

REFERENCES

- [1]. C Scheidler, et.al, Time Triggered Architectures, EMMSEC'97, Advances in information Technologies: The business challenge, IOS Press, (1997), 758-765.
- [2]. Mike Falla (edt), Advances in safety critical Systems-Results and achievements from the DTI/EPSRC R&D Program (1997)1-2.
- [3]. Martin L Shooman, Reliability of Computer Systems and Networks. John Wiley (2000) 14-15.
- [4]. H kopetz, Real Time Systems, Kluwer Academic Publishers, Boston, (1997).
- [5]. M Sparchmann, Modeling a controller for a time triggered protocol, PhD Thesis, Vienna, University of Technology, (1997).
- [6]. A Albert, Comparision of event triggered and time triggered concepts with regard to distributed control systems, in proceedings of Embedded World, (2004), 235-252.
- [7]. N Navet, et.al, Trends in automotive communication systems, Porceedings of IEEE, 93(6), (2005) 1204-1224.
- [8]. H kopetz, Event triggered versus Time triggered real time systems, Technical report 8/91, Insitut fur Technische Informatik TU Vienna, Austria (1991).
- [9]. L Sha, R Rajkumar, J P Lehoczky, Priority Inheritance Protocols: An Approach to real time synchronization, IEEE Transactions on Computers, 39(9), (1990) 1175-1185.
- [10]. S Poledna, Tolerating Sensor timing faults in highly responsive hard real time systems, IEEE Transactions on Computers, special issue on fault tolerant computing, 44 (2), (1995) 181-191.
- [11]. D Ullman, NP-Complete scheduling problems, journal of computer systems & science, 10 (3), (1975) 384-393.
- [12]. J A Stankovic, et.al, Implications of classical scheduling results for real time systems, computer 28(6), (1995) 16-25.
- [13]. N Audsley, et.al, Fixed priority preemptive scheduling: An Historical perspective, Real time systems, 8(2), (1995) 173-198.
- [14]. F Balarin, et.al, Scheduling for embedded real time systems, IEEE Design and

- Test of Computers, 15(1), (1998) 71-82.
- [15]. J Xu and D L Parnas, On satisfying timing constraints in hard real time systems, *IEEE Transactions on Software Engineering*, 19 (1), (1993) 70-84.
- [16]. M Schwehm and T Walter, Mapping and Scheduling by Genetic Algorithms, *Conference on Algorithms and Hardware for parallel processing*, (1994) 832-841.
- [17]. K Tindell, A Burns and A J Wellings, Allocating Hard real time tasks (An NP-Hard problem made easy), *Journal of Real time systems*, 4(2), (1992) 145-165.
- [18]. Kwan Woo Kim, Mitsuo Gen, Myoung Hun Kim, “Adaptive Genetic Algorithms for Multi-Resource Constrained Project Scheduling Problem with Multiple Modes”, *International Journal of Innovative Computing, Information and Control ICIC*, 2(1), (2006) 1349-4198.
- [19]. Johnson D.S. & McGeoch L.A., “The Traveling Salesman Problem: A Case Study in Local Optimization”, in: E.H.L. Aarts, J.K. Lenstra (Eds.), *Local Search in Combinatorial Optimization*, Wiley, New York, (1997), 215-310.
- [20]. Probir Roy, Md. Mejbah Ul Alam and Nishita Das, “Heuristic Based Task Scheduling In Multiprocessor Systems With Genetic Algorithm By Choosing The Eligible Processor”, *International Journal of Distributed and Parallel Systems (IJDPS)* 3(4), (2012) 111-121.
- [21]. Besan Al Salibi, M B Jelodar and Ibrahim Venkat, “A Comparative study between the nearest neighbor and genetic algorithms: A revisit to the TSP”, *IJCSEE*, 1(1), (2013) 34-38.
- [22]. Kopetz, H, “*Real-Time Systems, Design Principles for Distributed Embedded Applications*”, Kluwer Academic Publishers, Boston, Dordrecht, London, (1997).
- [23]. H. Kopetz, “*Event triggered versus timed triggered real-time systems*”, Technical report 8/91, Insitut fur Technische Informatik TU Viennna, Austria, (1991).
- [24]. L Sha, R Rajkumar, J P Lehoczky, “*Priority Inheritance Protocols: An Approach to Real-Time Synchronization*”, *IEEE Transactions on Computers*, 39(9) , (1990) 1175-1185.

