#### ALMA MATER STUDIORUM – UNIVERSITY OF BOLOGNA

Master Degree in Computer Science and Engineering

# Simulation and evaluation of FRASP programs

Master thesis in:
PERVASIVE COMPUTING

Supervisor

Prof. Mirko Viroli

Candidate
Jahrim Gabriele
Cesario

Cosupervisor

Dott. Roberto Casadei Dott. Gianluca Aguzzi

#### Abstract

Jahrim Gabriele Cesario: What is this thesis about? Max 2000 characters, strict.

Jahrim Gabriele Cesario: Aknowledgements... Max 1 page.

# Acknowledgements

Jahrim Gabriele Cesario: Optional. Max a few lines.

#### Contents

Abstract		iii
1	Introduction	1
<b>2</b>	Background	3
3	Analysis	5
4	Design	7
5	Implementation	9
6	Evaluation	11
7	Conclusions	13
Bibliography		15

CONTENTS ix

#### CONTENTS

X CONTENTS

# List of Figures

LIST OF FIGURES xi

#### LIST OF FIGURES

xii LIST OF FIGURES

# List of Listings

LIST OF LISTINGS xiii

#### LIST OF LISTINGS

xiv LIST OF LISTINGS

#### Introduction

Jahrim Gabriele Cesario: What is this thesis about? Context Motivation High level goals Methodology.

# Background

Jahrim Gabriele Cesario: What knowledge is required to understand this document? Scala Functional Reactive Programming Sodium FRASP Collective Systems Simulation

# Analysis

Jahrim Gabriele Cesario: What is the problem that needs to be solved? Requirements...

# Design

Jahrim Gabriele Cesario: How was the problem solved?

# Implementation

Jahrim Gabriele Ce sario: How was the solution implemented concretely?

### Evaluation

Jahrim Gabriele Cesario: How was the solution evaluated and tested?

# Conclusions

Jahrim Gabriele Cesario: Brief summary What has been achieved? What has no been achieved? What are future explorations for the work done in this project?

# Bibliography

[SB16] Anthony Jones Stephen Blackheath. Functional Reactive Programming. Manning, July 2016.

URL: https://www.manning.com/books/functional-reactive-programming [Last Visited: 01-06-2024].

BIBLIOGRAPHY 15