

## REFERENCES

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- [1] S. Ahmad, S. Malik, and D. H. Kim, “Comparative analysis of simulation tools with visualization based on real-time task scheduling algorithms for iot embedded applications,” *Int. J. Grid Distrib. Comput.*, vol. 11, no. 2, 2018.
- [2] H. El Ghor, J. Hage, N. Hamadeh, and R. H. Chehade, “Energy-efficient real-time scheduling algorithm for fault-tolerant autonomous systems,” *Scalable Comput.*, vol. 19, no. 4, 2018.
- [3] R. Belagali, S. Kulkarni, V. Hegde, and G. Mishra, “Implementation and validation of dynamic scheduler based on LST on FreeRTOS,” *2016 Int. Conf. Electr. Electron. Commun. Comput. Optim. Tech. ICEECCOT 2016*, pp. 325–330, 2017.
- [4] Y. Laalaoui and N. Bouguila, “Pre-run-time scheduling in real-time systems: Current researches and Artificial Intelligence perspectives,” *Expert Syst. Appl.*, vol. 41, no. 5, pp. 2196–2210, 2014.
- [5] Jane W. S. Liu, *Real - Time Systems*. PEARSON, 2016.
- [6] K. Chatterjee, A. Pavlogiannis, A. Kößler, and U. Schmid, “Automated competitive analysis of real-time scheduling with graph games,” *Real-Time Syst.*, vol. 54, no. 1, pp. 166–207, 2018.
- [7] J. Y. T. Leung, “A new algorithm for scheduling periodic, real-time tasks,” *Algorithmica*, vol. 4, no. 1–4, 1989.
- [8] A. Burns *et al.*, “The meaning and role of value in scheduling flexible real-time systems,” *J. Syst. Archit.*, vol. 46, no. 4, 2000.
- [9] A. Magdich, Y. Hadj Kacem, M. Kerboeuf, A. Mahfoudhi, and M. Abid, “A design

- pattern-based approach for automatic choice of semi-partitioned and global scheduling algorithms,” *Inf. Softw. Technol.*, vol. 97, no. November 2017, pp. 83–98, 2018.
- [10] F. Lindh, T. Otnes, and J. Wennerström, “Scheduling algorithms for real-time systems,” *Dep. Comput. Eng. Mälardalens Univ. Sweden*, 2010.
- [11] S. Funk, J. Goossens, and S. Baruah, “On-line scheduling on uniform multiprocessors,” *Proc. - Real-Time Syst. Symp.*, 2001.
- [12] E. D. Jensen, C. D. Locke, and H. Tokuda, “TIME-DRIVEN SCHEDULING MODEL FOR REAL-TIME OPERATING SYSTEMS.,” 1985.
- [13] S. R. Biyabani, J. A. Stankovic, and K. Ramamritham, “Integration of deadline and criticalness in hard real-time scheduling,” 1988, vol. 35 n 6.
- [14] B. Chattopadhyay, “Integrating pragmatic constraints and behaviors into real-time scheduling theory,” p. 2015, 2015.
- [15] J. Teraiya and A. Shah, “Comparative Study of LST and SJF Scheduling Algorithm in Soft Real-Time System with its Implementation and Analysis,” *2018 Int. Conf. Adv. Comput. Commun. Informatics, ICACCI 2018*, pp. 706–711, 2018.
- [16] C. L. Liu and J. W. Layland, “Scheduling Algorithms for Multiprogramming in a Hard-Real-Time Environment,” *J. ACM*, vol. 20, no. 1, pp. 46–61, 1973.
- [17] G. Buttazzo, M. Spuri, and F. Sensini, “Value vs. deadline scheduling in overload conditions,” in *Proceedings - Real-Time Systems Symposium*, 1995.
- [18] G. Saini, “Application of fuzzy logic to real-time scheduling,” in *2005 14TH IEEE-NPSS Real Time Conference*, 2005.
- [19] S. Baruah *et al.*, “On the competitiveness of on-line real-time task scheduling,” *Real-Time Syst.*, 1992.

