

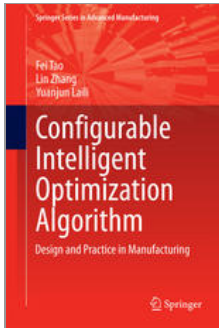
---

Download Book (10,090 KB) Download Chapter (323 KB)  
Configurable Intelligent Optimization Algorithm  
Springer Series in Advanced Manufacturing 2015, pp 351-361  
Date: 19 Aug 2014

## Future Trends and Challenges

### Abstract

In this chapter, we give some future trends and challenges of dynamic configuration not only for intelligent optimization algorithm, but also for other algorithms used in the whole life cycle of manufacturing.



### Article Metrics

#### Citations

- [View Chapter](#)

## Related Content



References (24)

1. Burke EK, Hart E, Kendall G, Newall J, Ross P, Schulenburg S (2003) Hyper-heuristics: an emerging direction in modern search technology. In: Glover F, Kochenberger G (eds) *Handbook of metaheuristics*. Kluwer Academic Publishers, Boston
2. Ross P (2005) *Hyper-heuristics, search methodologies*. Springer, Berlin
3. Vrugt JA, Robinson BA (2007) Improved evolutionary optimization from genetically adaptive multimethod search. *Proc Natl Acad Sci* 104(3):708–711 [CrossRef](#)
4. Vrugt JA, Robinson BA, Hyman JM (2009) Self-adaptive multimethod search for global optimization in real-parameter spaces. *IEEE Trans Evol Comput* 13(2):243–259 [CrossRef](#)
5. Qu R, Burke EK (2009) Hybridisations within a graph based hyper-heuristic framework for university timetabling problems. *J Oper Res Soc* 60:1273–1285 [CrossRef](#)
6. Burke EK, Hyde M, Kendall G, Ochoa G, Özcan E, Woodward JR (2010) A classification of hyper-heuristic approaches. In: Gendreau M, Potvin JY (eds) *Handbook of metaheuristics*. Springer, New York, pp 449–468
7. Hart E, Ross P, Nelson JAD (1998) Solving a real-world problem using an evolving heuristically driven schedule builder. *Evol Comput* 6(1):61–80 [CrossRef](#)
8. Ochoa G, Qu R, Burke EK (2009) Analyzing the landscape of a graph based hyper-heuristic for timetabling problems. In: *Proceedings of the ACM genetic and evolutionary computation conference (GECCO)*, pp 341–348
9. Burke EK, McCollum B, Meisels A, Petrovic S, Qu R (2007) A graph-based hyper-heuristic for educational timetabling problems. *Eur J Oper Res* 176:177–192 [CrossRef](#)
10. Vazquez-Rodriguez JA, Petrovic S, Salhi A (2007) A combined meta-heuristic with hyper-heuristic approach to the scheduling of the hybrid flow shop with sequence dependent setup times and uniform machines. In: *Proceedings of the 3rd multidisciplinary international scheduling conference: theory and applications (MISTA)*
11. Rodríguez JAV, Salhi A (2007) A Robust meta-hyper-heuristic approach to hybrid flow-shop scheduling. In: *Evolutionary scheduling*. Springer, Berlin, pp 125–142
12. Cano-Belmán J, Ríos-Mercado RZ, Bautista J (2010) A scatter search based hyper-heuristic for sequencing a mixed-model assembly line. *J Heuristics* 16(6):749–770 [CrossRef](#)
13. Bai R, Burke EK, Kendall G (2007) Heuristic, meta-heuristic and hyper-heuristic approaches for fresh produce inventory control and shelf space allocation. *J Oper Res Soc* 59(10):1387–1397 [CrossRef](#)
14. Burke EK, Kendall G, Soubeiga E (2003) A tabu-search hyperheuristic for timetabling and rostering. *J Heuristics* 9(6):451–470 [CrossRef](#)
15. Burke EK, Hyde M, Kendall G, Ochoa G, Özcan E, Woodward J (2009) Exploring hyper-heuristic methodologies with genetic programming. In: Mumford C, Jain L (eds) *Collaborative computational intelligence*. Springer, Berlin, pp 177–201
16. Burke EK, Hyde M, Kendall G, Woodward J (2010) A genetic programming hyper-heuristic approach for evolving 2-D strip packing heuristics. *IEEE Trans Evol Comput* 14(6):942–958 [CrossRef](#)
17. Vrugt JA, Robinson BA, Hyman J (2008) A universal multimethod search strategy for computationally efficient global optimization. *Geological Society of America (GSA)*, New York, pp 28–31
18. Zhang X, Srinivasan R, Liew MV (2010) On the use of multi-algorithm, genetically adaptive multi-objective method for multi-site calibration of the SWAT model. *Hydrol Process* 24(8):955–969 [CrossRef](#)
19. Harp DR, Dai Z, Wolfsberg AV, Vrugt JA, Robinson BA, Vesselinov VV (2008) Aquifer structure identification using stochastic inversion. *Geophys Res Lett* 35(8):L08404

20. Köhne JM, Wöhling T, Pot V, Benoit P, Leguédou S, Bissonnais YL, Šimůnek J (2011) Coupled simulation of surface runoff and soil water flow using multi-objective parameter estimation. *J Hydrol* 403(1):141–156 CrossRef
21. Lawson CL, Hanson RJ, Kincaid D, Krogh FT (1979) Basic linear algebra subprograms for FORTRAN usage. *ACM Trans Math Softw* 5:308–323 (Algorithm 539)
22. Choi J, Dongarra J, Ostrouchov S, Petitet A, Walker D, Whaley RC (1996) A proposal for a set of parallel basic linear algebra subprograms. In: *Applied parallel computing computations in physics, chemistry and engineering science*. Springer, Berlin, pp 107–114
23. Dongarra JJ (ed) (1979) *LINPACK users' guide*, vol 8. Siam, Philadelphia
24. Balay S, Gropp WD, McInnes LC, Smith BF (1996) *PETSc 2.0 users manual*. Mathematics and computer science division (UC-405), Argonne National Laboratory

## About this Chapter

---

### Title

Future Trends and Challenges

### Book Title

Configurable Intelligent Optimization Algorithm

### Book Subtitle

Design and Practice in Manufacturing

### Book Part

Part VI

### Pages

pp 351-361

### Copyright

2015

### DOI

10.1007/978-3-319-08840-2\_12

### Print ISBN

978-3-319-08839-6

### Online ISBN

978-3-319-08840-2

### Series Title

Springer Series in Advanced Manufacturing

### Series ISSN

1860-5168

### Publisher

Springer International Publishing

### Copyright Holder

Springer International Publishing Switzerland

### Additional Links

- [About this Book](#)

### Topics

- [Computer-Aided Engineering \(CAD, CAE\) and Design](#)
- [Operating Procedures, Materials Treatment](#)
- [Computational Science and Engineering](#)

### Industry Sectors

- [Automotive](#)
- [Electronics](#)
- [IT & Software](#)
- [Telecommunications](#)

- Aerospace
- Engineering

eBook Packages

- eBook Package english full Collection
- eBook Package english Engineering

Authors

- Fei Tao <sup>(5)</sup>
- Lin Zhang <sup>(5)</sup>
- Yuanjun Laili <sup>(5)</sup>

Author Affiliations

- 5. School of Automation Science and Electrical Engineering, Beihang University (BUAA), Beijing, China

Continue reading...

To view the rest of this content please follow the download PDF link above.

---

Over 8.5 million scientific documents at your fingertips  
© Springer International Publishing AG, Part of Springer Science+Business Media