

Tobias Fiebig

Grants

- 01.2015-12.2017 **“enzevalos” IKT2020 — Selbstschutz (BMBF), Project:** *Creating usable End-to-End encryption implementations, securing day-to-day communications without relying on central infrastructure (PKI)*, **Responsibilities:** For Prof. Seifert, responsible for the TU Berlin portions of the proposal; conceptualization, application, budgeting and integration among the partners.

Project (Total): 704,895 EUR
Funding: 544,961 EUR
TU Berlin: 176,312.21 EUR

Publications

- 09.2017 **Static Program Analysis as a Fuzzing Aid**, *Bhargava Shastry, Markus Leutner, Tobias Fiebig, Kashyap Thimmaraju, Fabian Yamaguchi, Konrad Rieck, Stefan Schmid*, Accepted for: RAID (Research in Attacks, Intrusions and Defenses) 2017.
- 03.2017 **Something From Nothing (There): Collecting Global IPv6 Datasets From DNS**, *Tobias Fiebig, Kevin Borgolte, Shuang Hao, Christopher Kruegel, Giovanni Vigna*, PAM (Passive and Active Measurement) Conference 2017.
- 10.2016 **A One-Year Perspective on Exposed In-memory Key-Value Stores**, *Tobias Fiebig, Anja Feldmann, Matthias Petschick*, SafeConfig'16, CCS Workshops.
- 10.2016 **SoK: An Analysis of Protocol Design: Avoiding Traps for Implementation and Deployment**, *Tobias Fiebig, Franziska Lichtblau, Florian Streibelt, Thorben Krüger, Pieter Lexis, Randy Bush, Anja Feldmann*, Technical Report, arXiv:1610.05531.
- 05.2015 **Analyzing End-Users' Knowledge and Feelings Surrounding Smartphone Security and Privacy**, *Lydia Kraus, Tobias Fiebig, Viktor Miruchna, Sebastian Möller, Asaf Shabtai*, MOST 2015, S&P Workshops.
- 08.2014 **A Metric for the Evaluation and Comparison of Keylogger Performance**, *Tobias Fiebig, Janis Danisevskis, Marta Piekarska*, CSET 2014, USENIX Security Workshops.
- 08.2014 **Security Impact of High Resolution Smartphone Cameras**, *Tobias Fiebig, Jan Krissler, Ronny Hänsch*, WOOT 2014, USENIX Security Workshops.

Talks

- 03.2017 **You can -j REJECT but you can not hide: Global scanning of the IPv6 Internet**, *Internet Engineering Task Force (IETF) Meeting No. 98, Chicago*, Presenting first steps towards scanning IPv6 globally in an industry context, with a special focus on transferring academic insights to industry players.
- 12.2016 **You can -j REJECT but you can not hide: Global scanning of the IPv6 Internet**, *33C3: 33rd Chaos Communication Congress, Hamburg*, Presenting first steps towards scanning IPv6 globally.

- 06.2016 **Kleine Fehler—Große Wirkung**, *Ringkolloquium: Digitale Herausforderungen—Perspektiven auf Datenschutz und Datensicherheit aus Wissenschaft, Wirtschaft und Politik*, How the field of security and usability neglects the role of operations personell, and how this leads to security misconfigurations in the wild..
- 06.2014 **Teaching Crypto - How to Make Teenagers Curious**, 20. *Kryptotag der Gesellschaft für Informatik, Berlin*, Using hardware reverse engineering as a tool to teach high-school students about computer science.
- 09.2012 **Seminar for the “Union of the Police” (Gewerkschaft der Polizei, GdP) on “Cybercrime”**, *representing a German NGO*.
- 05.2012 **Lecture during the Symposium of the “Union of the Police” (Gewerkschaft der Polizei, GdP) on “Cybercrime”**, *representing a German NGO*.

Teaching

- 2017 **Lectorship Beuth Hochschule Berlin, Supervision Masterthesis**, *Constanze Dietrich*, “*Sicherheitsrisiken durch den Faktor Mensch im IT-Betrieb: Eine empirische Evaluation der Erfahrungen von Systemadministratoren im Kontext sicherheitsrelevanter Fehlkonfigurationen*”, Examiners: Tobias Fiebig, Ilse Schmiedecke, Prof. Dr. Agathe Merceron.
- 2016 **Bachelor Thesis Supervision**, *Oliver Machacik*, “*An investigation of SSH NOAUTH usage in the wild*”, Examiner: Prof. Anja Feldmann, Ph. D.
- 2016 **Bachelor Thesis Supervision**, *Michaela Stehmann*, “*A Study on End-User’s Usage of TLS for E-Mail Protokols Public WiFis*”, *Co-Advised with Franziska Lichtblau*, Examiners: Prof. Anja Feldmann, Ph. D., Prof. Dr. Jörg Schwenk.
- 2015 **Bachelor Thesis Supervision**, *Kai Kunschke*, “*Forensic Document Carving from Customer Premises Equipment*”, Examiners: Prof. Dr. Jean-Pierre Seifert, Prof. Dr. Ben Juurlink.
- 2015 **Bachelor Thesis Supervision**, *Felix Bauer*, “*Forensic Investigation of DNS Traces in Volatile Memory Dumps on Embedded Systems*”, Examiners: Prof. Dr. Jean-Pierre Seifert, Prof. Dr. Lars Knipping.
- Winter Term 2014/2015 **Re-design Computer Security Seminar of FG SecT**, *I designed a new version of the Computer Security Seminar, which is more engaging for students and improves their general learning experience..*
- 09.2014 **Hardware Reverse Engineering anhand eines FlickerTAN Generators**, *Schülerakademie Mathematik und Informatik Münster, Münster*, Teaching of a one-week block course for pre-bachelor level STEM gifted high-school students during an annual summer school.
- Summer Term 2014 **Computer Security Seminar of FG SecT**, *Students were individually assigned a set of up to three papers they had to work on under the supervision of a PhD student. I handled the main organization and distribution of topics.*