- [20] J. Teraiya and A. Shah, "Analysis of Dynamic and Static Scheduling Algorithms in Soft Real-Time System with Its Implementation," in *Advances in Intelligent Systems and Computing*, 2020.
- [21] A. Shah and K. Kotecha, "Scheduling algorithm for real-time operating systems using ACO," in *Proceedings - 2010 International Conference on Computational Intelligence and Communication Networks, CICN 2010*, 2010.
- [22] S. C. Yu, "Elucidating multiprocessors flow shop scheduling with dependent setup times using a twin particle swarm optimization," *Appl. Soft Comput. J.*, vol. 21, pp. 578–589, 2014.
- [23] H. Kazemi, Z. M. Zahedi, and M. Shokouhifar, "Swarm Intelligence Scheduling of Soft Real-Time Tasks in Heterogeneous Multiprocessor Systems," *Electr. Comput. Eng. An Int. J.*, vol. 5, no. 1, 2016.
- [24] D. Thakor and A. Shah, "D\_EDF: An efficient scheduling algorithm for real-time multiprocessor system," *Inf. Commun. Technol. (WICT), 2011 World Congr.*, pp. 1044–1049, 2011.
- [25] G. Koren and D. Shasha, "Dover: an optimal on-line scheduling algorithm for overloaded uniprocessor real-time systems," *SIAM J. Comput.*, 1995.
- [26] D. G. Harkut, "Comparison of Different Task Scheduling Algorithms in RTOS: A Survey," vol. 4, no. 7, pp. 1236–1240, 2014.
- [27] G. C. Buttazzo, "Rate Monotonic vs. EDF: Judgment day," *Real-Time Syst.*, vol. 29, no. 1, pp. 5–26, 2005.
- [28] S. Baruah, S. Funk, and J. Goossens, "Robustness results concerning EDF scheduling upon uniform multiprocessors," *IEEE Trans. Comput.*, vol. 52, no. 9, 2003.

- [29] M. Patel and B. Oza, "International Journal of Advance Engineering and Research An Improved LLF \_ DM Scheduling Algorithm for Periodic Tasks by Reducing Context Switches," vol. 0, pp. 248–254, 2015.
- [30] K. Ramamritham, J. A. Stankovic, and P. F. Shiah, "Efficient Scheduling Algorithms for Realtime Multiprocessor Systems," *IEEE Trans. Parallel Distrib. Syst.*, 1990.
- [31] W. Li, K. Kavi, and R. Akl, "A non-preemptive scheduling algorithm for soft real-time systems," *Comput. Electr. Eng.*, vol. 33, no. 1, pp. 12–29, 2007.
- [32] Shah Apurva, "Dynamic Scheduling for Real-Time Operating Systems," pp. 1–141, 2009.
- [33] A. Shah, "Adaptive scheduling for real-time distributed systems," *Biol. Tech. Knowl. Discov. Data Min.*, pp. 236–248, 2014.
- [34] B. Webb, "Swarm Intelligence: From Natural to Artificial Systems," *Conn. Sci.*, vol. 14, no. 2, 2002.
- [35] A. S. A. Beegom and M. S. Rajasree, "Integer-PSO: a discrete PSO algorithm for task scheduling in cloud computing systems," *Evol. Intell.*, vol. 12, no. 2, pp. 227–239, 2019.
- [36] R. Zarrouk, I. E. Bennour, and A. Jemai, "A two-level particle swarm optimization algorithm for the flexible job shop scheduling problem," *Swarm Intell.*, vol. 13, no. 2, pp. 145–168, 2019.
- [37] S. Pandey, L. Wu, S. M. Guru, and R. Buyya, "A particle swarm optimization-based heuristic for scheduling workflow applications in cloud computing environments," *Proc. - Int. Conf. Adv. Inf. Netw. Appl. AINA*, pp. 400–407, 2010.
- [38] P. Guo and Z. Xue, "An adaptive PSO-based real-time workflow scheduling algorithm in cloud systems," *Int. Conf. Commun. Technol. Proceedings, ICCT*, vol. 2017-Octob, pp. 1932–1936, 2018.