- [25]. H. Kopetz, K. Ki, “*Temporal uncertainties in interaction among real-time objects*”, Proceedings of 9th Symposium on Reliable Distributed Systems, (1990) 165-174.
- [26]. Kopetz, H, “*Why time-triggered architectures will succeed in large hard real-time systems*”, Proceedings of the 5th IEEE Computer Society Workshop on Future Trends of Distributed Computing Systems, Cheju Island, Korea, (1995).
- [27]. Rushby, J, “*Bus architectures for safety-critical embedded systems*”, Proceedings of the First Workshop on Embedded Software (EMSOFT 2001), vol 2211 of *Lecture Notes in Computer Science*, Lake Tahoe, CA. Springer-Verlag 306–323.
- [28]. Bretz, E, “*By-wire cars turn the corner*”, IEEE Spectrum, 38(4), (2001) 68-73.
- [29]. Suri, N., Walter, C.J., and Hugue, M.M. “*Advances In Ultra-Dependable Distributed Systems*”, IEEE Computer Society Press, (1995).
- [30]. Poledna, S. “*Fault-Tolerant Real-Time Systems: The Problem of Replica Determinism*”, Kluwer Academic Publishers, (1995).
- [31]. Kopetz, H. and Obermaisser, R. “*Temporal composability*”, Computing & Control Engineering Journal, 13, (2002) 156–162.
- [32]. S. Poledna, “*Tolerating Sensor Timing Faults in Highly Responsive Hard Real-Time Systems*”, IEEE Transactions on Computers, 44(2), (1995) 181-191.
- [33]. N Navet, Y Song, et al, “*Trends in Automotive Communication systems*”, Proceedings of IEEE, 93(6), (2005) 1204-1223.
- [34]. H Kopetz and G. Grunsteidl, “TTP - A protocol for fault-tolerant real-time systems,” *IEEE Computer*, (1994) 14-23.
- [35]. Ross Bannatyne, “*Time Triggered Protocol: TTP/C*”, Embedded Systems Programming, (1999) 76-86.
- [36]. H. Kopetz, *Real-Time Systems: Design Principles for Distributed Embedded Applications*, Kluwer Academic Publishers, Norwell (MA), (1997).
- [37]. G. Kross, “The time-triggered communication protocol TTP/C,” *Real-Time Magazine*, No. 4, (1998) 100-101.

- [38]. TTTech Computertechnik AG: *Specification of the TTP/C protocol*. (1999)
Available at: <http://www.tttech.com>.
- [39]. H kopetz and G Gruenstiedl, TTP- A Protocol for Fault Tolerant Real Time Systems, IEEE Computer, 24(1), (1994), 14-23.
- [40]. H kopetz, et.al, A Synchronization strategy for a TTP/C Controller, SAE paper 960120, SAE press Warrendale, (1996), 19-27.
- [41]. SAE: Class C Application Requirements – J2056/1, SAE Handbook, SAE Press Waarendale, (1994), 23.366-23.372.
- [42]. H kopetz and R Nossal, The Cluster Compiler – A Tool for the Design of Time Triggered RTS, ACM SIGPLAN Workshop, (1995).
- [43]. Franz Rothlauf , Design of Modern Heuristics: Principles and Application, Springer-Verlag Berlin Heidelberg, (2011).
- [44]. C. R. Reeves, Modern Heuristic Techniques for Combinatorial Problems, Blackwell Scientific Publications, (1993).
- [45]. N. Metropolis et al., “Equation of State Calculation by Fast Computing Machines”, Chemical Physics, 21, (1953), 1087-1091.
- [46]. M. Coli and P. Palazzari, “A New Method for Optimization of Allocation and Scheduling in Real-Time Applications”, Proc. 7th Euromicro Workshop on Real- Time Systems, (1995), 262-269.
- [47]. D. J. Rabideau and A. O. Steinhardt, “Simulated Annealing for Mapping DSP Algorithms onto Multiprocessors”, Proceedings of 27th Asilomar Conference on Signals, Systems and Computers, (1993), 668-672.
- [48]. P. Eles et al., “System Level Hardware/Software Partitioning Based on Simulated Annealing and Tabu Search”, Design Automation for Embedded Systems, 2(1), (1997), 5-32.
- [49]. F. Glover, “Future Paths for Integer Programming and Links to Artificial Intelligence”, Computers and Operations Research, 13(5), (1986), 533-549.
- [50]. P. Hansen, “The Steepest Ascent Mildest Descent Heuristic for Combinatorial Programming”, Congress on Numerical Methods in Combinatorial Optimization, (1986).
- [51]. S. Manolache, P. Eles, and Z. Peng, “Optimization of Soft Real-Time Systems with Deadline Miss Ratio Constraints”, Proceedings of 10th IEEE Real-Time

