UNIVERSITÄT ZU LÜBECK
INSTITUT FÜR MEDIZINISCHE INFORMATIK

MRT-Registration

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Masterarbeit

verfasst am
Institut für Medizinische Informatik

im Rahmen des Studiengangs
Medizinische Informatik
der Universität zu Lübeck

vorgelegt von
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Eidesstattliche Erklärung

Ich erkläre hiermit an Eides statt, dass ich diese Arbeit selbständig verfasst und keine anderen als die angegebenen Quellen und Hilfsmittel benutzt habe.

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Jan Meyer

Zusammenfassung

Irgendwas über MRT und Registration

Abstract

Something about MRI and registration

Acknowledgements

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Contents

1

Introduction

Introduction of stuff.

1.1 Contributions of this Thesis

We implemented stuff.

1.2 Related Work

Others have already done stuff for example [1], [2], [3].

1.3 Structure of this Thesis

This Thesis contains a lot of stuff in different chapters.

2

Basics

2.1 Magnetic Particle Imaging

Here MRI is described.

2.2 Image Registration

Here goes some stuff for image registration.

$$T' = \max S(F, T(M)) \tag{2.1}$$

This equation is taken from [1]

2.3 Deep Learning for image registration

Deep Learning has seen a rise in popularity in the last year in verious fields including image registration.

CNNs

CNNs are an important class of neural networks, mainly for image processing.

U-Net

The U-Net architecture is typically used for segmentation, but can also be used for image registration tasks.

3

Main Chapter - Rename later

In this chapter the main part of the actual work is discussed.

3.1 DeepFlash

Explain *DeepFlash*.

3.2 Fourier Net

Here goes the explanation for the Fourier-Net.

3.3 Fourier Net+

Here goes the explanation for the Fourier-Net+.

4

Results and Discussion

Here go the results with the discussion.

5

Conclusion

Summery of all stuff…

Bibliography

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