Manas Ranjan Singh, Ph.D.

Designation : Associate Professor

Department : Department of Electronics Engineering

(JOINED THE INSTITUTE IN 2006)

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RESEARCH INTERESTS

- Optimization and simulation in manufacturing
- Operations Management
- Manufacturing Processes
- Industrial Engineering
- Soft Computing

Academic Qualifications

Ph. D. (Mechanical Engineering): National Institute of Technology, Rourkela, India
M. Tech. (Manufacturing process and systems): KIIT University, Bhubaneswar, India
B.Tech. (Mechanical Engineering), OEC, Utkal University, Bhubaneswar

Teaching Experience/Research Experience

Teaching Experience: 18 years

PUBLICATIONS

JOURNAL& CONFERENCES

[1]. Behura, Aruna Kumar, Chinmaya Prasad Mohanty, **Manas Ranjan Singh**, Ashwini Kumar, EmanoilLinul, and Dipen Kumar Rajak. "Performance Analysis of Three Side Roughened Solar Air Heater: A Preliminary Investigation." Materials 15, no. 7 (2022): 2541.Indexing: SCI-E.

[2]. Mohanty, C. P., Behura, A. K., Singh, M. R., Prasad, B. N., Kumar, A., Dwivedi, G., &Verma, P. (2020). Parametric performance optimization of three sides roughened solar air heater. *Energy Sources, Part A: Recovery, Utilization, and EnvironmentalEffects*, 1-21, Taylor and Francis, Indexing: SCI.

[3]. Mohanty, Chinmaya Prasad, Mantra Prasad Satpathy, Siba Sankar Mahapatra, and **Manas Ranjan Singh**. "Optimization of cryo-treated EDM variables using TOPSIS-based TLBO algorithm." *Sādhanā* 43, no. 4 (2018): 51, (Spinger), Indexing: SCI.

[4]. Mohanty, Chinmaya P., Siba Sankar Mahapatra, and **Manas Ranjan Singh**. "An intelligent approach to optimize the EDM process parameters using utility concept and QPSO algorithm." *Engineering Science and Technology, an International Journal* 20.2 (2017): 552-562, Indexing: Scopus.

[5]. Mohanty, Chinmaya P., Siba Sankar Mahapatra, and **Manas Ranjan Singh**. "Effect of deep cryogenic treatment on machinability of Inconel 718 in powder-mixed EDM." *International Journal of Machining and Machinability of Materials* 19.4 (2017): 343-373, Indexing:Scopus

[6]. **Singh, Manas Ranjan**, and Siba Sankar Mahapatra. "A quantum behaved particle swarm optimization for flexible job shop scheduling." Computers &Industrial Engineering 93 (2016): 36-44., (Elsevier), Indexing: SCI.

[7]. Bathrinath, S., Saravanasankar, S., Mahapatra, S. S., **Manas Ranjan Singh**., &Ponnambalam, S. G. (2016). An improved meta-heuristic approach for solving identical parallel processor scheduling problem. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 230(6), 1114-1126, Indexing: SCI.

[8]. Mohanty, Chinmaya P., Siba Sankar Mahapatra, and **Manas Ranjan Singh**. "A particle swarm approach for multi-objective optimization of electrical discharge machining process." Journal of Intelligent Manufacturing 27.6 (2016): 1171-1190, (Spinger)Indexing: SCI.

[9]. **Singh, Manas Ranjan**, Madhusmita Singh, S. S. Mahapatra, and NibeditaJagadev. "Particle swarm optimization algorithm embedded with maximum deviation theory for solving multi-objective flexible job shop scheduling problem." The International Journal of Advanced Manufacturing Technology85, no. 9-12 (2016): 2353-2366, Indexing: SCI.

[10]. Mohanty, Chinmaya P., Siba Shankar Mahapatra, and **Manas Ranjan Singh**. "An experimental investigation of machinability of Inconel 718 in electrical discharge machining." Procedia materials science 6 (2014): 605-611.Elsevier (3rd International Conference on Materials Processing and Characterization (ICMPC 2014)

[11]. **Singh, Manas Ranjan,** S. S. Mahapatra, and RatikantaMishra. "Robustscheduling for flexible job shop problems with random machine breakdowns usinga quantum behaved particles warm optimisation." International Journal of Services and Operations Management 20.1 (2014): 1-20**,** (Inderscience).

[12]. **Singh, Manas Ranjan**, S. S. Mahapatra, and KaushikMishra. "A novel swarm optimiser for flexible flow shop scheduling." International Journal of Swarm Intelligence 1.1 (2013): 51-69, (Inderscience).

[13]. **Singh, Manas Ranjan**, and S. S. Mahapatra. "A swarm optimization approach for flexible flow shop scheduling with multi processor tasks." The International Journal of Advanced Manufacturing Technology 62.1-4 (2012): 267-277,(Spinger), Indexing: SCI.

International Conferences:

[1] **Manas Ranjan Singh**. and Mahapatra, S. S. (2013). A quantum particleswarmoptimizer for multi-objective flexible flow shop

schedulingproblem. International Conference on Industrial Engineering (ICIE 2013), S.V. National Institute of Technology, Surat, 20th to 22th Nov. 2013.

[2] **Manas Ranjan Singh**and Mahapatra, S. S. (2013). A quantum behaved particle swarm optimization for flexible job shop scheduling with random machine breakdowns. International Conference on Smart Technologies for Mechanical Engineering (STME-2013), Delhi Technological University, New Delhi, 25th to 26th Oct. 2013.

[3] **Manas RanjanSingh**,Mahapatra, S. S. and Chinmaya P Mohanty (2013). A quantum particle swarm optimizer with chaotic mutation operator for flexible flow shop scheduling. International Conference on Advanced Manufacturing and Automation (INCAMA 2013), Kalasalingam University, Tamil Nadu, 28th-30th March, 2013.

[4] Chinmaya P. Mohanty, S.S.Mahapatra, **Manas R Singh** (2014) Multi Response Optimization of Electrical Discharge Machining Process Using Particle Swarm Approach, Asia Symposium on engineering and information, Bangkok, Thailand 11th-13th April 2014.

Book Chapter

[1] Mohanty, C. P., **Singh, M. R**., Mahapatra, S. S., &Chatterjee, S. (2014). A Particle Swarm Approach Embedded with Numerical Analysis for Multi-response Optimization in Electrical Discharge Machining. In *Swarm, Evolutionary, and Memetic Computing* (pp. 74-87). Springer International Publishing.