- and Embedded Technology and Applications Symposium, (2004), 562-570.
- [52]. J. H. Holland, *Adaptation in Natural and Artificial Systems*, University of Michigan Press, (1975).
- [53]. D. E. Goldberg, *Genetic Algorithms in Search, Optimization, and Machine Learning*, Addison-Wesley, (1989).
- [54]. J. Conner et al., "FD-HGAC: A Hybrid Heuristic/Genetic Algorithm Hardware/Software Co-synthesis Framework with Fault Detection", *Proceedings of Asia and South Pacific Design Automation Conference*, (2005), 709-712.
- [55]. M. J. Baxter, M. O. Tokhi, and P. J. Fleming, "Task- Processor Mapping for Real-Time Parallel Systems Using Genetic Algorithms with Hardware-in-the-Loop", *Proc. First Intl. Conf. on Genetic Algorithms in Engineering Systems: Innovations and Applications*, (1995), 158-163.
- [56]. J. Axelsson, "Hardware/Software Partitioning Aiming at Fulfilment of Real-Time Constraints", *Systems Architecture*, 42, (1996), 449-464.
- [57]. P. H. Chou, R. B. Ortega, and G. Borriello, "The Chinook Hardware/Software Co-Synthesis System", *Proc. Int. Symp. on System Synthesis*, (1995), 22-27.
- [58]. R. Ernst, J. Henkel, and T. Benner, "Hardware/software co-synthesis for microcontrollers", *IEEE Design & Test of Computers*, 10(3), (1993), 64-75.
- [59]. R. K. Gupta, *Co-Synthesis of Hardware and Software for Digital Embedded Systems*, Kluwer Academic Publishers,(1995).
- [60]. I. Bolsens et al., "Hardware/Software Co-Design of Digital Telecommunication Systems", *Proc. of the IEEE*, 85(3), (1997), 391-418.
- [61]. B. P. Dave and N. K. Jha, "COHRA: Hardware-Software Cosynthesis of Hierarchical Heterogeneous Distributed Systems", *IEEE Trans. on CAD*, 17(10), (1998), 900-919.
- [62]. B. P. Dave, G. Lakshminarayana, and N. J. Jha, "COSYN: Hardware-Software Co-Synthesis of Heterogeneous Distributed Embedded Systems", *IEEE Trans. on VLSI Systems*, 7(1), (1999), 92-104.
- [63]. R. P. Dick and N. K. Jha, "CORDS: Hardware-Software Co-Synthesis of Reconfigurable Real-Time Distributed Embedded Systems", *Proc. Intl. Conf. on CAD*, (1998).