- [39] H. F. Rahman, M. N. Janardhanan, and I. E. Nielsen, "Real-time order acceptance and scheduling problems in a flow shop environment using hybrid Ga-PSO algorithm," *IEEE Access*, vol. 7, pp. 112742–112755, 2019.
- [40] R. Eberhart and J. Kennedy, "New optimizer using particle swarm theory," in *Proceedings of the International Symposium on Micro Machine and Human Science*, 1995.
- [41] J. Brownlee, *Clever Algorithms*. 2011.
- [42] S. Baruah, G. Koren, B. Mishra, A. Raghunathan, L. Rosier, and D. Shasha, "On-line scheduling in the presence of overload," in *Annual Symposium on Foundations of Computer Science (Proceedings)*, 1991.
- [43] "Real Time System Dataset." [Online]. Available: <http://www.processdataset.in/>.
- [44] J. Teraiya, A. Shah, and K. Kotecha, "ACO based scheduling method for soft RTOS with simulation and mathematical proofs," *Int. J. Innov. Technol. Explor. Eng.*, vol. 8, no. 12, pp. 4736–4740, 2019.
- [45] C. Lu, J. A. Stankovic, G. Tao, and S. H. Son, "Design and evaluation of a feedback control EDF scheduling algorithm," in *Proceedings - Real-Time Systems Symposium*, 1999.
- [46] G. Chen and W. Xie, "On a laxity-based real-time scheduling policy for fixed-priority tasks and its non-utilization bound," *2011 Int. Conf. Inf. Sci. Technol. ICIST 2011*, pp. 7–10, 2011.
- [47] T. Feld, A. Biondi, R. I. Davis, G. Buttazzo, and F. Slomka, "A survey of schedulability analysis techniques for rate-dependent tasks," *J. Syst. Softw.*, vol. 138, pp. 100–107, 2018.
- [48] J. Teraiya and A. Shah, "Analysis of Dynamic and Static Scheduling Algorithms in Soft Real-Time System with Its Implementation," *Adv. Intell. Syst. Comput.*, vol. 1053, pp.

- 757–768, 2020.
- [49] J. Lehoczky, L. Sha, and Y. Ding, “Rate monotonic scheduling algorithm: Exact characterization and average case behavior,” in *Proceedings - Real-Time Systems Symposium*, 1989.
  - [50] S. K. Baruah and J. Goossens, “Rate-monotonic scheduling on uniform multiprocessors,” *IEEE Trans. Comput.*, vol. 52, no. 7, 2003.
  - [51] Z. Benhai, Y. Yuan, M. Hongyan, Y. Dapeng, and X. Libo, “Research on optimal ELSF real-time scheduling algorithm for CPS,” *Proc. 28th Chinese Control Decis. Conf. CCDC 2016*, pp. 6867–6871, 2016.
  - [52] D. Konar, S. Bhattacharyya, K. Sharma, S. Sharma, and S. R. Pradhan, “An improved Hybrid Quantum-Inspired Genetic Algorithm (HQIGA) for scheduling of real-time task in multiprocessor system,” *Appl. Soft Comput. J.*, 2017.
  - [53] J. Teraiya and A. Shah, “Hybrid Scheduler (S\_LST) for Soft Real-Time System based on Static and Dynamic Algorithm,” *Int. J. Eng. Adv. Technol.*, vol. 9, no. 2, pp. 2885–2889, 2019.
  - [54] A. K. Mok, “Fundamental design problems of distributed systems for the hard-real-time environment,” *PHD Thesis, MIT, Cambridge, Massachusetts*. 1983.
  - [55] M. Dorigo, G. Di Caro, and M. Sampels, *Ant algorithms : third international workshop, ANTS 2002, Brussels, Belgium, September 12-14, 2002 : proceedings*. 2002.
  - [56] M. Dorigo, G. Di Caro, and L. M. Gambardella, “Ant algorithms for discrete optimization,” *Artif. Life*, 1999.
  - [57] V. Ramos, F. Muge, and P. Pina, “Self-Organized Data and Image Retrieval as a Consequence of Inter-dynamic Synergistic Relationships in Artificial Ant Colonies,” in

*Frontiers in Artificial Intelligence and Applications, Soft Computing Systems - Design, Management and Applications*, 2002.

