

# Advanced Vision Assignment 1

Moataz Elmasry and Monica Paun

February 12, 2014

## **Abstract**

# Chapter 1

## Marble Detection

### 1.1 Algorithm

#### 1.1.1 Object-oriented Approach

#### 1.1.2 Background Subtraction

#### 1.1.3 Post-processing

#### 1.1.4 Marble Identification

### 1.2 Performance Analysis

Normalized vs non-normalized

#### 1.2.1 Successful Detections

#### 1.2.2 Unsuccessful Detections

## Chapter 2

# Marble Tracking

### 2.1 Algorithm

### 2.2 Performance Analysis

Normalized vs non-normalized

#### 2.2.1 Successful Detections

#### 2.2.2 Unsuccessful Detections

## Chapter 3

# Final Evaluation and Discussion