

Martina Lindorfer

mlindorfer@isecclab.org

EDUCATION

Doctor of Technical Sciences (Dr. techn.) July 2011 – November 2015

Vienna University of Technology, Austria

Major: Malware Analysis and Mobile Security

Thesis: *Malware Through the Looking Glass: Malware Analysis in an Evolving Threat Landscape*

Advisor: Priv.-Doz. Dipl.-Ing. Mag.rer.soc.oec. Dr. techn. Edgar Weippl

Master of Science (Dipl.-Ing.)

October 2006 – May 2011

Vienna University of Technology, Austria

Major: Software Engineering and Internet Computing

Thesis: *Detecting Environment-Sensitive Malware*

Advisor: Priv.-Doz. Dipl.-Ing. Dr. techn. Engin Kirda

Bachelor of Science (BSc)

October 2003 – July 2006

University of Applied Sciences Hagenberg, Austria

Major: Computer and Media Security

Theses: *Aggregate Signatures – Algorithms and Applications*

Integration of Elliptic Curves in the Cryptographic Base Infrastructure of the Utimaco Safeware AG

Advisor: FH-Prof. Dr. Juergen Fuss

EXPERIENCE

Researcher

January 2013 – December 2015

SBA Research, Vienna, Austria

Visiting Researcher

October 2014 – March 2015

Systems Security Lab, Northeastern University, Boston, USA

- Analysis of iOS8 security features
- Data leak detection in mobile app traffic

Research Assistant

July 2011 – September 2014

Secure Systems Lab, Vienna University of Technology, Vienna, Austria

- Research as part of PhD studies
- Dynamic malware analysis and detection of Android malware (Andrubis)

Research Intern

November 2013

Foundation for Research and Technology – Hellas (FORTH-ICS), Heraklion, Greece

- Detection of malicious Android applications in alternative markets

Research Intern

January – May 2013

Fukuda Laboratory, National Institute of Informatics (NII), Tokyo, Japan

- Detection of botnet traffic in backbone networks based on NetFlow data

Research Intern

September – November 2009

Multimedia Security Lab, Korea University, Seoul, South Korea

- Development of a Windows executable packer with encryption and compression

Software Engineer, Project Controller

July 2006 – December 2008

Underground_8 Secure Computing GmbH, Linz, Austria

- Design and development of a transparent threat management appliance, which filters mail and web traffic for spam and malware

Teaching Assistant

March – June 2008

Distributed Systems Technologies, Vienna University of Technology, Vienna, Austria

Software Engineer (Professional Practical Training)

March – June 2006

Utimaco Safeware AG, Linz, Austria

- Integration of elliptic curve signature and encryption algorithms in the cryptographic base infrastructure of a hard disk encryption suite

PUBLICATIONS

Conferences

CuriousDroid: Automated User Interface Interaction for Android Application Analysis Sandboxes

Patrick Carter, Collin Mulliner, Martina Lindorfer, William Robertson, Engin Kirda
International Conference on Financial Cryptography and Data Security (FC)
Christ Church, Barbados, February 2016 (to appear)

Marvin: Efficient and Comprehensive Mobile App Classification Through Static and Dynamic Analysis

Martina Lindorfer, Matthias Neugschwandtner, Christian Platzer
Annual International Computers, Software & Applications Conference (COMPSAC)
Taichung, Taiwan, July 2015

AndRadar: Fast Discovery of Android Applications in Alternative Markets

Martina Lindorfer, Stamatis Volanis, Alessandro Sisto, Matthias Neugschwandtner, Elias Athanasopoulos, Federico Maggi, Christian Platzer, Stefano Zanero, Sotiris Ioannidis
Conference on Detection of Intrusions and Malware & Vulnerability Assessment (DIMVA)
London, UK, July 2014

Take a Bite – Finding the Worm in the Apple

Martina Lindorfer, Bernhard Miller, Matthias Neugschwandtner, Christian Platzer
International Conference on Information, Communications and Signal Processing (ICICS)
Tainan, Taiwan, December 2013

Lines of Malicious Code: Insights Into the Malicious Software Industry

Martina Lindorfer, Alessandro Di Federico, Federico Maggi, Paolo Milani Comparetti, Stefano Zanero
Annual Computer Security Applications Conference (ACSAC)
Orlando, Florida, USA, December 2012