- [64]. G. Lakshminarayana, K. S. Khouri, and N. K. Jha, "Wavesched: A Novel Scheduling Technique for Control- Flow Intensive Designs", IEEE Trans. on Computer- Aided Design of Integrated Circuits and Systems, 18(5), (1999) 505-523.
- [65]. P. Pop, "Analysis and Synthesis of Communication- Intensive Heterogeneous Real-Time Systems", Ph. D. Thesis No. 833, Dept. of Computer and Information Science, Linköping University, (2003).
- [66]. P. Pop et al., "Design Optimization of Multi-Cluster Embedded Systems for Real-Time Applications", Proc. Design, Automation and Test in Europe Conf., (2004), 1028-1033.
- [67]. P. Pop et al., "Schedulability-Driven Partitioning and Mapping for Multi-Cluster Real-Time Systems", Proc. 16th Euro micro Conf. on Real-Time Systems, (2004), 91-100.
- [68]. Miguel A. S. Casquilho, "The Travelling Salesman Problem", Technical University of Lisbon, Ave. Rovisco Pais, 1049-001 Lisboa, Portugal.MC IST op.res. (2012).
- [69]. Biggs N. L.; Lloyd E. Keith & Wilson Robin J. Graph Theory 1736-1936, Clarendon Press, Oxford, (1986).
- [70]. Schrijver, Alexander. "On the history of combinatorial optimization." in K.Aardal (ed.) et.al., Discrete optimization, Elsevier, Handbooks in operation research and management sciences, 12, (2005) 1-68.
- [71]. Varshika Dwivedi, Taruna Chauhan, Sanu Saxena and Princie Agrawal, "Travelling Salesman Problem using Genetic Algorithm", National Conference on Development of Reliable Information Systems, Techniques and Related Issues (DRISTI) (2012).
- [72]. Naveen kumar, Karambir and Rajiv Kumar, "A Genetic Algorithm Approach to Study Travelling Salesman Problem", Journal of Global Research in Computer Science, 3(3), (2012) 33-38.
- [73]. Omar M. Sallabi and Younis EI-Haddad, "An Improved Genetic Algorithm to Solve the Traveling Salesman Problem", World Academy of Science, Engineering and Technology 3, (2009).
- [74]. Chetan Chudasama, S. M. Shah and Mahesh Panchal, "Comparison of Parents

- Selection Methods of Genetic Algorithm for TSP”, International Conference on Computer Communication and Networks CSI- COMNET-2011, (2011).
- [75]. Kanchan Rani and Vikas Kumar, “Solving Travelling Salesman Problem Using Genetic Algorithm Based on Heuristic Crossover and Mutation Operator”, International Journal of Research in Engineering & Technology, 2(2), (2014) 27-34.
- [76]. Md. Lutful Islam, Danish Pandhare, Arshad Makhthedar and Nadeem Shaikh, “A Heuristic Approach for Optimizing Travel Planning Using Genetics Algorithm”, International Journal of Research in Engineering and Technology, 3(1), (2014) 531-537.
- [77]. A. Arananayakgi, “Reduce Total Distance and Time Using Genetic Algorithm in Traveling Salesman Problem”, International Journal of Computer Science & Engineering Technology, 5(8), (2014) 815-819.
- [78]. B. F. a. P. Merz, "A genetic local search algorithm for solving symmetric and asymmetric traveling salesman problem," in Proceedings of International Conference on Evolutionary Computation, (1996).
- [79]. Mouhammd Al kasassbeh, Ahmad Alabadleh and Tahsen Al-Ramadeen, “Shared Crossover Method for Solving Traveling Salesman Problem”, Intl. Journal of Information And Computer Science 1(6), (2012) 153-158.
- [80]. Zakir H. Ahmed, “Genetic Algorithm for the Traveling Salesman Problem using Sequential Constructive Crossover Operator”, International Journal of Biometrics & Bioinformatics (IJBB) 3(6), (2010) 96-105.
- [81]. Saloni Gupta and Poonam Panwar, “Solving Travelling Salesman Problem Using Genetic Algorithm”, International Journal of Advanced Research in Computer Science and Software Engineering, 3(6), (2013) 376380.
- [82]. Russell, R.A. “An effective heuristic for the m-tour traveling salesman problem with some side conditions”. Operations Research, 25(3),(1997) 517–524.
- [83]. Lin, S. & Kernighan, B.. “An effective heuristic algorithm for the traveling salesman problem”. Operations Research, 21, (1973) 498–516.
- [84]. Potvin, J.; Lapalme, G. & Rousseau, J.. “A generalized k-opt exchange procedure for the MTSP”. Information Systems, 27(4), (1989) 474–81.

