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Designation : Associate Professor

Department : Department of Electrical and Electronics Engineering

(JOINED THE INSTITUTE IN JULY 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, India

B.Tech. (Mechanical Engineering), OEC, Utkal University, India

Teaching Experience/Industrial Experience/Research Experience

- ✓ Teaching Experience : 15years

PUBLICATIONS

JOURNAL & CONFERENCES

- [1]. Behura, Aruna Kumar, Chinmaya Prasad Mohanty, **Manas Ranjan Singh**, Ashwini Kumar, Emanoil Linul, 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, Chinmaya Prasad, Arun Kumar Behura, **Manas Ranjan Singh**, Bishwa Nath Prasad, Ashwini Kumar, Gaurav Dwivedi, and Puneet Verma. "Parametric performance optimization of three sides roughened solar air heater." *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects* (2020): 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]. **Singh, Manas Ranjan**, Madhusmita Singh, S. S. Mahapatra, and Nibedita Jagadev. "Particle swarm optimization algorithm embedded with maximum deviation theory for solving multi-objective flexible job shop scheduling problem." *The International Journal of Advanced Manufacturing Technology* 85, no. 9-12 (2016): 2353-2366.. Indexing: **SCI**.
- [9]. 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**.
- [10]. **Singh, Manas Ranjan**, S. S. Mahapatra, and Ratikanta Mishra. "Robust scheduling for flexible job shop problems with random machine breakdowns using a quantum behaved particle swarm optimisation." *International Journal of Services and Operations Management* 20.1 (2014): 1-20. (**Inderscience**). Indexing: **Scopus**
- [11]. 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)
- [12]. **Singh, Manas Ranjan**, S. S. Mahapatra, and Kaushik Mishra. "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 multiprocessor 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 particle swarm optimizer for multi-objective flexible flow shop scheduling problem. *International Conference on Industrial Engineering (ICIE 2013)*, at S.V. National Institute of Technology, Surat, during 20th to 22th November 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), at Delhi Technological University, New Delhi, during 25th to 26th October 2013.

- [3] **Manas Ranjan Singh** , 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), at Kalasalingam University, Tamil Nadu, during 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.