**INTRODUCTION**

SB3C2017

Summer Biomechanics, Bioengineering and Biotransport Conference

June 21 – 24, Tucson, AZ, USA

Cardiovascular Segmentation with Convolutional Neural Networks

Gabriel D. Maher (1), Jameson Merkow (2), Alison L. Marsden (1,2,3)

(1) Department

University

City, State, Country

1. Department

University

City, State, Country

(3) Department

University

City, State, Country

In recent years, numerically computed cardiovascular biomechanical quantities have been shown to have a range of useful applications, ranging from aiding in understanding cardiovascular biomechanics to clinical applications such as analysis of atherosclerosis [**samady]** and coronary artery disease [**taylor]**. However, cardiovascular biomechanics simulations require accurate three dimensional digital models of the cardiovascular anatomy of the subject under consideration. The process of digital anatomical model construction for a particular subject is known as patient-specific modeling [**taylor**]. During model construction typically volumetric medical images, such as magnetic resonance (MR) or computed tomography (CT) scans, are used.

**METHODS**

Explain what was examined, developed or done to answer the research questions. Explain how it was done. Explain how the resulting data/results were analyzed.

Follow directions in the instruction document for equations. Equations should be set apart from the body of the text and centered. Equations should be numbered consecutively, using numerals enclosed in parentheses and positioned flush right along the final baseline of the equation. Here is an example equation:

(1)

**RESULTS**

Present results in decreasing order of importance or chronologically. Refer to figures and tables parenthetically. Do not duplicate data in the text, figures and tables. That the major results in the text, referencing the figures and tables parenthetically as appropriate.

**Figure 1: Follow directions for Figures in the instructions document. Figure captions are centered below the graphic.**

**Table 1: Follow directions for Tables in the instructions document. Table captions are centered above the table.**

**DISCUSSION**

The primary functions of the Discussion are to answer the research question and/or put the results in context and explain their significance. Discuss the results of your study and their significance. Explain how your findings compare with existing knowledge on the subject. Does your answer fit with current thinking? Can you explain conflicts or discrepancies between your results and the results of others? What new information is provided by your study that complements or contradicts previous work? Provide the reader with a balanced presentation of the strengths and limitations. End with a clear statement such as the implications of your findings, or with speculations based on the findings.

**ACKNOWLEDGEMENTS**

Please acknowledge any grant or other funding support or the assistance of others as appropriate.

**REFERENCES**

References should be arranged in numerical order according to the sequence of citations within the text. Each reference should include the last name of at least the first author followed by his/her initials, the journal name, volume, pages and year. You may include more detailed reference information if space in your particular abstract allows.

Sample Reference:

[5] Bergmann, G et al., *J Biomech*, 34:859-871, 2001.