- [85]. Fogel, D.B.. “A parallel processing approach to a multiple travelling salesman problem using evolutionary programming”. In: Proceedings of the fourth annual symposium on parallel processing. Fullerton, CA, (1990) 318–326.
- [86]. Harun Rasit, Nadia Erdogan, “Parallel Genetic Algorithm to Solve Travelling Salesman Problem on Map Reduce Framework using Hadoop Cluster”, International Journal of Soft Computing and Software Engineering (JSCSE), . 3(3),(2013) 380-386.
- [87]. Chunlin Li · Layuan Li, “Optimal resource provisioning for cloud computing Environment”, Journal of supercomputing 62(2), (2012) 989-1022.
- [88]. Arash Ghorbannia Delavar, Yalda Aryan, “A Synthetic Heuristic Algorithm for Independent Task Scheduling in Cloud Systems”, International Journal of Computer Science (IJCSI), 8(6), (2011) 289-295.
- [89]. Boctor, F. F. “Heuristics for scheduling projects with resource restrictions and several resource-duration modes”, International Journal of Production Research 31(11), (1993) 2547-2558.
- [90]. Stefka Fidanova and Mariya Durchova, “Ant Algorithm for Grid Scheduling Problem”, Large scale computing, Lecture Notes in Computer Science Springer, No.3743, (2006), 405 – 412.
- [91]. Graham Ritchie and John Levine, “A hybrid ant algorithm for scheduling independent jobs in heterogeneous computing environments”, American Association for Artificial Intelligence, (2004).
- [92]. Marco Dorigo, Luca Maria Gambardella, “Ant Colony system: A Cooperative Learning Approach to the Travelling Salesman Problem”, IEEE Transactions on Evolutionary Computation, 1(1), (1997), 1 – 24.
- [93]. J. H. Holland, “Adaptation in Natural and Artificial Systems”. Cambridge, MA, USA: MIT Press, (1992).
- [94]. Andrew J. Page and Thomas J. Naughton, “Dynamic task scheduling using genetic algorithms for heterogeneous distributed computing”, Proceedings of the 19th IEEE/ACM International parallel and distributed processing symposium, Denver USA, (2005), 1530-2075.
- [95]. E.-S. Kim, C.-S. Sung, and I.-S. Lee, "Scheduling of parallel machines to minimize total completion time subject to s-precedence constraints," The

- Journal of Computers & Operations Research, 36, (2009), 698 – 710.
- [96]. R. Hwang, M. Gen, and H. Katayam, "A comparison of multiprocessor task scheduling algorithms with communication costs," *The Journal of Computers & Operations Research*, 35, (2008), 976 – 993.
- [97]. E.S.H. Hou, N. Ansari and R. Hong, "A Genetic Algorithm for Multiprocessor Scheduling", *IEEE Transactions on Parallel and Distributed Systems*. 5(2), (1994), 113 – 120.
- [98]. A.S. Wu, H. Yu, S. Jin, K.-C. Lin, and G. Schiavone, "An incremental genetic algorithm approach to multiprocessor scheduling", *IEEE Transactions on Parallel and Distributed Systems*, 15(9), (2004), 824–834.
- [99]. Kaur, Kamaljit, Amit Chhabra, and Gurvinder Singh. "Heuristics based genetic algorithm for scheduling static tasks in homogeneous parallel system." *international journal of computer science and security* 4, no. 2 (2010): 183-198.
- [100]. Kwok, Yu-Kwong, and Ishfaq Ahmad. "A Parallel Genetic-Search-Based Algorithm for Scheduling Arbitrary Task Graphs to Multiprocessors." In *Proceedings of the 9th IASTED International Conference on Parallel and Distributed Computing and Systems (PDCS'97)*, (1997) 245-248.
- [101]. Davis, Lawrence, ed. *Handbook of genetic algorithms*. New York: Van Nostrand Reinhold, 115, (1991).
- [102]. C. Pinello, L. P. Carloni, and A. L. Sangiovanni-Vincentelli, "Fault-Tolerant Deployment of Embedded Software for Cost-Sensitive Real-Time Feedback-Control Applications", *Proceedings of Design, Automation and Test in Europe Conference*, (2004), 1164–1169.
- [103]. R. Al-Omari, A.K. Somani, and G. Manimaran, "A New Fault-Tolerant Technique for Improving Schedulability in Multiprocessor Real-Time Systems", *Proc. 15th Intl. Parallel and Distributed Processing Symp.*, (2001), 23-27.
- [104]. A. Girault et al., "An Algorithm for Automatically Obtaining Distributed and Fault-Tolerant Static Schedules", *Proc. Intl. Conf. on Dependable Systems and Networks*, (2003), 159-168.
- [105]. O. Ceyda and M. Ercan, "A genetic algorithm for multilayer multiprocessor

