AN AUTONOMOUS METHOD FOR MEASURING 3D JOINT KINEMATICS FROM 2D XRAY IMAGES

By

ANDREW JAMES JENSEN

A DISSERTATION PRESENTED TO THE GRADUATE SCHOOL
OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT
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This is the dedication tex file, which should have been set in the main file using the command `\setDedicationFile{Drive:/file/location/dedicationFile}`. Keep in mind this should be written in first person; eg “I dedicate this to all those people that let me crawl into a cave and disappear while I learned way too much about way too specific of a subject in order to make a meaningful contribution to my field.”

ACKNOWLEDGEMENTS

This is the acknowledgments tex file, which should have been set in the main file using the command `\setAcknowledgementsFile{Drive:/file/location/acknowledgementsFile}`.

Keep in mind this should be written in first person, eg; “I thank my chair for his patience with my random tangents and endless questions and his subsequent (and often lengthy) explanations. I especially appreciate him refraining from voicing how dumb some of those questions were, despite me feeling like a moron nonetheless.”

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LIST OF ABBREVIATIONS

$\sum$	Denotes the summation of a series of terms
$\bigcap$	A really big bigcap
fractal	A geometric pattern that is repeated at ever smaller scales to produce irregular shapes and surfaces that cannot be represented by classical geometry. Fractals are used especially in computer modeling of irregular patterns and structures in nature.
polynomial	(in one variable) an expression consisting of the sum of two or more terms each of which is the product of a constant and a variable raised to an integral power: $ax^2 + bx + c$ is a polynomial, where a, b, and c are constants and x is a variable.

Abstract of Dissertation Presented to the Graduate School
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Chair: Scott Banks
Major: Mechanical Engineering

`Abstract Placeholder`

This is a brief outline of the main points to make for the abstract

The function of joints The main function of our joints is to support dynamic loaded motion

Joint Pathologies Many joint pathologies express themselves during motion. i.e. most of the pain that someone might express would occur during motions like walking or running

Clinical Tools available Clinicians don't have the ability to measure the motion of joints during these painful exercises.

Joint Cost These diseases cost, on average $XYZ dollars per year in direct and related costs. Despite this, there are no tools for clinicians to measure the fundamental motions of those joints

Existing Methods Existing methods are far too time-intensive, expensive, invaisive, or unreliable for clinical use.

Autonomous Methods We know that clinicians would eagerly adopt these technologies!

CHAPTER 1
INTRODUCTION

1.1 A subsection of the introdcution

This is part of the introduction test test

CHAPTER 2
LITERATURE REVIEW

This is the introduction to the literature review that I am going to write

$$\frac{hello}{goodbye} \tag{2-1}$$

CHAPTER 3
EXAMPLES OF EDITOR/AUTHOR TOOLS, TABLES, AND IMAGES

BIOGRAPHICAL SKETCH

Biopgraphy placeholder