Andreas Happe

Curriculum Vitae

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Employment History

2012–Present **Senior Security Consultant**, CoreTEC GmbH, Vienna.
Security-Assessments and Penetration-Tests

2019–Present **Lecturer**, FH Technikum Wien, Vienna.
Web Security, Secure Operating Systems

2015–2018 **Engineer**, Austrian Institute of Technology.
Design, Implementation and Maintenance of privacy-preserving multi-cloud storage, identity management and data-sharing systems.
Projects: Credential (Horizon 2020), DRBD4Cloud (Eurostars), Prismacloud (Horizon 2020).

2012–2015 **Software Engineering Contractor**, Austrian Institute of Technology.
Design, Implementation and Maintenance of secure multi-cloud storage systems

2009–2015 **Ruby on Rails Freelancer**.
Design, Development and Maintenance of Ruby on Rails-based web applications.

2007–2009 **CTO**, BlackWhale GmbH.
Startup working on web-based work-flow solutions.

2006–2012 **Software Engineering Contractor**, ARC Seibersdorf Research GmbH Austrian Institute of Technology.
Design, Development and Maintenance of a Quantum Key-Distribution system.

2001–2007 **System Administrator**, Infotech GmbH.
Linux and Microsoft Windows systems.

Technical Skills

Security Engineering
Assessment, Design and Implementation of secure IT-Systems.
Design, Execution and Documentation of Penetration-Tests.
Primary Focus upon Web-Applications as well as Android/iOS Mobile Applications.
Secondary focus on network-level Penetration Tests as well as Desktop Applications.
Design and Execution of training events in the Security Area.

Software Development
Procedural, Object-Oriented and Functional Programming Paradigms.
Expert level in Ruby on Rails, Python, C, Java
Proficient in Scala, Akka.io, R, JavaScript.

Languages

German **Native language**

English **Full professional proficiency**

Formal Education

2006–2009 **DI/Master of Science**, *Software Engineering & Internet Computing*, TU Wien.

2002–2006 **Bakk. techn.**, *Software & Information Engineering*, TU Wien.

1996–2001 **Matura**, *EDV und Organisation*, HTBLVA Villach.

Certifications

since 2015 Offensive Security Certified Professional

Standardization Work

since 2017 OWASP MSTG – "Mobile Security Testing Guide"
Top Contributor

since 2016 ÖNorm A77.00 – "Sichere Webapplikationen"
Austrian Standard on Development and Maintenance of Secure Web Applications

Other Security Involvement

2019 Autor Einführung in die Web Application Security

since 2019 OWASP Chapter Vienna – Leader

since 2019 We Are Developers – Sounding Board Security

2019 NATO Locked Shields, 2nd place (Partner Event)
Teamlead Web-Security, Team FH/Technikum Wien

References

Due to my work's sensitive nature please contact the following references for further information:

Pen-Tests Manfred Kirisits, CEO CoreTEC IT Security GmbH
mk@coretec.at, +43-676-841-786-310

Ruby on Rails Peter Greiner, Executive Board Burgstaller-Steiner Immobilien GmbH
peter.greiner@burgstaller-steiner.at, +43-650-473-4637

Java, Clouds Thomas Lorünser, Senior Engineer and Project Coordinator for the European Union H2020 "Credential" and "PrismaCloud" Research Projects, Austrian Institute of Technology
thomas.loruenser@ait.ac.at

C, Linux, Distributed Systems Thomas Themel, Colleague during European Union's FP7 SECOQC project, now Google Inc.
thomas@themel.com

Masters Thesis

Title	*Agile Provenance*
Supervisors	S. Dustdar, L. Juszczyk, H.-L. Truong
Description	Automated transparent provenance gathering and analysis within Ruby on Rails.

Selection of Noteworthy Research Projects

2015–2018 PRISMACLOUD
Design, development and maintenance of the PrismaCloud privacy-preserving multi-cloud storage prototype. One of seven projects accepted for the European Union's Horizon 2020 Research Programme.

2015–2018 CREDENTIAL
Development of Trust Solutions for untrusted multi-cloud architectures. Another one of the seven projects accepted for the European Union's Horizon 2020 Research Programme.

2012–2015 ARCHISTAR
Design and Development of a Multi-Cloud Storage System utilizing BFT (Byzantine Fault Tolerance) and Secret-Sharing techniques.

2006–2012 SECOQC
Implementation of the first inter-company quantum key distribution network. I was deeply involved in design and implementation of the networking components (which were written using Linux, Python, C). After the presentation of the prototype during the SECOQC-Conference of 2009 responsible for maintenance and further feature-work.

Publications – Unikernel

2017 Unikernels for Cloud Architectures: How Single Responsibility can Reduce Complexity, Thus Improving Enterprise Cloud Security
Andreas Happe, Bob Duncan, Alfred Bratterud
Complexis 2017 in Porto, Portugal

2016 Enterprise IoT Security and Scalability: How Unikernels can Improve the Status Quo
Bob Duncan, Andreas Happe, Alfred Bratterud
IEEE/ACM 9th International Conference on Utility and Cloud Computing
2016 in Shanghai, China

2016 Enhancing Cloud Security and Privacy: Time for a New Approach?
Bob Duncan, Alfred Bratterud, Andreas Happe
INTECH 2016 in Dublin, Ireland

Publications — Cloud Storage

2017 The Archistar Secret-Sharing Backup Proxy
Andreas Happe, Florian Wohner, Thomas Loruenser
SECPID/ARES 2017 in Calabria, Italy

2016 Exchanging Database Writes with modern Crypto
Andreas Happe, Thomas Loruenser
IARIA Cyber 2016 in Venice, Italy

2016 Malicious Clients in Distributed Secret Sharing Based Storage Networks
Andreas Happe, Stephan Krenn, Thomas Loruenser
Presented at Secure Protocol Workshop 2016 in Brno, Czech Republic

2015 ARCHISTAR: Towards Secure and Robust Cloud Based Data Sharing
Thomas Loruenser, Andreas Happe, Daniel Slamanig
Presented at IEEE CloudCon 2015 in Vancouver, Canada

Publications — Quantum Key Distribution

2013 New release of an open source QKD software: design and implementation of new algorithms, modularization and integration with IPSec
Andreas Happe, Oliver Maurhart, Christoph Pacher, Thomas Loruenser, Cristina Tamas, Andreas Poppe, Momtchil Peev et al.

2012 Timing synchronization with photon pairs for quantum communications
Andreas Happe, Thomas Loruenser, Andreas Poppe, Momtchil Peev, Florian Hipp, Damian Melniczuk, Pattama Cummon, Pituk Panthong, Paramin Sangwongngam et al.

2012 QKD software architecture and system integration with classical communication infrastructure
Oliver Maurhart, Christoph Pacher, Andreas Happe, Thomas Loruenser, Cristina Tamas, Andreas Poppe, Momtchil Peev

2009 The SECOQC quantum key distribution network in Vienna
Andreas Happe, Momtchil Peev, Thomas Loruenser, Thomas Themel, Christoph Pacher, Oliver Maurhart, Andreas Poppe, Anton Zeilinger, Cristina Tamas, Edwin Querasser et al.