My Submissions

pap868 Reviews Details

Decision: Reject

Submission: Evolutionary learning of weighted linear composite dispatching rules for scheduling

Contributors: Ingimundardottir, Runarsson

Key for the below column headings: show

Reviewer	rel	sig	orig	ach	writ	rep	tech	rec	conf	bp
Reviewer 1	4	4	3	2	2	2	2	2-probably accept as poster (2)	3	no (0)
Reviewer 2	4	4	2	3	3	3	3	2-probably accept as poster (2)	3	no (0)
Reviewer 3	5	5	4	5	4	3	4	5-definitely accept as full paper (5)	5	yes (1
Reviewer 4	3	2	4	3	3	4	4	3-definitely accept as poster (3)	3	no (0)
Reviewer 5	2	3	2	3	4	3	3	2-probably accept as poster (2)	5	no (0)
Averages:	3.6	3.6	3.0	3.2	3.2	3.0	3.2	2.8	3.8	0.2

Committee Comments jump

Review of pap868s2 by Reviewer 1

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Comments for Authors:

In this paper the job shop scheduling problem is studied and combined dispatching rules are learned by evolutionary search. The idea of the work is nice, but unfortuntely the presentation is poor. The reader is left alone with tables and figures without any explanations. I could not understand what precisely is done. Additionally, the English has to be improved.

-p.1: Categories: Why did you choose "Integer programming"? There is nothing related to this topic in the paper. - p.1, Sec 1: What is "logistic regression"? Later on you use the term "ordinal regression". Is there any diffence? The main idea of your learning mechanism should be shortly explained. - p.2, Sec 2: "In the context of Rice's ..." What do you mean by "its expected performance"? Whose? - p.2, Sec 3: You assume that every job has to be processed on every machine once. This should be mentioned since this is not a usual assumption in job shop scheduling. - p.3, Sec 5: Where do you get optimal values from? - p.3, Table 2: Some features are not clear. E.g. phi_6: Are they given for each job separately? Then I would write "jobs" instead of "job". phi_8: Do you mean "total idle time for each machine"? - p.3, Sec 5: Is such a large amount of time (288 hoours) really needed? - p.3, Sec 5.1: What do you mean by "featues were indeed optimal"? - p.4, Table 3: Please describe the meaning of the columns in the text. Do you present average values over all instances? - p.4, Fig. 4: Please give an interpretation of the results. - p.4, Table 4: Please explain the meaning of the columns and give an interpretation of the results. - p.4, Sec 5.3: The self-reference to Section 5.3. seems to be wrong. You say that you only report Cmax, but in the table also ES_\rho is given. (??) The term "robustness" from the section's heading does not again appear in the section.

Review of pap868s2 by Reviewer 2

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Comments for Authors:

The paper addresses the job-shop scheduling problem (JSP) and how it is tackled with evolutionary search algorithms. Here, particularly, a special focus is on evolutionary strategies (ESs). In summary, the paper is a study of the JSP and how certain parameters and design decisions influence the optimization process.

The presentation of the paper could be significantly improved. Besides some grammar mistakes, the paper is not easy to read due to the lack of proper motivation of several parts. The figures could be improved as well, particularly the legibility of Figure 2 to 4.

The paper focuses on a specific problem, the JSP. As a comprehensive study, it lacks a comparison with previous approaches and a good discussion of related work. It remains unclear how the paper improves the state of the art. The paper also lacks a real-world example that would make it interesting to a broader audience. However, the paper might be interesting to people working on JSP.

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Comments for Authors:

The results should contain the computational times.

Review of pap868s2 by Reviewer 4

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Comments for Authors:

The authors propose a method to generate job shop dispatching rules. It is a study more focused on the GAs and learning methods to schedule solutions than in solving sized instances as the authors do not go beyond 10x10 problems, which can be solved to optimality very easily by complete enumeration in the case of the PFSP and very good solutions can be obtained for those problem sizes as regards the JSP. In any case, the focus of the paper is on the evolutionary search feature. The method proposed by the authors performs better than previous PREF methods. In any case, I am not sure this paper represents a contribution to either the PFSP or JSP literature.

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Comments for Authors:

The paper is very confuse. It is not clear the real contribution of this work related to evolutionary learning field. Previous work os refered and the proposal is not clear.

Additionally authors uses a sample of instances for JSP very small and with reduced dimension. Computational study is not significant.

Committee Comments to Authors

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None

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