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## – Master-/Bachelor Thesis –

### Attacking Face Recognition Systems using Facial Masks

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#### da/sec



da/sec is the biometrics and internet security research group and is affiliated with University of Applied Sciences Darmstadt and the National Research Center for Applied Cybersecurity - ATHENE. The group is led by Prof. Dr. Christoph Busch. The focus of the group is on highly innovative and applied IT security research in the special fields of biometrics. Read more on [www.dasec.h-da.de](http://www.dasec.h-da.de).

#### Motivation & Goal

Wearing facial masks has become prevalent since the outbreak of the COVID-19 pandemic. Consequently, researchers and practitioners have improved the robustness of face recognition systems towards facial masks. However, custom patterns can be added to facial masks and be used to attack face recognition systems. Such adversarial face masks have the potential to impair the security of face recognition systems which are employed in uncontrolled or semi-controlled scenarios. The goal of this project is to design one of more adversarial face mask attacks and evaluate the attack potential on several state-of-the-art face recognition systems.

#### Tasks

- Creation of face database with different types of adversarial face mask attacks
- Evaluation of several state-of-the-art face recognition systems on the created database

#### We offer

- Incentives for the student to work on this project (work within scientific context and in close collaboration with researchers)

#### Requirements

- Interest in biometric systems and computer vision
- High motivation and creativity
- Analytical and programming skills

#### By Date

By now / by appointment

#### Contact

**M.Sc. Mathias Ibsen**  
[mathias.ibsen@h-da.de](mailto:mathias.ibsen@h-da.de)

h\_da  
Faculty of Computer Science

ATHENE – National Research Center for Applied Cybersecurity  
da/sec – Biometrics and Internet Security Research Group

Schöfferstraße 8b,  
64295 Darmstadt

