

Curriculum Vitae

Dr. Robin Sommer

International Computer Science Institute	Lawrence Berkeley National Laboratory
Center for Internet Research	Computational Research Division
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Research Interests

Network Security, Traffic Monitoring, Intrusion Detection, Network Architectures

Education

TECHNICAL UNIVERSITY MÜNCHEN, GERMANY

Doctorate (Dr. rer. nat.) in Computer Science September 2005
Dissertation

Viable Network Intrusion Detection in High-Performance Environments

Advisor Prof. Anja Feldmann

Thesis Committee

Prof. Alfons Kemper, Prof. Anja Feldmann,

Prof. Manfred Broy, Prof. Vern Paxson

UNIVERSITY OF PADERBORN, GERMANY

Diploma in Computer Science ($\hat{=}$ M.Sc.) August 2001

Intermediate Diploma in Computer Science September 1998

Professional Experience

Research

Research Staff Scientist October 2006–today

International Computer Science Institute, Berkeley, CA, and

Lawrence Berkeley National Laboratory, Berkeley, CA

Visiting Researcher November/December 2007

Distributed Systems Group, RWTH Aachen, Germany

I3P Fellow October 2006–September 2007

Lawrence Berkeley National Laboratory, Berkeley, CA

Fellowship of the Institute for Information Infrastructure Protection

Post-doctoral fellowship October 2005–September 2006
 International Computer Science Institute, Berkeley, CA
 Fellowship of the German Academic Exchange Service (DAAD)

Research Assistant August 2002–September 2005
 Network Research Group, Technical University München, Germany

Research Assistant September 2001–Juli 2002
 Network Research Group, Saarland University, Saarbrücken, Germany

Internship September 2003–November 2003
 International Computer Science Institute, Berkeley, CA

Internship May 2002–August 2002
 International Computer Science Institute, Berkeley, CA

Teaching

Guest Lecture
Hands-on Network Intrusion Detection, RWTH Aachen, Germany Dec 2007

Instructor and Organizer
Bro Hands-On Workshop, San Diego Supercomputer Center Jul 2007

Teaching Assistant
 Lectures on Fundamentals of Computer Science 1–4 2002–2004
 Seminar Courses on Internet Security (4 courses) 2001–2004
 Seminar Course on Internet Routing 2004

Supervisor for diploma/master theses and term projects 2001–today

Activities

Steering Committee Memeber
 Detection of Intrusions & Malware, and
 Vulnerability Assessment (DIMVA)

Program Committee Chair
 Detection of Intrusions & Malware, and
 Vulnerability Assessment 2007 (DIMVA)

Program Committee Member
 Recent Advances in Intrusion Detection 2007 & 2008 (RAID)
 Detection of Intrusions & Malware, and
 Vulnerability Assessment 2005, 2006, & 2008 (DIMVA)
 IEEE Workshop on Mission-Critical Networking 2008 (MCN)
 Critical Information Infrastructure Security 2007 (CRITIS)

Organizational Committee Member
 ACM SIGCOMM 2003

External Reviewer
 Including ACM CCR, ACM SIGCOMM, ACM TISSEC, ACM TOIT, IEEE S&P.

Memberships
 Association for Computing Machinery (ACM)
 Gesellschaft für Informatik (GI) (*German ACM equivalent*)

Other appointments

UNIX System Administrator
University of Paderborn, Germany

April 1998–April 2001

Languages

German, English (fluent)

References

On request.

Publications

Book

Bernhard M. Hämmerli, Robin Sommer (Eds.)
Detection of Intrusions and Malware, and Vulnerability Assessment (DIMVA)
Springer, Lecture Notes in Computer Science, ISBN 978-3-540-73613-4, 2007

Conferences & Workshops

Mark Allman, Christian Kreibich, Vern Paxson, Robin Sommer, Nicholas Weaver
The Strengths of Weaker Identities: Opportunistic Personas
Proc. USENIX Workshop on Hot Topics in Security, 2007

Nicholas Weaver, Robin Sommer
Stress Testing Cluster Bro
Proc. DETER Community Workshop on Cyber Security Experimentation and Test, 2007

Matthias Vallentin, Robin Sommer, Jason Lee, Craig Leres, Vern Paxson, Brian Tierney
The NIDS Cluster: Scalable, Stateful Network Intrusion Detection on Commodity Hardware
Proc. Symposium on Recent Advances in Intrusion Detection, 2007

Vern Paxson, Robin Sommer, Nicholas Weaver
An Architecture for Exploiting Multi-Core Processors to Parallelize Network Intrusion Prevention
Proc. IEEE Sarnoff Symposium, 2007

Ruoming Pang, Vern Paxson, Robin Sommer, Larry Peterson
binpac: A yacc for Writing Application Protocol Parsers
Proc. ACM SIGCOMM Internet Measurement Conference, 2006

Vern Paxson, Krste Asanovic, Sarang Dharmapurikar, John Lockwood, Ruoming Pang, Robin Sommer, Nicholas Weaver
Rethinking Hardware Support for Network Analysis and Intrusion Prevention
Proc. USENIX Workshop on Hot Topics in Security, 2006

Holger Dreger, Anja Feldmann, Michael Mai, Vern Paxson, Robin Sommer
Dynamic Application-Layer Protocol Analysis for Network Intrusion Detection
Proc. USENIX Security Symposium, 2006

Robin Sommer, Vern Paxson

Exploiting Independent State For Network Intrusion Detection

Proc. Annual Computer Security Applications Conference, 2005

Stefan Kornel, Vern Paxson, Holger Dreger, Anja Feldmann, Robin Sommer

Building a Time Machine for Efficient Recording and Retrieval of High-Volume Network Traffic

Proc. ACM SIGCOMM Internet Measurement Conference, 2005

Holger Dreger, Christian Kreibich, Vern Paxson, Robin Sommer

Enhancing the Accuracy of Network-based Intrusion Detection with Host-based Context

Proc. GI Conference on Detection of Intrusions and Malware & Vulnerability Assessment , 2005

Christian Kreibich, Robin Sommer

Policy-controlled Event Management for Distributed Intrusion Detection

Proc. International Workshop on Distributed Event-Based Systems, 2005

Holger Dreger, Anja Feldmann, Vern Paxson, Robin Sommer

Operational Experiences with High-Volume Network Intrusion Detection

Proc. ACM Conference on Computer and Communications Security, 2004

Andy Rupp, Holger Dreger, Anja Feldmann, Robin Sommer

Packet Trace Manipulation Framework for Test Labs

Proc. ACM SIGCOMM Internet Measurement Conference, 2004

Robin Sommer

Bro: An Open Source Network Intrusion Detection System

Proc. DFN-Arbeitstagung über Kommunikationsnetze, 2003

Robin Sommer, Vern Paxson

Enhancing Byte-Level Network Intrusion Detection Signatures with Context

Proc. ACM Conference on Computer and Communications Security, 2003

Robin Sommer, Anja Feldmann

NetFlow: Information Loss or Win?

Proc. ACM SIGCOMM Internet Measurement Workshop, 2002

Theses

Robin Sommer

Viable Network Intrusion Detection in High-Performance Environments

TU München, 2005

Robin Sommer

Verfahren zum Clustering von Dokumenten

University of Paderborn, Germany, 2001