- task scheduling”, In:TENCON 2004. IEEE region 10 conference, 2, (2004), 68-170.
- [106]. R.C. Correa, A. Ferreira and P. Rebreyend, “Scheduling multiprocessor tasks with genetic algorithms”, IEEE Transactions on Parallel and Distributed Systems, 10(8), (1999), 825–837.
- [107]. M. R. Bonyadi and M. E. Moghaddam, “A bipartite genetic algorithm for multi-processor task scheduling”, International Journal of Parallel Programming, 37(5), (2009), 462- 487.
- [108]. C. K. Goh , E. J. Teoh ,K. C. Tan, “A hybrid evolutionary approach for heterogeneous multiprocessor scheduling”, Soft Computing, 13. (2009), 833–846
- [109]. P. Chitra, P. Venkatesh and R. Rajaram,” Comparison of evolutionary computation algorithms for solving bi-objective task scheduling problem on heterogeneous distributed computing systems”, Sadhana, 36(2) (2011) 167–180.
- [110]. M. R. Mohamed and M. H. A. Awadalla,” Hybrid Algorithm for Multiprocessor Task Scheduling”, IJCSI International Journal of Computer Science Issues, 8(3), (2011) 79-89.
- [111]. T. H. Cormen, C. E. Leiserson, R. L. Rivest, and C. Stein, *Introduction to Algorithms*, Second ed.: The MIT Press, (2001).
- [112]. C Chauhan, R Gupta and K Pathak, Survey of methods of solving TSP along with its implementation using dynamic programming approach, IJCA, 52(4), (2012) 12-19.
- [113]. Besan Al Salibi, M B Jelodar and Ibrahim Venkat, A Comparative study between the nearest neighbor and genetic algorithms: A revisit to the TSP, IJCSEE, 1(1), (2013) 34-38.
- [114]. R W Eglese, Simulated annealing: A tool for operation research, Euro. J of Operation Res., 46, (1990), 271-281.
- [115]. Kirkpatrick, S., C. D. Gelatt, et al. “Optimization by Simulated Annealing.” Science 220 (1983), 671-680.
- [116]. K Krishna, K Ganeshan and D Janakiram, Distributed Simulated Annealing algorithms for job shop scheduling, IEEE Transactions on systems, Man and

- Cybernetics, 25(7), (1995), 1102-1109.
- [117]. Andrew D Martin and Kevin M Quinn, A review of discrete optimization algorithms, *The Political Methodologist*, 7(2), spring (1996), 6-10.
- [118]. Blum, C. and A. Roli, Metaheuristics in combinatorial optimization: Overview and conceptual comparison. *ACM Comput. Surv.* 35, (2003), 268-308.
- [119]. Blum, C., Ant colony optimization: Introduction and recent trends. *Phys. Life Rev.*, 2, (2005) 353-373.
- [120]. G R Harik, F G Lobo and D E Goldberg, The compact Genetic Algorithm, *IEEE Transactions on Evolutionary Computation*, 3(4), (1999) 287-297.
- [121]. Rechenberg, Ingo *Evolutions strategie*. Fromman-Hozboog Verlag (1973).