

Bibliography

- [1] Ramesh K. Shah and Dusan P. Sekulic, *Fundamentals of heat exchanger design*, USA: John Willey and Sons, 2003.
- [2] Orlando Duran, Nibaldo Rodriguez and Luiz Airtton Consalter, “Neural networks for cost estimation of shell and tube heat exchangers” in Proceedings of the International Multi Conference of Engineers and Computer Scientists, vol. II, 2008, pp. 1584-1589.
- [3] Mituhiko Araki and Hidefumi Taguchi, “Two-Degree-of-Freedom PID Controllers,” in *International Journal of Control, Automation, and Systems*, vol. 1, no. 4, December 2003.
- [4] X. Hui, R. C. Eberhart, and Y. Shi, “Particle swarm with extended memory for multiobjective optimization,” in Proceeding of IEEE Swarm Intelligence Symposium, Indianapolis, April 2003, pp. 193-197.
- [5] K. Deb, and Jain , “An Evolutionary Many-Objective Optimization Algorithm Using Reference-point Based Non-dominated Sorting Approach, Part I: Solving Problems with Box Constraints,” *IEEE Transactions on Evolutionary Computation*, vol. 18, no. 4, pp. 577600, August 2014.
- [6] J. Horn, N. Nafpliotis, and D.E. Goldberg, “A niched pareto genetic algorithm for multiobjective optimization,” In Proceedings of the First IEEE Conference on Evolutionary Computation, IEEE World Congress on Computational Intelligence, vol. 1, pp. 8287, Piscataway, New Jersey, IEEE Service Center, June 1994.
- [7] S. Mostaghim and J. Teich, “Strategies for finding good local guides in Multi-Objective Particle Swarm Optimization (MOPSO),” in Proceeding of IEEE Swarm Intelligence Symposium, Indianapolis, April 2003, pp. 26-33.

-
- [8] Yuvraj Bhushan Khare , Yaduvir Singh, “PID Control of Heat Exchanger System”, *International Journal of Computer Applications*, vol. , No. 6, October 2010.
- [9] Farhan A Salem, Albaradi A Rashid, “PID Controllers and Algorithms: Selection and Design Techniques applied in Mechatronics System design-Part-II,” in *International journal of Engineering and Science*, May 2013 ,pp. 191-203, ISSN 2306-6474.
- [10] J. Moore and R. Chapman, Application of Particle Swarm to Multiobjective Optimization: Dept. Computer Science Software Engineering, Auburn University, 1999.
- [11] K. E. Parsopoulos and M. N. Vrahatis, “Particle swarm optimization method in multiobjective problems,”, in Proceedings ACM Symposium Applied Computing (SAC2002), Madrid, Spain, 2002, pp. 603-607.
- [12] X. Li et al., “A nondominated sorting particle swarm optimizer for multiobjective optimization,”, in Proceeding of Genetic and Evolutionary Computation-GECCO 2003-Part I, Germany, July 2003, pp. 37-48.
- [13] Carlos A. Coello Coello, “Evolutionary multiobjective optimization: A historical view of the field,” *IEEE computational intelligence magazine*, pp. 2836, February 2006.
- [14] K. Deb, A. Pratap, S. Agarwal, and T. Meyarivan , “A fast and elitist multiobjective genetic algorithm: NSGAII,” *IEEE Transactions on Evolutionary Computation*, vol. 6, no. 2, pp. 182-197, Apr. 2002.
- [15] K. Deb, and Jain , “An Evolutionary Many-Objective Optimization Algorithm Using Reference-point Based Non-dominated Sorting Approach, Part I: Solving Problems with Box Constraints,” *IEEE Transactions on Evolutionary Computation*, vol. 18, no. 4, pp. 577600, August. 2014.
- [16] C. L. Hwang and K. P. Yoon , *Multiple attribute decision making: Methods and applications*, Springer-Verlag, 1981.
- [17] Ewa Roszkowska, “Multi-criteria decesion making models by applying TOPSIS method to crisp and interval data,” *Multiple Criteria Decision Making*, 2011; vol. 6 , pp. 200-230.

