

Fachhochschule Aachen
Campus Jülich

Fachbereich: Medizintechnik und Technomathematik
Studiengang: Technomathematik

Secure Multi-Party Computation for Decentralized Distributed Systems

Masterarbeit von Frederic Klein

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Frederic Klein
Unterschrift

Abstract

Abstract...

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Chapter 1

Introduction

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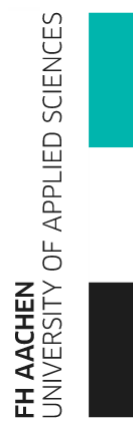


Figure 1.1: The FH Logo

Chapter 2

Foundation

2.1 Gamification and Serious Games

2.2 Distributed Systems

2.3 Secure Multi-Party Computation (SMPC)

Protocols

Frameworks

Differential Privacy

2.4 Wireless network technologies

Wireless Local Area Networks

Wi-Fi/802.11

Wireless Personal Area Networks

Bluetooth

Bluetooth Smart/Bluetooth Low Energy

Wireless Networks in Hospitals

2.5 Case Study: "The Hygiene Games" System

Chapter 3

Research

3.1 Applicability of SMPC Protocols in Decentralised Systems

Analysis of Key Factors: Computing Power, Network Data Rates and Duration of Connection

3.2 Effectiveness of SMPC Protocols in Sparse Networks

Maintaining anonymity

Strategies for Aggregation of Participants in Sparse Networks

3.3 Applicability and Requirements Analysis for the Hygiene Games

Chapter 4

Conclusion

Bibliography

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