Title of your Dissertation

by

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Member 3, title 3, Affiliation 3
Member 4, title 4, Affiliation 4

I dedicate this to myself because I have worked very hard on it.

ACKNOWLEDGMENTS

You probably also want to thank the Academy. Jk.

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NOMENCLATURE

DAGMC Direct Accelerated Geometry Monte Carlo

MCNP Monte Carlo N-Particle transport code

OBB oriented bounding box

ABSTRACT

This is my abstract that gives an overview of how exciting and important my dissertation is. Yay. Note that this abstract may or may not be the same abstract you submit to the Proquest/UMI website when you submit your dissertation. The electronic abstract required when you deposit must be 350 words or less. The abstract in this document may be longer.

1 INTRODUCTION

First example of content is this introduction. It is listed as a chapter and included in the main .tex document.

Let's use some acronyms just so they appear in our list in the frontmatter. I work with the Direct Accelerated Geometry Monte Carlo (DAGMC) toolkit. It couples with the Monte Carlo N-Particle (MCNP) code and it uses oriented bounding boxes (OBBs).

Here is another chapter example with sections and subsections.

2.1 Monte Carlo Radiation Transport

Blah blah blah.. background information in a section with equations and a reference to MCNP [1].

$$\sigma_x^2 = \frac{\sum (x_i - \bar{x})^2}{N-1}$$
$$\sigma_{\bar{x}}^2 = \frac{\sigma_x^2}{N} \tag{2.1}$$

$$R = \frac{\sigma_{\bar{x}}}{\bar{x}} \tag{2.2}$$

Another quantity of interest to measure computational performance is the figure of merit, defined by Equation 2.3 where t_{proc} is the processor time required for the simulation [1]. It is desirable to have a high figure of merit meaning there is low relative error and low processor time.

$$FOM = \frac{1}{R^2 t_{proc}} \tag{2.3}$$

2.1.1 Variance Reduction

As described in Section 2.1, some Monte Carlo radiation transport problems must employ variance reduction techniques to lower the variance $\sigma_{\bar{x}}^2$.

Here is an example figure with a caption (see Figure 2.1).

Here is an example table to appear in list of tables (see Table 2.1). It also uses “num" for formatting numbers.

Here is an example list:

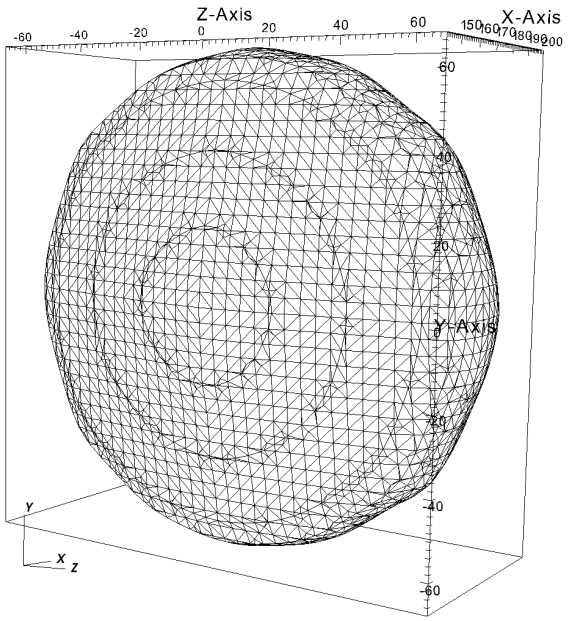

Figure 2.1: Example surface mesh generated by VisIt of the volume between two isosurfaces.

Table 2.1: Neutron Flux Z-values

Reference Mesh	**Comparison Mesh**	% **voxels with** $z \leq 2\sigma$
Analog	Cartesian WW Mesh	98.34%
Analog	WWIG	98.09%
Cartesian WW Mesh	WWIG	98.13%

1. first

2. second

2.2 Summary

In summary, we know stuff.

BIBLIOGRAPHY

[1] X-5 MONTE CARLO TEAM, *MCNP - A General Monte Carlo N-Particle Transport Code, Version 5: Volume I: Overview and Theory*, Los Alamos National Laboratory, version 5 ed. (February 2008).

A APPENDIX 1

Use the appendix for all the extra data and such

B APPENDIX 2

Example of a second appendix. Formatting requirements say that appendices should be numbered but they are allowed to be single spaced.