat during 3-5 August 2009
- International Conference on Advances in Mechanical Engineering (ICAME 2008) held at SVNIT Surat during 15-17 December 2008

International Workshops:

- **Indo-Russian Joint Research Workshop**: on "Computational Intelligence and Modern Heuristics on Automation and Robotics"
  Funding Agency: DST, India & RFBR, Russia
  Co-Coordinator: Prof. Vadim Zhmud, Novosibirsk State TechnicalUniversity, Russia
  The Workshop was held successfully during 20-22 September 2010
- **Second Russian-Indian Joint Research Workshop**: on "Computational Intelligence and Modern Heuristics on Automation andRobotics"
  Funding Agency: DST, India & RFBR, Russia
  Co-Coordinator: Prof. Vadim Zhmud, Novosibirsk State Technical

University, Russia
The joint Workshop was held successfully during 10-13 September 2011.

Countries Visited:

Czech Republic, Hong Kong, Singapore, Ukraine, Russia, Austria, Germany, Turkey, Thailand, South Korea, Slovenia, Poland, UAE, Switzerland, and Italy.

Reviewer of International Journals: More than 70

1. Applied Thermal Engineering, Elsevier
2. Heat and Mass Transfer, Springer
3. International Journal of Heat and Mass Transfer, Elsevier
4. Energy, Elsevier
5. Applied Energy, Elsevier
6. International Journal of Refrigeration, Elsevier
7. International Journal of Numerical Methods for Heat and Fluid Flow, Emerald Insight
8. International Journal of Electrical Power and Energy Systems, Elsevier
9. Chemical Engineering Research and Design, Elsevier
10. International Journal of Thermal Sciences, Elsevier
11. International Journal of Systems Science, Taylor &Francis
12. Asia-Pacific Journal of Chemical Engineering, Wiley
13. Neural Computing and Applications, Springer
14. Engineering Optimization, Taylor &Francis
15. Information Sciences, Elsevier
16. Engineering Applications of Artificial Intelligence, Elsevier
17. Applied Mathematics and Computation, Elsevier
18. Structural and Multidisciplinary Optimization, Springer
19. Applied Soft Computing, Elsevier, USA
20. Journal of King Saud University-Computer and Information Sciences, Elsevier
21. International Journal of Applied Evolutionary Computation, IGI Global
22. Optimal Control, Applications and Methods, Wiley
23. International Journal of Decision Sciences, Elsevier
24. International Journal of Approximate Reasoning, Elsevier
25. National Academy of Sciences, India Section A: Physical Sciences, Springer
26. International Journal of Mechanics of Time-Dependant Materials, Springer
27. Applied Mathematical Modelling, Elsevier
28. Decision Support Systems and Technology, Elsevier
29. Research in Engineering Design, Springer
30. The Arabian Journal for Science and Engineering, Springer
31. IET Generation, Transmission & Distribution, Taylor &Francis
32. Finite Elements in Analysis and Design, Elsevier
33. Science China Information Sciences, Elsevier
34. Scientia Iranica, Elsevier
35. Journal of Zhejiang University-SCIENCE A, China, Elsevier

36. Machining Science & Technology, Taylor &Francis
37. IIE Transactions-Design & Manufacturing, Taylor &Francis
38. International Journal of Production Research, Taylor &Francis
39. International Journal of Engg. Tribology, IMechE
40. International Journal of Advanced Manufacturing Technology, Springer
41. Journal of Optical Communications, Taylor &Francis
42. International Journal of Robotics& Computer Integrated Manufacturing, Elsevier
43. International Journal of Machining and Machinability of Materials, Inderscience.
44. International Journal of Materials & Product Technology, Inderscience
45. International Journal of Mechatronics and Manufacturing Systems, Inderscience
46. Surface Review and Letters, World Scientific
47. Journal of Indian Institute of Science (IISc), Bangalore
48. Journal of Materials Processing Technology, Elsevier
49. Journal of Engineering Manufacture, IMechE, SAGE Publishers
50. Journal of Mechanical Engineering Sciences, IMechE, SAGE Publishers
51. Journal of Engineering Tribology, IMechE, SAGE Publishers
52. Journal of Materials Engineering and Performance, Taylor &Francis
53. International Journal of Vehicle Design, Inderscience
54. International Journal of Computers & Industrial Engineering, Elsevier
55. International Journal of Mathematical and Computer Modeling, Elsevier
56. International Journal of Management Research News
57. ASME Journal of Mechanical Design, ASME, USA
58. International Journal of Production Research, Taylor &Francis
59. European Journal of Industrial Engineering, Inderscience
60. International Journal of Manufacturing Research, Inderscience
61. International Journal of Operational Research, Inderscience
62. Journal of Intelligent Manufacturing, Springer
63. International Journal of Decision Support Systems and Technology, IGI Global, USA
64. International Journal of Information Technologies and Systems Approach, IGI Global, USA
65. International Journal of Industrial Engineering Computations, Growing Science, Canada
66. SME-Journal of Manufacturing Systems, Elsevier
67. International Journal of Enterprise Network Management, Inderscience
68. Grey Systems: Theory and Application, Emerald Insight
69. Heat and Mass Transfer, Springer, UK
70. International Journal of Intelligent Computing and C7ybernetics, Emerald Publishing, USA

