

INVENTING THE SUIT AND SAVING THE WORLD: ONE HUMAN'S STORY OF
UNPARALLELED GENIUS, INTERMINABLE COURAGE, AND GENERAL
AWESOMENESS

by
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Dedication

To Wanda Maximoff:

Write as a block (or single paragraph) with no indentation. The dedication is optional. A dedication is an expression of friendly connection, gratitude, or thanks by the author towards another person or person(s). It may also be used to highlight a connection to a community or cause. Adapted from Wikipedia. The dedication has its own place on the dedication page and is part of the front matter.

Abstract

Abstract to be less than 300 words. The abstract is required. Write as a single block with no indentation. An abstract is a concise summary of your project. It should summarize your project, its results, and its broader relevance. It allows readers determine the relevance of your project to their own research, and serves as an invitation to them to read it. It also communicates your key findings to those who don't have the time to read your entire project.

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Plain Word Summary

Plain word summary to be less than 300 words. The plain word summary is optional. Write as a single block without indentation. Write as a single block without indentation. A Plain Word Summary should convey the same information as the Abstract but in a different language and tone. It should summarize your project, its results, and their broader relevance without using jargon so that it is understandable by readers from outside of your discipline, as well as journalists and educators. The audiences include, but are not limited to, practitioners, policy makers, the public, and/or professionals in nearby disciplines.

Acknowledgements

Write as a paragraph, or paragraphs, with indentation. The acknowledgements section is optional. The acknowledgments section is where you recognize and thank everyone (mentor/advisor committee, friends, family, colleagues, communities, organizations, agencies) who helped you with your project and contributed to your success. It's a way to show your appreciation and recognition of them in a public and permanent forum. You can also include a Land Acknowledgement in the acknowledgements. It is also the section where you can formally report any agencies and organizations that provided financial or other material support for your work (e.g., I acknowledge the support of the UAF graduate school for, I thank Foundation X for). I acknowledge the support of the graduate school for a travel grant in Fall 2022. I acknowledge the support of the National Science Foundation under grant 2012345.

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Chapter 1: Introduction

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Figure 1.1: A capybara wearing a suit. Probably has an important meeting to get to.

Chapter 2: Methods

2.1 Study System

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2.2 Mathematical Model

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$$\frac{\partial u_i}{\partial t} = \underbrace{D \nabla^2 u_i}_{\text{Random Motion}} - \underbrace{2 \nabla [A_i \nabla u_i]}_{\text{Directed Motion}} \quad (2.1)$$

2.3 Statistical Model

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$$f(\mathbf{x}|\mathbf{y}, \theta_0) = \frac{\phi(\mathbf{x}|\mathbf{y}, \theta_0) \omega(\mathbf{x}, \boldsymbol{\beta})}{\int_{\Omega} \phi(\mathbf{x}'|\mathbf{y}, \theta'_0) \omega(\mathbf{x}', \boldsymbol{\beta})} \quad (2.2)$$

Parameter	Interpretation	Dimensions
$\mathbf{x}$	spatial location	[1x2]
$u_i(\mathbf{x},t)$	individual territory	[1x1] (i=5)
V_{hr}	vector field defining available space	[1x1]
$B(\mathbf{x})$	perceptive range of individual	[1x12]
$s_j(\mathbf{x},t B(\mathbf{x}))$	Spatially averaged effect in perceptive range	[1x1] (j=4)
$B^C_{i,j}$	effect of conspecific (from iSSA)	[5x5]

Table 2.1: Model components and parameters making up advection diffusion model as well as biological interpretation in model's system.

Chapter 3: Results

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3.1 Steady State Solution

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	TET052	TET030	TET072	TET062	TET074
TET052	-	-0.3	-0.1	-0.1	-0.14
TET030	-0.26	-	-0.1	-0.2	-0.2
TET072	-0.1	-0.1	-	-0.13	-0.1
TET062	-0.1	-0.31	-0.16	-	-0.1
TET074	-0.13	-0.21	-0.1	-0.1	-

Table 3.1: They all seem to be negative. Maybe that's significant? Maybe it's not. Why are a bunch of them 0.1?

3.2 Non-territorial Individual Analysis

Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus

adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eupurus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

Chapter 4: Discussion

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Appendix A: Supplemental Material

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Figure A.1: Frog looking real dapper.

Appendix B: More Supplemental Material

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