



Hochschule Konstanz
Department of Computer Science

Master Thesis

Fingerprint Presentation Attack Detection using Laser Speckle Contrast Imaging

**A thesis submitted in partial fulfillment of the requirements for the degree
of Master of Science (M.Sc.)**

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general todo
reference todo
research todo
details...
layout issue
check again
correct this
review

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Abstract

Solution for uniform Headline

This is the abstract.

Write abstract, may consider guidelines

Writing an abstract and conclusion is what you do at the very end of your thesis. Questions that might help to write a good abstract are:

- Motivation: Why do we care about the problem and the results?
- Problem statement: What problem are you trying to solve?
- Approach: How did you go about solving or making progress on the problem? Did you use simulation, analytic models, prototype construction, or analysis of field data for an actual product?
- Results: What's the answer?
- Conclusions: What are the implications of your answer? Is it going to change the world (unlikely), be a significant "win", be a nice hack, or simply serve as a road sign indicating that this path is a waste of time (all of the previous results are useful)?

Do not itemize in final version.

Declaration of Authorship

The official HTWG document is in German Language¹

Hiermit erkläre ich, Pascal Keilbach, geboren am 17.07.1988 in Bad Mergentheim,

(1) dass ich meine Masterarbeit mit dem Titel:

Fingerprint Presentation Attack Detection using Laser Speckle Contrast Imaging

am Institut da/sec unter Anleitung von Prof. Dr. Hanno Langweg selbständig und ohne fremde Hilfe angefertigt habe und keine anderen als die angeführten Hilfen benutzt habe;

(2) dass ich die Übernahme wörtlicher Zitate, von Tabellen, Zeichnungen, Bildern und Programmen aus der Literatur oder anderen Quellen (Internet) sowie die Verwendung der Gedanken anderer Autoren an den entsprechenden Stellen innerhalb der Arbeit gekennzeichnet habe.

(3) dass die eingereichten Abgabe-Exemplare in Papierform und im PDF-Format vollständig übereinstimmen.

Ich bin mir bewusst, dass eine falsche Erklärung rechtliche Folgen haben wird.

Konstanz, den 30. Juni 2018

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¹https://www.htwg-konstanz.de/fileadmin/pub/fk_in/Abschlussarbeiten/abschlussarbeiten_ehrenwoertliche_erklaerung_v2-170917.docx

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Think about Abstract and Author Declaration in TOC

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Listings

Think about changing name for listings heading to List of Listings

List of Abbreviations

PAD	Presentation Attack Detection
PA	Presentation Attack
PAI	Presentation Attack Instrument
EU	European Union
LONGEST	The longest acronym in the list

1 Introduction

Test to use abbreviations Presentation Attack Instrument (PAI) this is a test quote [1].
another test quote [2]

2 Related Work

3 Data Analysis

4 Algorithm Implementation

5 Test Results

6 Evaluation

7 Conclusion and Future Work

Conclusion

References

- [1] European Association for Biometrics, “Eab - vision,” 2012. [Online]. Available: <https://www.eab.org/about/vision.html?ts=1511288748946>
- [2] C. Busch and C. Sousedik, “Presentation attack detection methods for fingerprint recognition systems: A survey,” *IET Biometrics*, vol. 3, no. 4, pp. 219–233, 2014.

Check citation style with hda

A Appendix

A.1 First Appendix

A.2 Second Appendix