Etc……

Training Programs Attended Outside India (selected and deputed by the Ministry of Human Resource Development (Ministry of Education), Government of India, New Delhi:

- Participated in the *"Leadership for Academicians Program (LEAP)"* of the Ministry of Human Resource Development, New Delhi, organized by IIT Bombay at Mumbai for 2 weeks and at NTU Singapore for 1 week in 2019.
- Institute of Technical Education, Ministry of Foreign Affairs, Singapore (onTVET programme for Principals and Instructors during 7-11 March 2011)
- SIVAT, Seoul, South Korea (on PPCP in technical and vocational education andtraining during 7-15 September 2009)
- National Institute of Education of Nanyang Technological University, Singapore (on Enhancing Pedagogy Skills for Teacher Trainers during 7-13 October 2008)

List of 50 Representative Papers Published in SCI Journals During Last 5 Years:

For complete list, the following links may be referred to:

Google Scholar
https://scholar.google.com/citations?hl=en&user=4NoqGCEAAAAJ&view_op=list_works

Scopus
https://www.scopus.com/authid/detail.uri?authorId=12764013600

S. No.	Title	Authors	Name of Journal	Volume	Issue	Pages	Year
1.	Dimensional synthesis of four-bar mechanisms using Rao algorithms and their variants.	RV Rao, RB Pawar	Applied Soft Computing	132	https://doi.org/10.1016/j.asoc.2022.109839	109839 (1-26)	2023
2.	A comprehensive review on Jaya optimization algorithm.	LSA da Silva, YLS Lúcio, LS Coelho, VC Mariani, RV Rao	Artificial Intelligence Review	56	5	4329-4361	2023
3.	Improved Rao algorithm: a simple and effective algorithm for constrained mechanical design optimization problems.	RV Rao, RB Pawar	Soft Computing	27	7	3847-3868	2023

4.	Elitist Rao algorithms and R-method for optimization of energy systems.	RV Rao, HS Keesari, J Taler, P Oclon, D Taler	Heat Transfer Engineering	44	11-12	926-950	2023
5.	Solar assisted heat engine systems: Multi-objective optimisation and decision making.	RV Rao, HS Keesari	International Journal of Ambient Energy	43	1	149-175	2022
6.	Design Optimization of Selected Mechanical Engineering Components using Variants of Rao Algorithms.	RV Rao, N Zinzuvadia	Jordan Journal of Mechanical & Industrial Engineering	16	-	835-863	2022
7.	Design optimization of shell-and-tube heat exchanger using Rao algorithms and their variants.	RV Rao, M Majethia	Thermal Science and Engineering Progress	36	https://doi.org/10.1016/j.tsep.2022.101520	101520	2022
8.	An adaptive multilevel thresholding method with chaotically-enhanced Rao algorithm.	Y Olmez, A Sengur, GO Koca, RV Rao	Multimedia Tools and Applications	https://doi.org/10.1007/s11042-022-13671-9		1-27	2022
9.	Design optimization of cam–follower mechanisms using Rao algorithms and their variants.	RV Rao, RB Pawar	Evolutionary Intelligence	https://doi.org/10.1007/s12065-022-00750-x		1-26	2022
10.	Optimal design of dome structures with recently developed	T Dede, B Atmaca, M Grzywinski, RV Rao	Structures	42	https://doi.org/10.1016/j.istruc.2022.06.010	65-79	2022

