International Journal of Industrial Engineering and Management

Innovations in Marketing of Printed Circuit Board Assembly by Optimization Techniques for Enhanced Performance

L. S. Budovich[a,*] 0000-0002-4693-4832

[a] *MIREA - Russian Technological University (RTU MIREA); Moscow, Russia*

References

[1] S. Selvakumar, S. Adithe, J. S. Isaac, R. Pradhan, V. Venkatesh, and B. Sampath, "A Study of the Printed Circuit Board (PCB) E-Waste Recycling Process" In Sustainable Approaches and Strategies for E-Waste Management and Utilization, A. M. Rawani, M. K. Sahu, S. S. Chakarabarti, and A. K. Singh, Eds. New York, NY, USA: IGI Global, 2023, ch. 9, pp. 159-184, doi: 10.4018/978-1-6684-7573-7.ch009.

[2] C. Zhao, C. Wu, X. Wang, B. W. K. Ling, K. L. Teo, J. M. Lee, and K. H. Jung, "Maximizing lifetime of a wireless sensor network via joint optimizing sink placement and sensor-to-sink routing," Applied Mathematical Modelling, vol. 49, pp. 319-337, 2017, doi: 10.1016/j.apm.2017.05.001.

[3] M. J. Tuama, "The Role of Simultaneous Engineering in Reducing Costs and Improving Product Quality - An Applied Study in Wasit State Company for Textile Industries," International Academic Journal of Social Sciences, vol. 10, no. 1, pp. 26-36, 2023, doi: 10.9756/iajss/v10i1/iajss1004.

[4] I. Rastgar, J. Rezaeian, I. Mahdavi, and P. Fattahi, "A novel mathematical model for Integration of Production Planning and Maintenance Scheduling," International Journal of Industrial Engineering and Management, vol. 14, no. 2, p. 122-137, 2023, doi: 10.24867/IJIEM-2023-2-328.

[5] M. Alolaiwy, T. Hawsawi, M. Zohdy, A. Kaur, and S. Louis, "Multi-objective routing optimization in electric and flying vehicles: a genetic algorithm perspective," Applied Sciences, vol. 13, no. 18, p. 10427, 2023, doi: 10.3390/app131810427.

[6] K. C. Rath, A. Khang, and D. Roy, "The Role of Internet of Things (IoT) Technology in Industry 4.0 Economy," in Advanced IoT Technologies and Applications in the Industry 4.0 Digital Economy, A. Khang, V. Abdullayev, V. Hahanov, and V. Shah, Eds. Boca Raton, FL, USA: CRC Press, 2024, ch. 1, pp. 1-28, doi: 10.1201/9781003434269.

[7] V. A. Rogova, "Shamin R.V. Optimization procedures in the problem of marketing educational services at the stage of forming a policy for recruiting applicants to universities," Russian Technological Journal, vol. 8, no. 5, pp. 91-102, 2020, doi: 10.32362/2500-316X-2020-8-5-91-102.

[8] A. Juárez-Vite, J. R. Corona-Armenta, H. Rivera-Gómez, O. Montaño-Arango, and J. Medina-Marín, "Application of the SMED methodology through folding references for a bus manufacturing company," International Journal of Industrial Engineering and Management, vol. 14, no. 3, pp. 232-243, 2023, doi: 10.24867/IJIEM-2023-3-335.

[9] J. Logeshwaran and R. M. Nachiappan, "Optimization of process parameter involved in the effectiveness evaluation of continuous line manufacturing system (CLMS)," International Journal of Nonlinear Analysis and Applications, vol. 13, no. 1, pp. 321-342, 2022, doi: 10.22075/IJNAA.2022.5499.

[10] R. Adattil, P. Thorvald, and D. Romero, "Assessing the Psychosocial Impacts of Industry 4.0 Technologies Adoption in the Operator 4.0: Literature Review & Theoretical Framework," International Journal of Industrial Engineering and Management, vol. 15, no. 1, pp. 59-80, 2024, doi: 10.24867/IJIEM-2024-1-348.

[11] M. Pal, A. Das, K. Banerjee, and B. Dam, "Modelling of Fast Steering Mirror Assembly: A Review of the various Methodologies," Optik, vol. 287, p. 171108, 2023, doi: 10.1016/j.ijleo.2023.171108.

[12] S. K. Thomas, A. Ali, A. Alarjani, and E.-A. Attia, "Simulation based performance improvement: A case study on automotive industries," International Journal of Simulation Modelling, vol. 21, no. 3, pp. 405-416, 2022, doi: 10.2507/IJSIMM21-3-606.

[13] L. Xu, F. Liaqat, J. Sun, M. I. Khazi, R. Xie, and D. Zhu, "Advances in the vanillin synthesis and biotransformation: A review," Renewable and Sustainable Energy Reviews, vol. 189, p. 113905, 2024, doi: 10.1016/j.rser.2023.113905.

