

UTRECHT UNIVERSITY

TOPOLOGY OF WEYL-SEMIMETALS

with non-orientable Brillouin zones

by

Thijs DOUWES

A THESIS

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Project supervisor

Prof. Cristiane DE MORAIS SMITH
Department of Physics

Direct supervisor

Dr. Marcus STÅLHAMMAR
Department of Physics

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Abstract

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Chapter 1

Introduction

Example citation.[Ein05] Example expanded citation.[Lee09, Theorem 5.6]

1.1 Main results

1.2 Overview

1.3 Prerequisites

1.4 Notational conventions

Chapter 2

Topological states of matter & symmetries

2.1 1D: The Su–Schrieffer–Heeger model

2.2 2D: Quantum Hall effect

Chapter 3

Weyl semimetals

3.1 Physics perspective

3.2 Mathematics perspective

Chapter 4

Non-orientable manifolds

4.1 Mathematical exploration

4.2 Physical implications

Appendix A

Homology and cohomology

Bibliography

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