	algorithm: Rao series.						
11.	Inverse problem for dynamic structural health monitoring based on slime mould algorithm.	S Tiachacht, S Khatir, CL Thanh, RV Rao, S Mirjalili, M Abdel Wahab	Engineering with Computers	38	3	2205-2228	2022
12.	Path synthesis of a four-bar linkage using a teaching-learning-based optimization algorithm.	GG Waghmare, RV Rao, PC Kulkarni	International Journal for Computational Methods in Engineering Science and Mechanics	24	https://doi.org/10.1080/15502287.2022.2042869	40-51	2022
13.	A variable velocity strategy particle swarm optimization algorithm (VVS-PSO) for damage assessment in structures.	MH Le, S Khatir, RV Rao, M Abdel Wahab, TC Le	Engineering with computer	https://doi.org/10.1007/s00366-021-01451-2		-	2022
14.	Ranking of Pareto-optimal solutions and selecting the best solution in multi-and many-objective optimization problems using R-method.	RV Rao, RJ Lakshmi	Soft Computing Letters	3	https://doi.org/10.1016/j.socl.2021.100015	100015	2021
15.	An efficient balanced teaching-learning-based optimization algorithm with individual restarting strategy for	A Taheri, K RahimiZadeh, RV Rao	Information Sciences	576	https://doi.org/10.1016/j.ins.2021.06.064	68-104	2021

	solving global optimization problems.						
16.	Rao algorithms for multi-objective optimization of selected thermodynamic cycles.	RV Rao, HS Keesari	Engineering with Computers	37	4	3409-3437	2021
17.	A self-adaptive population Rao algorithm for optimization of selected bio-energy systems.	RV Rao, HS Keesari	Journal of Computational Design and Engineering	8	1	69-96	2021
18.	Review on dam and reservoir optimal operation for irrigation and hydropower energy generation utilizing meta-heuristic algorithms.	KL Chong, SH Lai, AN Ahmed, WZW Zaafar, RV Rao, M Sherif, A Sefelnasr, A El-Shafie	IEEE Access	9	https://10.1109/ACCESS.2021.3054424	19488-19505	2021
19.	Multiobjective optimization of underground power cable systems.	P Ocłoń, M Rerak, RV Rao, P Cisek, A Vallati, D Jakubek, B Rozegnał	Energy	215	https://doi.org/10.1016/j.energy.2020.119089	119089	2021
20.	R-method: A simple ranking method for multi-attribute decision-making in the industrial environment.	R Rao, J Lakshmi	Journal of Project Management	6	4	223-230	2021
21.	Parallel implementation of metaheuristics for optimizing tool path computation on CNC machining.	H Rico-Garcia, JL Sanchez-Romero, HM Gomis, RV Rao	Computers in Industry	123	https://doi.org/10.1016/j.compind.2020.103322	103322	2020

22.	Quasi-oppositional-based Rao algorithms for multi-objective design optimization of selected heat sinks.	RV Rao, RB Pawar	Journal of Computational Design and Engineering	7	6	830-863	2020
23.	The size optimization of steel braced barrel vault structure by using Rao-1 algorithm.	D Tayfun, M Grzywiński, RV Rao, B Atmaca	Sigma Journal of Engineering and Natural Sciences	38	3	1415-1425	2020
24.	Multi-spark numerical simulation of the micro-EDM process: an extension of a single-spark numerical study.	M Singh, P Saxena, J Ramkumar, RV Rao	The International Journal of Advanced Manufacturing Technology	108	https://doi.org/10.1007/s00170-020-05566-6	2701-2715	2020
25.	Constrained design optimization of selected mechanical system components using Rao algorithms.	RV Rao, RB Pawar	Applied Soft Computing	89	https://doi.org/10.1016/j.asoc.2020.106141	106141	2020
26.	Design optimization of heat exchangers with advanced optimization techniques: a review.	RV Rao, A Saroj, P Ocloń, J Taler	Archives of Computational Methods in Engineering	27	2	517-548	2020
27.	Self-adaptive multi-population Rao algorithms for engineering design optimization.	RV Rao, RB Pawar	Applied Artificial Intelligence	34	3	187-250	2020
28.	Prediction of effects of process	AG Kamble, RV Rao	International Journal of	34	2	148-173	2020

	parameters and thermo-mechanical simulation of GMAW process for welding of AISI 430 steel.		Manufacturing Technology and Management				
29.	Rao algorithms: Three metaphor-less simple algorithms for solving optimization problems.	RV Rao	International Journal of Industrial Engineering Computations	11	1	107-130	2020
30.	An adaptive multi-team perturbation-guiding Jaya algorithm for optimization and its applications.	RV Rao, HS Keesari, P Oclon, J Taler	Engineering with Computers	36	1	391-419	2020
31.	Comparison of high performance parallel implementations of TLBO and JAYA optimization methods on manycore GPU.	H Rico-Garcia, JL Sanchez-Romero, A Jimeno-Morenilla, H Migallon-Gomis, H Mora-Mora, RV Rao	IEEE Access	7	https://10.1109/ACCESS.2019.2941086	133822-133831	2019
32.	Experimental investigation and multi-objective optimization of micro-wire electrical discharge machining of a titanium alloy using Jaya algorithm.	M Singh, J Ramkumar, RV Rao, J Balic	Advances in Production Engineering & Management	14	2	251-263	2019
33.	An elitism-based self-adaptive multi-population Jaya	RV Rao, A Saroj	Soft Computing	23	12	4383-4406	2019

