# PhD Corrections

#### 1.1 General

	Use of the word chaotic/chaos could be confusing
(KS) Terminology	Renamed initial phase of the swarms development to 'disor-
	ganised' throughout.

#### 1.2 Introduction

### 1.3 Bibliography

(PJ & KS) Dates in references are appearing twice	References 6, 7, 9, 10, 11, 12, 14, 15, 16, 18, 20, 24, 25, 28, 33, 37, 41, 47, 50, 52, 54, 55, 56, 58, 59, 61, 65, 67, 69, 71, 74, 76, 77, 78, 79, 82, 86, 90, 93, 94, 96, 98, 100, 113, 118, 126, 127, 130, 137, 139, 140, 141, 142, 146, 147, 150, 151, 152, 154, 155, 156, 157, 158, 161
(KS) No dates	References 21, 60, 70, 75, 92, 135 ?
(KS) References with no publisher	References 27, 30, 36, 42, 44, 48, 49, 51, 52, 53, 57, 60, 63, 68, 73, 81, 83, 84, 87, 88, 89, 101, 103, 108, 109, 115, 132, 149 ?
(KS) References with capitalised Author	References 88, 149
(KS) References requiring page numbers	Reference 117 ?

#### 1.4 Abstract

#### 1.5 Introduction

### 1.6 Methods Techniques Tools

(PJ) Citations sections 2.1, 2.7	Separate references Split references from Barnes and Bennet appropriately
(PJ) Typo	Section 2.3 interction
	interaction

(PJ) Incorrect	Figure 2.6 shows the
reference	Equation 2.5 shows
	Cardinality notation changed to use   .
	$nbr(b) \stackrel{\Delta}{=} \{b' \in S :  bb'  <= C_b\}$
(DI) E 1	$R(b) = \{b' \in S :  bb'  <= R_b\}$
(PJ) Formulae 2.1, 2.3, 2.4 - Formula notation	$\begin{vmatrix} v_r(b) = -\frac{1}{ R(b) } \left( \sum_{b' \in R(b)} \left( 1 - \frac{ bb' }{R_b} \right) bb' \right) \\ \{o \in O :  bo  \le O_b \} \end{vmatrix}$
	$ \{o \in O :  bo  \le O_b\} $
(PJ) Section 2.6 -	moves an obstacles
Sentence restruc-	moves it may enter an obstacle's
ture	
(PJ) Section 2.8 -	Special case of Equation 2.7
Special case refer-	Special case of Equation 2.8
ence error	
	Section 2.11
(PJ) Spelling	amp Figure 2.12 Stabalise
	Stabilise
(PJ) Expand	No mention of current work
Conclusion	Added small discussion of current work
(PJ) Explain ^	Section 2.6 uses unexplained notation
	Moved ^ explanation from section 2.9 to 2.6
(PJ) No equation	Section 2.9 uses inline formulae for movement.
	Equation broken out and referenced.

### 1.7 Magnitude Metric

(KS) Table $4.1 \rightarrow$ 3.1 Explain parameters	Hexagonal Modified labels and altered section to highlight that the parameters are arbitrary as they are only required to create a swarm to highlight the inter-agent relationships that exist.
	Log, Id, N.Id Labels expanded in text
$\begin{array}{c} \text{(PJ) Section } 4.2 \\ \rightarrow 3.2 \text{ Sentence} \\ \text{error} \end{array}$	vectorTable 4.4 vector. Table 4.4

$\begin{array}{c} \text{(PJ) Section } 4.3 \\ \rightarrow 3.3 \text{ Punctuation} \end{array}$	= 0) The = 0). The
$\begin{array}{c} \text{(PJ) Diagram 4.7} \\ \rightarrow 3.7 \text{ Label error} \end{array}$	bot agent
(KS) Equations 4(3).2, 4(3).3, 4(3).4, 4(3).6, 4(3).7, 4(3).8 and inline equations cardinality notation changed	.    .  for magnitude.  . for cardinality

## 1.8 Swarm Type

(PJ) Typo in introduction	is a swarm in a swarm
troduction	
(PJ) Parameter explanation, Table $5.1 \rightarrow 4.1$	Explain parameter requirements Paragraph added
(NE) Table labels	Neighbour and agent altered
(NE) Table labels in $5.1 \rightarrow 4.1$	Cohesion field, Repulsion field
(DI) C+: 7 0 1	Clarify graph mean
(PJ) Section 5.2.1 $\rightarrow$ 4.2.1	Paragraph extended
(DI) Section 5.3.1	Clarify bi-modal
(PJ) Section 5.3.1 $\rightarrow$ 4.3.1	Paragraph extended
	Isn't Sect 5.4 a repetition
(PJ) Section 5.4 $\rightarrow$ 4.4 Comment	Section is a comparison to highlight that the new metric could be used as a replacement for the distance metric and provide additional status information
(PJ) Section 5.4	metric Figure 5.21
$\rightarrow$ 4.4 Punctua-	metric. Figure 5.21
tion	
$\begin{array}{c} \text{(PJ) Section 5.5} \\ \rightarrow 4.5 \text{ Expand} \end{array}$	identical?
	descrition extended

#### 1.9 Perimeter Coordination

(PJ) Typo in introduction	applied. Partial applied, partial
(PJ) Fig 6(5).4 6(5).28, 6(5).29	Needs to indicate starting point Added "Start Point" and arrows to graphs
(PJ) Section 6(5).2 Typo	there their
(PJ) Section 6(5).8 Typo	must are are
(PJ) Section 6(5).8 Typo	its a goal towards it's goal
(PJ) Figure 6(5).31 Title change	speed path
(PJ) Section 6(5).9 Reference	Tables 6.8, 6.9 and 6.10
(PJ) Figure 6(5).42 Font	$n_{1-7}$ Font increased
(PJ) Missing Section	Conclusion section missing Added conclusion

### 1.10 Concave Reduction

(PJ) Introduction sentence dupli- cates explanation	Depending upon Sentence removed
(PJ) Expand explanation	In some circumstances Circumstance explained
(PJ) Table Reference	Table 8.4 Table 7.1 (Error in latex label corrected)
(PJ) Figure title clarification Fig 7(6).12, 7(6).13	Baseline/Concave path effect Baseline/Concave path effect (after 600 iterations / 60s)

- 1.11 Flood Filling
- 1.12 Future Work