-
- [18] Madjid Tavana , Zhaojun Li, Mohammadsadegh Mobin, Mohammad Komaki, and Ehsan Teymourian, “Multi-objective control chart design optimization using NSGA-III and MOPSO enhanced with DEA nad TOPSIS,” *Expert Systems with Application*, 2016, pp. 17-39.
- [19] F.Y. Edgeworth, *Mathematical Physics*, P. Keagan, London, England, 1881.
- [20] V. Pareto, *Cours DEconomie Politique*, vol. I and II. F. Rouge, Lausanne, 1896.
- [21] D. Corne, M. Dorigo, and F. Glover, *New Ideas in Optimization*. McGraw-Hill, London, UK, 1999.
- [22] R.S. Rosenberg, “Simulation of genetic populations with biochemical properties,” , Ph.D. thesis, University of Michigan, Ann Harbor, Michigan, 1967.
- [23] J. David Schaffer, “Multiple Objective Optimization with Vector Evaluated Genetic Algorithms,” , Ph.D. thesis, Vanderbilt University, 1984.
- [24] J. David Schaffer, “Multiple objective optimization with vector evaluated genetic algorithms,” , In *Genetic Algorithms and their Applications: Proceedings of the First International Conference on Genetic Algorithms*, pp. 93-100, Lawrence Erlbaum, 1985.
- [25] N.H. Eklund and M.J. Embrechts, “GA-based multi-objective optimization of visible spectra for lamp design,” in *Smart Engineering System Design: Neural Networks, Fuzzy Logic, Evolutionary Programming, Data Mining and Complex Systems*, pp. 451-456, New York, ASME Press, Nov. 1999.
- [26] C.A. Coello and A.D. Christiansen, “Two New GA-based methods for multiobjective optimization,” *Civil Engineering Systems*, vol. 15, no. 3, pp. 207-243, 1998.
- [27] L. Gacgne, “Research of pareto set by genetic algorithm, application to multicriteria optimization of fuzzy controller,” , In *5th European Congress on Intelligent Techniques and Soft Computing EUFIT97*, pp. 837-845, Aachen, Germany, September 1997.
- [28] D.E. Goldberg, *Genetic Algorithms in Search, Optimization and Machine Learning*, Addison-Wesley Publishing Company, Reading, Massachusetts, 1989.

-
- [29] E. Zitzler and L. Thiele, "Multiobjective evolutionary algorithms: A comparative case study and the strength pareto approach," *IEEE Transactions on Evolutionary Computation*, vol. 3, no. 4, pp. 257-271, Nov. 1999.
- [30] N. Srinivas and K. Deb, "Multiobjective optimization using nondominated sorting in genetic algorithms," *Evolutionary Computation*, vol. 2, no. 3, pp. 221-248, fall 1994.
- [31] C.M. Fonseca and P.J. Fleming, "Genetic algorithms for multiobjective Optimization: Formulation, discussion and generalization," In Stephanie Forrest, editor, *Proceedings of the Fifth International Conference on Genetic Algorithms*, pp. 416-423, San Mateo, California, University of Illinois at Urbana-Champaign, Morgan Kauffman Publishers, 1993.
- [32] G. Rudolph and A. Agapie, "Convergence properties of some multi-objective evolutionary algorithms," In *Proceedings of the 2000 Conference on Evolutionary Computation*, vol. 2, pp. 1010-1016, Piscataway, New Jersey, IEEE Press, July 2000.
- [33] E. Zitzler and L. Thiele, "Multiobjective optimization using evolutionary algorithms a comparative study," *Parallel Problem Solving from Nature V*, pp. 292-301, Amsterdam, Springer-Verlag, Sep. 1998.
- [34] E. Zitzler, M. Laumanns, and L. Thiele, "SPEA2: Improving the strength pareto evolutionary algorithm," In *EUROGEN 2001. Evolutionary Methods for Design, Optimization and Control with Applications to Industrial Problems*, pp. 95-100, Athens, Greece, 2002.
- [35] J.D. Knowles and D.W. Corne, "Approximating the nondominated front using the pareto archived evolution strategy," *Evolutionary Computation*, vol. 8, no. 2, pp. 149-172, 2000.
- [36] Kalyanmoy Deb, *Multiobjective optimization using evolutionary algorithms*, John Wiley and Sons, Ltd, ISBN: 0-471-873-X.
- [37] J. Kennedy and R. C. Eberhart, *Swarm Intelligence*, San Mateo, CA: Morgan Kaufmann, 2001.
- [38] T. Ray and K. M. Liew, "A swarm metaphor for multiobjective design optimization," *Engineering Optimization*, vol. 34, no. 2, pp. 141-153, Mar. 2002.

