List of changes

# Cover

Change title to “A research on automatic tailoring and cloth modelling for animation character”

# Chapter.1 Introduction

( Page 2 – 4 ) Add an introduction about cloth design pipeline in fashion industry .

( page 5 - 6 ) Add a brief introduction about cloth manufacturing process in fashion industry.

( page 7 - 9 ) introduced a detailed explanation about general requirement, objectives and applications of virtual clothing techniques used in fashion industry.

( page 9 - 10 ) Add an explanation about animation film production pipeline and the position about cloth modeling and simulation procedure in a film production pipeline.

( page 11 - 12 ) Add introduction about cloth modeling and simulation techniques used in computer animation.

( page 16 ) In contribution, removed Geodesic calculation on Point Cloud.

# Chapter.2 Literature Review

## 2.1 Patternmaking in Fashion Design

( page 20 ) delete repetitive paragraph before 2.1 Patternmaking in Fashion Design

( page 21 ) add more detail about the history of cloth pattern

## 2.2 Anthropometry

( page 26 ) add Figure 2.4 to demonstrate the standard posture for measuring human body in anthropometry study.

( page 26 - 27 ) add a brief introduction about the development of cloth size chart and how to define a size chart for a group of people.

## 2.3 Virtual Clothing in Computer Graphics

### 2.3.1 Geometrical Based Virtual Clothing Methods

( page 27 ) Quoted definition of the term “virtual clothing” from (Volino & Thalmann 2000) and Add several important geometrical cloth modeling paper in the following section

( page 28 ) Add reference Decaudin et al. (2006) ( page 30 ) Add reference Wang et al. (2003)

( page 31 ) Add reference Igarashi & Hughes (2002), Wang et al. (2009)

( page 32 ) Add reference Meng et al. (2012), Moved reference Brouet et al. (2012) from end of this chapter to here

( page 33 ) Add reference Turquin et al. (2007a), Umetani et al. (2011), Yu et al. (2012)

( page 40 )

## 2.4 Geodesics

( page 40 - 41 ) Add explanation of why modern cloth size chart cannot be used on animation character and why anthropomorphic measuring method cannot be used on animation character.

( page 41 ) Add Figure 2.9 to demonstrate body variation in animation character design.

( page 41 - 42 ) Add a detailed introduction of tape measuring method used in tailoring and its measuring characteristic.

( page 43 ) Add an explanation of the reason of using geodesic to mimic tape measuring in computer animation and presented current bottleneck in geodesic applications.

# Chapter 3 Character Measurements Extraction

( page 54 ) Move Table 3.1 from end of this chapter to here to illustrate the relationship between body landmarks and body measurements.

( page 55 ) Move Figure 3.1 from end of this chapter to here to demonstrate the position of human body landmarks on a female body.

( page 56 ) Add an explanation about the girth measurements extracting method.

( page 56 – 57 ) Explain in detail about how geodesic can simulate tape measuring and its advantages in coping different character postures.

( page 60 - 61) Add reference for Definition 1 ~ 3

( page 67 ) Add a detailed explanation for Matrix K, its structure and how to calculate its value.

( page 69 ) Explained the effect of step size µ to Equation 3.11

( page 70 ) Add explanation of why geodesic tend to leave the surface .

( page 72 ) Add Equation 3.14 to explain how to apply backward Euler method to Equation 3.13

( page 73 ) Improved the way of writing Matrix K to make it more clearer.

( page 74 )Add procedures of calculating each part of the matrix on the left side of Equation 3.19

( page 81 - 82 ) Add detailed explanation of the method that a unvisited vertex selects its parent note to form a initial path for geodesic computation.

( page 90 – 94 ) Point out differences between the shape of tape when measuring and the shape of geodesic path where on a human body, tape ruler forms a “convex-hull” like shape and geodesic path always travels on surface. In order to improve the measuring the quality of geodesic measuring method, a geodesic path shape correction method is presented. Figure 3.13 ~3.16 are added to help to explain this shape correction method.