**Checklist**

Easy stuff

1. In Sect. IV.A: O(4^{shortest path length}) could be

corrected as “O(4^{s}), with s the shortest path length “

1. In Sect. IV.D, : the reviewer does not understand the

“basic idea” described by Fig.6

Reasonable stuff

1. Introduction section is a bit confusing and should be

improved. It is lacking of a true presentation of the state

of the art, and the motivations and contributions of the

paper should be emphasized.

Probably, the section II could be merged with the

introduction section. Similarly, Section III could be merged within the section IV.

1. Should give more

explanations on the simulation results.

Journal Stuff

1. Could the particles move in 8 directions (right,

right up, up, left up, left, left down, down, and right

down)?

1. Sect. V: in the previous sections of the manuscript, the

authors make effort to distinguish small to large particle.

It will be convenient to provide some (at least

basic/preliminary) results for large particles to exhibit

their differences.

Reviewer 9 of CASE, ISAM 2016 submission 8

Comments to the author

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This paper presents an efficient approach to collect

particles. This work seems sound and good results of the

method are reported. However, in the proposed approach, the

particles just move in 4 directions (right, up, left, and

down). Could the particles move in 8 directions (right,

right up, up, left up, left, left down, down, and right

down)?

Comments on the Video

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The quality of the video is good.

Reviewer 5 of CASE, ISAM 2016 submission 8

Comments to the author

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This paper presents a technique to collect a swarm of

particle in a grid environment with a common input discrete

signal. The authors consider a swarm of particles

initialized in a grid world in which each position is

either free- space or obstacle. The proposed swarm’s

collecting approach is based on optimal and greedy

algorithms. This paper provides algorithms that collect a

swarm of particle to one position and compares these

algorithms on the basis of efficiency and implementation

time.

The paper is well interesting, despite some

recommendations from the reviewer.

Introduction section is a bit confusing and should be

improved. It is lacking of a true presentation of the state

of the art, and the motivations and contributions of the

paper should be emphasized.

Probably, the section II could be merged with the

introduction section

Similarly, Section III could be merged within the section

IV.

In Sect. IV.A: O(4^{shortest path length}) could be

corrected as “O(4^{s}), with s the shortest path length “

In Sect. IV.D, : the reviewer does not understand the

“basic idea” described by Fig.6

Sect. V: in the previous sections of the manuscript, the

authors make effort to distinguish small to large particle.

It will be convenient to provide some (at least

basic/preliminary) results for large particles to exhibit

their differences.

Comments on the Video

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The submitted video describe suitably the result of the

proposed method for collecting a swarm in a grid

environment.

Reviewer 4 of CASE, ISAM 2016 submission 8

Comments to the author

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This paper investigates efficient methods to collect

particle swarm robots to one position. It guarantees that

the optimal and greedy algorithms collect particles for a

bounded world. The authors provide good theoretical

backgrounds to the problem, but they should give more

explanations on the simulation results.

Comments on the Video

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The video clearly shows the motivation of the research.