-
- [39] X. Hu and R. Eberhart, "Multiobjective optimization using dynamic neighborhood particle swarm optimization," in *Proceeding of Congress Evolutionary Computation (CEC2002)*, vol. 2, Honolulu, HI, May 2002, pp. 1677-1681.
- [40] J. E. Fieldsend and S. Singh, "A multi-objective algorithm based upon particle swarm optimization, an efficient data structure and turbulence," in *Proceeding of U.K. Workshop on Computational Intelligence*, Birmingham, U.K., Sept. 2002, pp. 37-44.
- [41] William L. Luyben, "Design and Control Degrees of Freedom," *Industrial Engineering Chemical*, Res. 1996, 35, pp. 2204-2214.
- [42] M. Horowitz, *Synthesis of Feedback Systems*, Academic Press, 1963.
- [43] Peyman Bagheri, Hossein Nemati, "Novel Tuning Strategy for Two-Degree-of-Freedom PI Controllers," in the 18th IFAC World Congress Milano (Italy) August 28 - September 2, 2011, pp. 6757-6762.
- [44] M. Araki, "PID control system with reference feed forward (PID-FF control system)," in *Proceeding of 23rd SICE (Society of Instrument and Control Engineers) Annual Conference*, pp. 31-32, 1984.
- [45] Chien, J. A. Hrones, and J. B. Reswick, "On the automatic control of generalized passive systems", in *Transaction of ASME*, vol. 74, pp. 175-185, 1952.
- [46] R. Kuwata, "An improved ultimate sensitivity method and PID: characteristics of I-PD control," in *Transaction of SICE*, vol. 23, pp. 232-239, 1987.
- [47] K. Hiroi, "Two-degree-of-freedom PID control system and its application," *Instrumentation*, vol. 29, pp. 39-43, 1986.
- [48] M. Namie, T. Ueda, T. Tsukabe, and H. Taguchi, "Two-degree-of-freedom PID controller used for temperature control: Simultaneity reference response and disturbance response," *OMRON Technics*, vol. 28, pp. 285-291, 1988.
- [49] OMRON Corporation, "Electrical Temperature Controller," Catalog No. SCSS-045, 1988.
- [50] K. Hiroi and K. Yonezawa, "Reference-filter type two-degree-of-freedom PID control system," *Proceedings of 24th SICE Annual Conference*, pp. 217-218, 1985.

-
- [51] K. Hiroi and Y. Yamamoto , “Component separated type two-degree-of-freedom PID control system,” Proceeding of 24th SICE Annual Conference, pp. 219-220, 1985.
- [52] H. Taguchi, M. Doi, and M. Araki, “Optimal parameters of two-degree-of-freedom PID control systems,” *Transaction of SICE*, vol. 23, pp. 889-895, 1987.
- [53] K. Hiroi and K. Nagakawa , “Improvement of a digital PID algorithm with rate limitation on MV change,” Proceeding of 28th SICE Annual Conference, pp. 243-244, 1989.
- [54] K. Hiroi, A. Nomura, A. Yoneya, and Y. Togari , “Advanced two-degree-of-freedom PID algorithm,” Proceeding of 29th SICE Annual Conference, pp. 49-50, 1990.
- [55] M. Kanda and K. Hiroi , “Super two-degree-of-freedom- PID algorithm,” Proceeding of 30th SICE Annual Conference, pp. 465-466, 1991.
- [56] Sadik Kaka and Hongtan Liu , *Heat Exchangers: Selection, Rating and Thermal Design*, CRC Press. ISBN 0-8493-0902-6.
- [57] M. Araki , “Two-degree-of-freedom control system: part I,” *Systems and Control*, vol. 29, pp. 649-656, 1985.
- [58] Manish Mishra, P.K. Das, and Sunil Sarangi, “Transient behaviour of crossflow Heat exchangers due to perturbations in temperature and flow,” in *International Journal of Heat and Mass transfer*, 2006.
- [59] M Gopal, *Control Systems: Principles and Design*, Tata McGraw-Hill Education, 2002.
- [60] Manuel Beschi, Antonio Visioli, Manuel Berenguel, and Lidia Roca, “A feedback linearization-based Two Degree of Freedom Constrained Controller Strategy for a Solar Furnace,” , 978-1-4799-0224-8/13/ 2013 IEEE.
- [61] B.G.Liptak , *Heat Exchanger Control and optimization* , 2006.
- [62] Kennedy, J. and Eberhart, R. C. , “Particle swarm optimization,” Proceeding of IEEE int’l conference on neural networks ,vol. IV, pp. 1942-1948. IEEE service center, Piscataway, NJ, 1995.

-
- [63] K. Deb, S. Agrawal, A. Pratab, and T. Meyarivan, "A fast elitist non-dominated sorting genetic algorithm for multi-objective optimization: NSGA-II," In Proceedings of the Parallel Problem Solving from Nature VI Conference, pp. 849-858, Paris, France, 2000.
- [64] Coello et al. , "Handling multiple objectives with Particle swarm optimization," *IEEE Transactions On Evolutionary Computation*, vol. 8, no. 3, JUNE 2004, pp. 256-278.