- [58] M. Dorigo, M. Birattari, and T. Stutzle, *Ant Colony Optimatization*. 2006.
- [59] K. Kotecha and A. Shah, “Adaptive scheduling algorithm for real-time operating system,” in *2008 IEEE Congress on Evolutionary Computation, CEC 2008*, 2008.
- [60] A. Alsheikhy, R. Ammar, R. Elfouly, M. Alharthi, and A. Alshegaifi, “An efficient dynamic scheduling algorithm for periodic tasks in real-time systems using dynamic average estimation,” in *Proceedings - IEEE Symposium on Computers and Communications*, 2016, vol. 2016-Augus.
- [61] “Swarm Intelligence.” [Online]. Available: <http://www.techferry.com/articles/swarm-intelligence.html>.
- [62] J. Kennedy and R. Eberhart, “Particle swarm optimization,” in *IEEE International Conference on Neural Networks - Conference Proceedings*, 1995.
- [63] B. Yuce, M. S. Packianather, E. Mastrocinque, D. T. Pham, and A. Lambiase, “Honey bees inspired optimization method: The bees algorithm,” *Insects*, vol. 4, no. 4, pp. 646–662, Nov. 2013.
- [64] E. Rashedi, H. Nezamabadi-pour, and S. Saryazdi, “GSA: A Gravitational Search Algorithm,” *Inf. Sci. (Ny)*., 2009.
- [65] M. Elbes, S. Alzubi, T. Kanan, A. Al-Fuqaha, and B. Hawashin, “A survey on particle swarm optimization with emphasis on engineering and network applications,” *Evol. Intell.*, vol. 12, no. 2, pp. 113–129, 2019.
- [66] A. Dixit, A. Mani, and R. Bansal, “An adaptive mutation strategy for differential evolution algorithm based on particle swarm optimization,” *Evol. Intell.*, 2021.

- [67] Y. L. Li, W. Shao, L. You, and B. Z. Wang, "An improved PSO algorithm and its application to UWB antenna design," *IEEE Antennas Wirel. Propag. Lett.*, vol. 12, no. 3, pp. 1236–1239, 2013.
- [68] A. Erskine, T. Joyce, and J. M. Herrmann, "Stochastic stability of particle swarm optimisation," *Swarm Intell.*, vol. 11, no. 3–4, pp. 295–315, 2017.
- [69] Y. L. Zheng, L. H. Ma, L. Y. Zhang, and J. X. Qian, "On the convergence analysis and parameter selection in particle swarm optimization," *Int. Conf. Mach. Learn. Cybern.*, vol. 3, no. November, pp. 1802–1807, 2003.
- [70] J. Teraiya, A. Shah, and K. Kotecha, "ACO based scheduling method for soft RTOS with simulation and mathematical proofs," *Int. J. Innov. Technol. Explor. Eng.*, vol. 8, no. 12, 2019.
- [71] K. Yang and J. H. Anderson, "On the soft real-time optimality of global EDF on multiprocessors: From identical to uniform heterogeneous," *Proc. - IEEE 21st Int. Conf. Embed. Real-Time Comput. Syst. Appl. RTCSA 2015*, pp. 1–10, 2015.
- [72] U. D, Locke C. (Computer Science Department, Carnegie-Mellon University, "Best Effort Decision Making for Real-Time Scheduling, Ph.D. Thesis," 1986.
- [73] L. L. Liu C. L., "Scheduling algorithms for multiprogramming in a hard-realtime environment," *J. ACM*, vol. Vol 20, no. 1, pp. 46–61, 1973.
- [74] M. L. Dertouzos and A. Ka-Lau Mok, "Multiprocessor On-Line Scheduling of Hard-Real-Time Tasks," *IEEE Trans. Softw. Eng.*, vol. 15, no. 12, 1989.