Detecting Environment-Sensitive Malware

Martina Lindorfer, Clemens Kolbitsch, Paolo Milani Comparetti
International Symposium on Recent Advances in Intrusion Detection (RAID)
Menlo Park, California, USA, September 2011

Workshops

Andrubis – 1,000,000 Apps Later: A View on Current Android Malware Behaviors

Martina Lindorfer, Matthias Neugschwandtner, Lukas Weichselbaum, Yanick Fratantonio, Victor van der Veen, Christian Platzer
International Workshop on Building Analysis Datasets and Gathering Experience Returns for Security (BADGERS)
Wroclaw, Poland, September 2014

Skin Sheriff: A Machine Learning Solution for Detecting Explicit Images

Christian Platzer, Martin Stuetz, Martina Lindorfer
International Workshop on Security and Forensics in Communication Systems (SFCS)
Kyoto, Japan, June 2014

Enter Sandbox: Android Sandbox Comparison

Sebastian Neuner, Victor van der Veen, Martina Lindorfer, Markus Huber, Georg Merzdovnik, Martin Mulazzani, Edgar Weippl
IEEE Mobile Security Technologies Workshop (MoST)
San Jose, California, USA, May 2014

A View to a Kill: WebView Exploitation

Matthias Neugschwandtner, Martina Lindorfer, Christian Platzer
USENIX Workshop on Large-Scale Exploits and Emergent Threats (LEET)
Washington, D.C., USA, August 2013

Miscellaneous

ReCon: Revealing and Controlling Privacy Leaks in Mobile Network Traffic

Jingjing Ren, Ashwin Rao, Martina Lindorfer, Arnaud Legout, David Choffnes
Technical Report, Northeastern University, October 2015

Andrubis: Android Malware Under the Magnifying Glass

Lukas Weichselbaum, Matthias Neugschwandtner, Martina Lindorfer, Yanick Fratantonio,
Victor van der Veen, Christian Platzer
Technical Report, Vienna University of Technology, July 2014

POSTER: Cross-Platform Malware: Write Once, Infect Everywhere

Martina Lindorfer, Matthias Neumayr, Juan Caballero, Christian Platzer
ACM Conference on Computer and Communications Security (CCS)
Berlin, Germany, November 2013

The Red Book: A Roadmap for Systems Security Research

The SysSec Consortium, Evangelos Markatos and Davide Balzarotti (editors), August 2013

HONORS & AWARDS

- Travel grant for the GREPSEC II workshop and IEEE Symposium on Security and Privacy May 2015
- Marshall Plan scholarship for a research exchange with Northeastern University May 2014
- Research fellowship from Clear Sky Ventures January 2014
- SysSec scholarship for a research exchange with FORTH-ICS October 2013
- Google EMEA Anita Borg Memorial Scholarship June 2012
- Finalist for the Google Europe Anita Borg Memorial Scholarship June 2008
- Finalist for the CAST IT security sponsorship award for outstanding bachelor theses November 2007

PROGRAM COMMITTEE SERVICE

- Conference on Detection of Intrusions and Malware & Vulnerability Assessment (DIMVA) 2016
- USENIX Workshop on Offensive Technologies (WOOT) 2015
- International Workshop on Emerging Cyberthreats and Countermeasures (ECTCM) 2013, 2014, 2015

EXTRA-CURRICULAR ACTIVITIES

- Lead development and maintenance of Andrubis (<http://anubis.iseclab.org>), since June 2012
a large-scale public dynamic analysis sandbox for Android applications
- Conception of a one day workshop on mobile malware analysis techniques August 2015
- Supervision of Master's thesis of Matthias Neumayr under the title January 2015
"The Current State of Browser Extension Security and Extension-based Malware"
- Conception of a four day workshop on dynamic malware analysis techniques, August 2014
analysis evasion and countermeasures
- Conception of a techNIKE workshop teaching Internet security topics and June 2014
security and privacy awareness in online social networks to girls aged 10–14
- Recruitment committee member for the position of full tenured professor of security April 2014
at Vienna University of Technology
- Investigator for the Vienna University of Technology in the August 2011 – June 2012
i-Code Real-time Malicious Code Detection Project
<http://www.icode-project.eu>
- Member of the We_Own_YOu Capture The Flag team
 - 3rd place in the 2012 RuCTFe
 - Participation in the 2012 DEF CON Capture The Flag
 - 1st place in the 2011 UCSB International Capture The Flag (iCTF)