

Characterizing the Requirements for a Complete RF Transmit Coil at Ultrahigh Field  
Head Imaging

By

Benjamin Hardy

Dissertation

Submitted to the Faculty of the  
Graduate School of Vanderbilt University  
in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

in

Physics

May 2022

Nashville, Tennessee

Approved:

Date:

---

John C. Gore, Ph.D.

---

Adam W. Anderson, Ph.D.

---

Todd E. Peterson, Ph.D.

---

Member4, Ph.D.

---

Junzhong Xu, Ph.D.

## **Dedication**

I dedicate this thesis to

Dedication right here

and

Another dedication!

## **Acknowledgment**

First and foremost

## TABLE OF CONTENTS

	Page
<b>DEDICATION</b> . . . . .	<b>ii</b>
<b>ACKNOWLEDGMENTS</b> . . . . .	<b>iii</b>
<b>LIST OF TABLES</b> . . . . .	<b>v</b>
<b>LIST OF FIGURES</b> . . . . .	<b>vi</b>
<b>CHAPTERS</b> . . . . .	
<b>1 Introduction</b> . . . . .	<b>1</b>
1.1 Section 1 . . . . .	1
<b>2 Title for Chapter 2</b> . . . . .	<b>2</b>
2.1 Section 1 . . . . .	2
<b>3 Title for Chapter 3</b> . . . . .	<b>3</b>
3.1 Section 1 . . . . .	3
<b>4 Title for Chapter 4</b> . . . . .	<b>4</b>
4.1 Section 1 . . . . .	4
<b>5 Future Work</b> . . . . .	<b>5</b>
5.1 Work in Progress . . . . .	5
5.2 Conclusion . . . . .	5
<b>REFERENCES</b> . . . . .	<b>6</b>
<b>A Appendix A</b> . . . . .	<b>7</b>

## LIST OF TABLES

Table

Page

## LIST OF FIGURES

Figure

Page

## **Chapter 1**

### **Introduction**

#### **1.1 Section 1**

##### **1.1.1 Subsection 1**

## **Chapter 2**

### **Title for Chapter 2**

#### **2.1 Section 1**

##### **2.1.1 Subsection 1**



## **Chapter 3**

### **Title for Chapter 3**

#### **3.1 Section 1**

##### **3.1.1 Subsection 1**

## **Chapter 4**

### **Title for Chapter 4**

#### **4.1 Section 1**

##### **4.1.1 Subsection 1**

## **Chapter 5**

### **Future Work**

#### **5.1 Work in Progress**

#### **5.2 Conclusion**

## REFERENCES

**Appendix A**

**Appendix A**