

Preconditioner for cell-based finite element operator

Bachelor Thesis

submitted by

Enes Witwit

supervised by

Prof. Dr. Kanschat

Faculty of Mathematics and Computer Science

University of Heidelberg

I hereby declare that, to the best of my knowledge, this thesis is the product of my own independent work. All content and ideas drawn from external sources, directly or indirectly, published or unpublished, are indicated as such. This thesis has neither been previously submitted in whole, nor in parts, for a degree at this or any university.

March 6, 2017

Heidelberg

Signature

Contents

1	Introduction	4
2	Theory	4
2.1	Partial Differential Equations	4
2.2	Finite Element Method	4
2.3	Higher order singular value decomposition	4

1 Introduction

2 Theory

2.1 Partial Differential Equations

2.2 Finite Element Method

2.3 Higher order singular value decomposition

References