

matthiasgusenbauer

scientist

contact

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languages

german mother tongue
english fluency
japanese conversational
spanish basic

programming

♥ Python
Javascript, C++,
Matlab
OpenCL, SQL

education

- 2016-2018 **Master** in Visual Computing TU Wien, Vienna
Bitstream - A bottom-up/top-down hybrid approach to data loading for interactive visualizations.
This thesis explores a novel mix of top-down and bottom-up processing techniques for visual analytics in the context of big data.
- 2011-2015 **Bachelor** of Media Informatics and Visual Computing TU Wien, Vienna
specialization in GPGPU

experience

Full Time

- 2015-2016 **National Institute of Informatics** Tōkyō, Japan
Research Intern
Worked as part of Fukuda Laboratory on understanding network anomalies (malware, scans, spam, etc) through visualization. A visualization prototype (parallel coordinates and node-link diagram) was presented at the IEICE general conference at Kyushu University, Japan.
- 2017-2018 **National Institute of Informatics** Tōkyō, Japan
Research Fellow
Worked with professor Isao Echizen on interactive visualization techniques for the Bitcoin blockchain. Data preparation for visualization involving progressive streaming and on-the-fly graph minimization techniques were explored and contributed significantly to my master's thesis.

Part Time

- since 2014 **SBA Research** Vienna, Austria
Researcher
Expanded the body of knowledge in a very motivated group of scientists in the fields of usable security, privacy, blockchain technology and visualization.
- 2016-2017 **University of Vienna** Vienna, Austria
Researcher
Worked in a interdisciplinary group of computer scientists, social scientists, lawyers and industry on improving CERT communication and incident response efficacy.
- 2013-2014 **All About Apps** Vienna, Austria
Quality Assurance
Worked on ensuring the quality of the app development by annoying developers with out-of-the-box thinking and random clicking.

volunteering

2016 **Volunteer Coordinator** ACM Conference on Computer and Communication Security
Responsible for ensuring the support of the conference organizers as well as speaker assistance by coordinating a group of about 20 volunteers.

communication skills

2018 **Oral Presentation and Workshop** THINK - Multidisciplinary Conference
Presentation titled "Scientists going Mental –Why User Experience is not Enough for Security" including an ad-hoc computer security workshop for laypeople.

2018 **Poster Presentation** Google Web Security Summit
Poster presentation of my Master Thesis topic at the Google offices in Munich, Germany.

2018 **Oral Presentation** Coffee With Science - Meetup
Presentation titled "Obstacles to the Adoption of Secure Communication Tools." with an open discussion at the end.

2016 **Poster** KIRAS Symposium
Presentation of intermediary results of a CERT communication literature survey, conducted in a joint project to support incident response and prevention.

2016 **Oral Presentation** IEICE General Conference
Presented the research I conducted during my first internship at NII Japan.

interests

professional: privacy, usable security, cryptography, HPC, machine learning

personal: philosophy, gaming, typography, music, yoga

publications

article in peer-reviewed journal

Cyber-Sicherheitsstrategien—Umsetzung von Zielen durch Kooperation

Bettina Pospisil, Matthias Gusenbauer, Edith Huber, and Otto Hellwig

Datenschutz und Datensicherheit-DuD 41.10 (2017) pp. 628–632. Springer, 2017

BS-3-14 Design of HELIOS, a Network Anomaly Visualization Tool (BS-3. Advanced Networking Technologies for Innovative Information Networks)

Matthias Gusenbauer, Romain Fontugne, Johan Mazel, and Kensuke Fukuda

電子情報通信学会総合大会講演論文集 2016.2 (Mar. 2016) "S-38"- "S-39". 一般社団法人電子情報通信学会, 2016

international peer-reviewed conferences/proceedings

A GDPR Compliance Module for Supporting the Exchange of Information Between CERTs

Otto Hellwig, Gerald Quirchmayr, Walter Hötzen dorfer, Christof Tschohl, Edith Huber, Franz Vock, Florian Nentwich, Bettina Pospisil, Matthias Gusenbauer, and Gregor Langner

Proceedings of the 13th International Conference on Availability, Reliability and Security, 2018, Hamburg, Germany

"The Other Side of the Coin: User Experiences with Bitcoin Security and Privacy" Katharina

Krombholz, Aljosha Judmayer, Matthias Gusenbauer, and Edgar Weippl

Financial Cryptography and Data Security: 20th International Conference, FC 2016, Christ Church, Barbados, February 22–26, 2016, Revised Selected Papers, 2017, Berlin, Heidelberg

Für bare Münze? NutzerInnenenerfahrungen mit Sicherheit und Datenschutz bei Bitcoin.
Katharina Krombholz, Aljosha Judmayer, Matthias Gusenbauer, and Edgar R Weippl
Sicherheit, 2016

other publications

A Novel Mapping of Arbitrary Precision Integer Operations to the GPU
Matthias Gusenbauer
2015