

UNIVERSITY OF CALIFORNIA  
SANTA CRUZ

**MY DISSERTATION**

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requirements for the degree of

DOCTOR OF MUSICAL ARTS

in

ALGORITHMIC COMPOSITION

by

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## **Abstract**

My Dissertation

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Joseph Davancens

This dissertation discusses the composition of *Heave, Sway, Surge*, a notated musical work for ten acoustic instruments. It will outline the composer's artistic motivations, theorize about its material foundations in performance practice, explain the system of notation used to create its score, and describe the software created to aid in its composition. Included in the appendices are the actual score as well as full documentation of the software.

## List of Figures

## List of Tables

To myself,

Perry H. Disdainful,

the only person worthy of my company.



## Acknowledgments

I want to “thank” my committee, without whose ridiculous demands, I would have graduated so, so, very much faster.

# Part I

## Text

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### 1.2 Poetics

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# Positions and Pressures and their Structuring in Time

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### 3.2 Forces/Indicators as Material

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### Notation

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# Surge - Design and Implementation

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5.3 Action-Maker-Handler Design Pattern

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5.6 Materials

5.7 Segment Definitions

5.8 Build Scripts and Utilities



## Part II

# Appendices

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### *Heave, Sway, Surge*, a Composition for 13 Instruments

## Appendix B

### Surge Documentation