	algorithm and its applications.						
34.	Multi-objective optimization of abrasive waterjet machining process using Jaya algorithm and PROMETHEE Method.	RV Rao, DP Rai, J Balic	Journal of Intelligent Manufacturing	30	5	2101-2127	2019
35.	Improved multi-objective Jaya optimization algorithm for a solar dish Stirling engine.	RV Rao, HS Keesari, P Oclon, J Taler	Journal of Renewable and Sustainable Energy	11	2	025903	2019
36.	Multipopulation-based multi-level parallel enhanced Jaya algorithms.	H Migallon, A Jimeno-Morenilla, JL Sanchez-Romero, H Rico, RV Rao	The Journal of Supercomputing	75	3	1697-1716	2019
37.	Usage of optimization techniques in civil engineering during the last two decades.	T Dede, M Kripka, V Togan, V Yepes, RV Rao	Current Trends in Civil & Structural Engineering	2	1	1-17	2019
38.	Efficient subpopulation based parallel TLBO optimization algorithms.	A García-Monzó, H Migallón, A Jimeno-Morenilla, JL Sánchez-Romero, H Rico, RV Rao	Electronics	8	1	19	2018
39.	A Posteriori Multiobjective Self-Adaptive Multipopulation Jaya Algorithm for Optimization of Thermal Devices and Cycles.	RV Rao, A Saroj, P Oclon, J Taler, J Lakshmi	IEEE Access	7	https://10.1109/ACCESS.2018.2885823	4113-4134	2018

40.	Multi-objective optimization of machining and micro-machining processes using non-dominated sorting teaching–learning-based optimization algorithm.	RV Rao, DP Rai, J Balic	Journal of Intelligent Manufacturing	29	8	1715-1737	2018
41.	Multi-team perturbation guiding Jaya algorithm for optimization of wind farm layout	RV Rao, HS Keesari	Applied Soft Computing	71	https://doi.org/10.1016/j.asoc.2018.07.036	800-815	2018
42.	Single-and multi-objective design optimization of plate-fin heat exchangers using Jaya algorithm.	RV Rao, A Saroj, P Ocloń, J Taler, D Taler	Heat Transfer Engineering	39	13-14	1201-1216	2018
43.	Constrained economic optimization of shell-and-tube heat exchangers using a self-adaptive multipopulation elitist-jaya algorithm.	RV Rao, A Saroj	Journal of Thermal Science and Engineering Applications	10	4	-	2018
44.	Design optimization of heat pipes using elitism-based self-adaptive multipopulation Jaya algorithm.	RV Rao, A Saroj, S Bhattacharya	Journal of Thermophysics and Heat Transfer	32	3	702-712	2018
45.	Multi-objective design	RV Rao, A Saroj	Energy Systems	9	2	305-341	2018

	optimization of heat exchangers using elitist-Jaya algorithm.						
46.	Optimum static balancing of a robot manipulator using TLBO algorithm.	RV Rao, G Waghmare	Advances in robotics research	2	1	13-31	2018
47.	Experimental investigation and parameter optimisation of Al2O3-40% TiO2 atmospheric plasma spray coating on mild steel substrate.	TS Rajesh, RV Rao	International Journal of Materials Engineering Innovation	9	4	257-278	2018
48.	Optimization of abrasive waterjet machining process using multi-objective jaya algorithm.	RV Rao, DP Rai, J Balic	Materials Today: Proceedings	5	2	4930-4938	2018
49.	Experimental investigation and parameter optimization of Al2O3-40% TiO2 atmospheric plasma spray coating on SS316 steel substrate.	TS Rajesh, RV Rao	Materials today: proceedings	5	2	5012-5020	2018
50.	Thermal performance optimization of the underground power cable system by using a modified Jaya algorithm.	P Ocłoń, P Cisek, M Rerak, D Taler, RV Rao, A Vallati, M Pilarczyk	International Journal of Thermal Sciences	123	https://doi.org/10.1016/j.ijthermalsci.2017.09.015	162-180	2018