Research Experience

- 03.2017 – **Visiting Researcher**, *University of California, Santa Barbara*, Research Group of Prof. Christopher Kruegel and Prof. Giovanni Vigna, Research on Internet-scale measurements of DNS and misconfiguration.
- 06.2015 – **Research Assistent**, *Technische Universität Berlin*, Research Group of Prof. Anja Feldmann, Ph. D, Research on Internet measurement, human factors in security and Internet-scale security misconfiguration.

- 09.2013 – **Research Assistent**, *Technische Universität Berlin*, Research Group of Prof. Dr. Jean-Pierre Seifert, Research on mobile security, security of financial transaction security methods, and Internet-scale security misconfiguration.
– 05.2015

Education

- 09.2013 – **PhD Student**, *TU Berlin*, Advised by Prof. Feldmann together with Prof. Seifert,
– vstl. 06.2016 Thesis Title: An Empirical Evaluation of Misconfiguration in Internet Services.
Thesis defense date: 16.06.2017
- 09.2012 – **MSc in System and Network Engineering**, *University of Amsterdam, Netherlands*.
– 07.2013 Grade: 7.8 GPA (US Letter Grade: A)
- 10.2008 – **BSc in Cognitive Science**, *University of Osnabrück, Germany*, Majors: *Cognitive Psychology, Philosophy of Mind, Artificial Intelligence, Computational Linguistics and Computer Science*, Grade: Very Good.
– 08.2012
- 09.2005 – **University Entrance Diploma (Abitur)**, *Städtisches Gymnasium Kamp-Lintfort, Germany*, Grade: 2.1.
– 06.2008

Undergraduate Projects (selected)

- 06.2013 **Master Thesis Part 2**, “*Forensic DHCP Information Extraction from Home Routers*”, Development of a new method in IT forensics, University of Amsterdam, Netherlands.
Grade: 8.5
- 05.2013 **Research Project**, “*Grindr application security evaluation report*”, Analysis of the backend application security of a popular dating app, leading to full compromise of their full userbase, University of Amsterdam, Netherlands.
Grade: 8.5
- 02.2013 **Research Project**, “*Internet Background Noise Induced Power Consumption*”, with Pieter Lexis, Evaluation of the power consumption caused by SSH bruteforce attempts, University of Amsterdam, Netherlands.
Grade: 8.0
- 12.2012 – **Master Thesis Part 1**, “*Getting Back at Trudy*”, Study of ways to retrieve SSH bruteforcer’s credentials, University of Amsterdam, Netherlands.
– 01.2013 Grade: 8.0
- 02.2012 – **BSc Thesis**, “*Ethical Implications of Remote Forensic Software in the Context of the Extended Mind Theory*”, University of Osnabrück, Germany.
– 08.2012 Grade: Very Good

Industry Experience

- 09.2013 – **Independent Consultant**, *Medium Sized European Internet Exchange*.
– 01.2016 Full redesign, migration and integration towards a low-maintainance DevOps focused Linux-based infrastructure, L2/L3 networking, consulting for customer projects, Incident Response.
- 04.2012 – **System Administrator and Consultant**, *Tasmiro GmbH, Osnabrück, Germany*.
– 08.2013 Linux-based infrastructure, L2/L3 networking, HA-cluster, consulting for customer projects.
- 04.2012 **Independent Consultant**, *Medium Sized European Internet Exchange*.
Design and integration of a monitoring system.
- 10.2008 – **System Administrator**, *seeconsult GmbH, Osnabrück, Germany*.
– 03.2012 Linux- and UNIX-based infrastructure, Linux-based clients, L2/L3 networking.
- 04.2009 – **System Administrator**, *MineTronics GmbH, Ladbergen, Germany*.
– 12.2010 Linux-based infrastrucutre, L2/L3 networking.

- 10.2008– **System Administrator**, *Embigence GmbH, Ladbergen, Germany*.
– 02.2009 Linux-based infrastructure, L2/L3 networking.

Voluntary Work and Projects

- 12.2016 **Infrastructure Monitoring**, *CCH, Hamburg, Germany*.
Conceptualisation and deployment of a monitoring system for an annual conference
- 12.2015 **Infrastructure Monitoring**, *CCH, Hamburg, Germany*.
Conceptualisation and deployment of a monitoring system for an annual conference
- since 04.2008 **Project management, hosting, and system administration for the Engelsystem**, The Engelsystem is a volunteer management system mostly used for open source and security conferences.
- since 02.2008 **Operator of wybt.net**, wybt.net is a non-profit hosting hobby, providing Linux and Unix services.
- 12.2012 **Infrastructure Monitoring**, *CCH, Hamburg, Germany*.
Conceptualisation and deployment of a monitoring system for an annual conference
- 12.2011 **Infrastructure Monitoring**, *BCC, Berlin, Germany*.
Conceptualisation and deployment of a monitoring system for an annual conference