[14] H. Suyono, R. N. Hasanah, P. Mudjirahardjo, M. F. E. Purnomo, S. Uliyani, I. Musirin, and L. J. Awalin, “Enhancement of the power system distribution reliability using ant colony optimization and simulated annealing methods,” Indonesian Journal of Electrical Engineering and Computer Science, vol. 17, no. 2, pp. 877-885, 2020, doi: 10.11591/IJEECS.V17.

[15] R. Priyadarshi, “Energy-Efficient Routing in Wireless Sensor Networks: A Meta-heuristic and Artificial Intelligence-based Approach: A Comprehensive Review,” Archives of Computational Methods in Engineering, vol. 31, pp. 2109-2137, 2024, doi: 10.1007/s11831-023-10039-6.

[16] M. Picard, M. P. Scott-Boyer, A. Bodein, O. Périn, and A. Droit, “Integration strategies of multi-omics data for machine learning analysis,” Computational and Structural Biotechnology Journal, vol. 19, pp. 3735-3746, 2021, doi: 10.1016/j.csbj.2021.06.030.

[17] Z. P. Li, “Management decisions in multi-variety small-batch product manufacturing process,” International Journal of Simulation Modelling, vol. 21, no. 3, pp. 537-547, 2022, doi: 10.2507/IJSIMM21-3-CO15.

[18] H. K. Zhang, C. Zhu, G. Liu, and X. Wang, “Fundamental limitations on optimization in variational quantum algorithms,” arXiv, 2022, doi: 10.48550/arXiv.2205.05056.

[19] J. Pascual-Pañach, M. À. Cugueró-Escofet, and M. Sànchez-Marrè, “Interoperating data-driven and model-driven techniques for the automated development of intelligent environmental decision support systems,” Environmental Modelling and Software, vol. 140, p. 105021, 2021, doi: 10.1016/j.envsoft.2021.105021.

[20] L. Wang, Y. Zhang, D. Zhu, S. Coleman and D. Kerr, "Supervised Meta-Reinforcement Learning With Trajectory Optimization for Manipulation Tasks," IEEE Transactions on Cognitive and Developmental Systems, vol. 16, no. 2, pp. 681-691, 2024, doi: 10.1109/TCDS.2023.3286465.

[21] D. X. Thanh, L. D. Truong, V. N. Duy, “A review of EGR application for automotive industry,” Journal of Innovations in Business and Industry, vol. 2, no. 2, p. 117-122, 2024, doi: 10.61552/JIBI.2024.02.007.

[22] A. Antrolia, K. Shahare, P. Manjardekar, and N. Raykar, “Multi-objective optimization of centre locking hub bolt of automobile wheel under conflicting objectives,” Materials Today: Proceedings, vol. 56, pp. 425-432, 2022, doi: 10.1016/j.matpr.2022.01.394.

[23] M. S. Monfared, S. E. Monabbati, and M. Mahdipour Azar, “Bi-objective optimization problems with two decision makers: Refining pareto-optimal front for equilibrium solution,” OR Spectrum, vol. 42, pp. 567-584, 2020, doi: 10.1007/s00291-020-00587-9.

[24] R. B. Anderson, C. Pehlivantürk, and M. Pryor, “Optimization Strategies for Bayesian Source Localization Algorithms,” IEEE Transactions on Automation Science and Engineering, vol. 20, no. 1, pp. 394-403, 2022, doi: 10.1109/TASE.2022.3154228.

[25] D. T. Xuan, T. V. Huynh, N. T. Hung, and V. T. Thang, "Applying Digital Twin and Multi-Adaptive Genetic Algorithms in Human–Robot Cooperative Assembly Optimization," Applied Sciences, vol. 13, no. 7, p. 4229, 2023, doi: 10.3390/app13074229.

[26] P. Khatavkar and L. W. Mays, "Resilience of water distribution systems during real-time operations under limited water and/or energy availability conditions," Journal of Water Resources Planning and Management, vol. 145, no. 10, p. 04019045, 2019, doi: 10.1061/(ASCE)WR.1943-5452.0001112.

[27] Y.-S. Chen, J.-R. Chang, and C.-J. Huang, "Strategic Decision-making Processes of NPD by Hybrid Classification Model Techniques," Journal of Internet Technology, vol. 21, no. 6, pp. 1635-1646, 2020, doi: 10.3966/160792642020112106006.

[28] Y. Zhang, J. M. Górriz, and D. R. Nayak, "Optimization Algorithms and Machine Learning Techniques in Medical Image Analysis," Mathematical Biosciences and Engineering, vol. 20, no. 3, pp. 5917–5920, 2023, doi: 10.3934/mbe.2023255.